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On the Renewal of Economic Thinking

Welcome by the Editor-in-Chief

Journal of Economic Literature (JEL) codes: A11, E6, F11, F65, H6, O15, P41
Keywords: public finances, monetary policy, training in economics, London School of Economics, Hungary

History in Retrospection to the Period before the Crisis

Prior to the crisis that erupted in 2007-2008, there was a general consensus among the key economic policy theoreticians that financial regulation was not a macroeconomic instrument, and the mission of monetary policy called for the "single aim, single instrument", while doubts regarding the efficiency of fiscal policy became an entrenched pattern. In this approach, predilection to market participants' automaticity and the minimization of the state's role in economy organisation, control and regulation constituted the generally accepted pattern, and central banks operated as "islands" in the world of government finances.

Thus the most important goal expected of monetary policy was the stabilisation of inflation, at a low level, possibly around 2 per cent. The reason for this was that back then the stabilisation of inflation was believed to also stabilise the output gap, and the closed output gap was thought to ensure optimum GDP growth, also accepted for welfare considerations. However, it has been confirmed that if central banks only endeavour to stabilise inflation, economies end up in output gap bubbles, as seen, in the form of an overflow in lending, (first) in the Anglo-Saxon mortgage markets (in 2007). This, on the other hand, also destabilised inflation, in other words, in terms of inflation, tight inflation targeting proved to run counter to the intentions. Thus the lesson is that inflation must be stabilized but this cannot be the single objective of central banks.

Since then, the economic policy consensus implemented among the outlined framework conditions has also failed in practice. Crises can and do hit advanced market economies, despite the fact that the leading economists had considered it inconceivable (Krugman, 1998), and not even the Japanese developments could get them thinking, as they reckoned with liquidity trap merely as a theoretical fiction. However, the liquidity trap did evolve and became reality, manifest in the form of market participant indebtedness and insufficient aggregated demand, and even the expected comprehensive economy boosting effects of negative real interest rates[1] failed after some time. Thus, monetary policy hit a certain zero bottom, which was already insufficient for boosting the economy, and what is more, downturn and the threat of deflation evolved.

Unconventional monetary policy (Gertler and Karadi, 2011; 2013) targets bottlenecks and makes efforts at sending money where it is scarce. In other words, the aim is to prevent the liquidity trap caused by excessively plentiful money by re-channelling the funds of market participants with too much money to those who are struggling with cash flow problems. When nearly zero interest is paid, no loss is made on holding liquid assets, and therefore those with abundant liquidity rather tend to hold their money, however, this is not an optimum condition for the national economy.

In relation to monetary policy, it was confirmed that a genuine and credible inflation target is important, however, over the long term, stringent inflation targeting does not have a stabilizing effect. It became evident that after crises the neutral real interest rate may turn negative, and thus monetary policy shifts into a state of inertia. The very essence of unconventional monetary policy is that removal of liquidity traps requires non-conventional instruments.

Prior to the crisis, fiscal policy was also perceived differently. It was considered to have a delayed effect, as short-term downturns were presumed and thus its effects were thought to act already in the period of upturn, when they are no longer needed. Monetary policy alone is capable of overcoming short-term crises. Remembering J. M. Keynes's doctrines, it has been evidenced that the surplus earned from income increased by fiscal means (through wage increases and tax cuts) generates additional consumption at the level of households (in other words, wages and consumptions move roughly together), and so the aggregated demand will grow, and in turn, this will have its beneficial impacts felt in GDP growth and higher employment rates. During upturn wage growth does not fully generate consumption, however, during downturn, the impacts of current income growth appreciates, i.e. the effect of the budgetary multiplier on consumption is perceptible. This means that the current income (increased by fiscal means) does count (Eggertsson and Krugman, 2012) as during downturn the ratio of indebted consumers is high, and once they overcome indebtedness, they want to step higher on Maslow's pyramid of needs and turn several of their latent needs into effective (realisable) needs. Based on Keynes's recipe, in crisis management the fiscal multiplier's role is appreciated (Blanchard and Leigh, 2012; Auerbach and Gorodnichenko, 2012), although it is also true that in the upturn period, the counter-cyclical fiscal policy is reasonably pushed to the background, especially if matured automatic stabilisers are available.

Current Problems – and the Deficit in Theoretical Renewal

The success of practical crisis management is beyond doubt. Both the previous hotbed of the crisis, the United States, and the European region[2] have embarked on the course of consolidation. In the economies that have recovered by now brought crisis management to success through the revival of the Keynesian doctrine, giving precedence to the institutional approach,[3] and assigning multiple mandates to the central bank. However, there is no comprehensive theoretical background underlying the economic policy practice and taught at school. One of the critical areas and most perceptible surfaces is higher education, and more specifically, training in economics. And this prevents the general appreciation of consolidation and the integration of the legislation drafted to manage the crisis. In other words, unless the syllabus of the pre-2007 period is replaced by the comprehensive new one in education, the applied economy management method cannot have theoretically support. Unless it is declared on a theoretical level that an economic policy excessively relying on market automaticity and an economic policy unreasonably displacing central regulation have harmful effects and cause crisis, and that inflation management is not the only role central banks have, genuine and full-fledged renewal is ruled out, and in particular, it is impossible to scientifically corroborate the new economic practice. Thus the achievements are easily annulled or at least their effects may taper off and become uninterpretable in certain layers of society. If public and business-based economy management is carried on with young economists trained according to the old theories, then the absence of theoretical revival may cause damages and discrepancies.

A peculiar attempt at solving this problem was the manifesto issued by economists at the London School of Economics to draw the attention to universal problems. Five hundred years after Martin Luther nailed his theses to the door of All Saints' Church in Wittenberg, the researches and students dissatisfied with the prevailing economic dogmas also nailed their 33 points on the entrance of the London School of Economics. In their opinion, the world is struggling with poverty, inequalities, an environmental crisis and financial instability, and they think economics could do more to help solve the problems. They are the first to mention that an unhealthy monopoly has evolved in economics. Education, research, policy consultation and public debates are all predominated by the neoclassical economic thought. Numerous other trends have been marginalised despite the fact that they could contribute useful advice to decision-makers. According to the authors of the proclamation, the debate should not be about which theory is better, rather we simply need debates, but there is none in economics. They disapprove that although neoclassical economics has yielded important historical results and remains useful to this day, it has not been improved, despite the fact that there are numerous opportunities to development, for example by establishing relations with other disciplines. Third, they criticize mainstream economics for its incapability of self-correction, and thus developing more as a religious argumentation than a scientific discipline. When theory and evidences come into conflict, evidences are disregarded far too frequently just to defend theories.

For this reason, the compilers of the manifesto invite the economists of the world for a debate. The manifesto implies that orthodox economics is on the point of operating in society nearly as a religious belief, and the "omniscient" priests of this science mystified with the help of complicated mathematics do not mingle with ordinary people while laying the basis for decisions affecting all through concealed value judgements.

New Doctrines from the Intellectual Circles of the Catholic Church

In the midst of the labours of shaping new theoretical foundations, one of the pivotal phenomena is the economic philosophy expansion proposed by the intellectual circles of the Catholic Church. The basis of the pope's Encyclical *Caritas in veritate* published on St Peter's and St Paul's day was the global financial crisis. It proclaims that the economic growth driven by the exclusive principle of profit maximisation has caused dramatic problems that may be solved by cultural renewal and by laying the foundations of integrated, full-fledged human development. The social theory of the church includes an interdisciplinary approach that combines faith, metaphysics, theology and science. The encyclical points out that the ultimate objective of economic development is public happiness, and profit is only a means of achieving other, value-based objectives. The fundamental principle of market operation is solidarity, mutual trust and moral, ethical and social responsibility. Companies and the members of the society come into contact with one another in the market, and therefore the state has a significant role in the operation of this central institution.

The warnings and scientific theories given by intellectual workshops linked to the Catholic Church provide a sound basis for reconsidering exclusivity, built on Adam Smith's teaching[4] and having its effects felt to this very day, including the invocation of Antonio Genovesi, the classic author of the anthropocentric economics, after three hundred years of slumber and despite the fact that he was sidelined already by his contemporaries (Genovesi, 1765-1769). In economics, emphasis on anthropocentrism is for the most part ascribed to Ernst Schumacher and the 1970s, however, Genovesi wrote several centuries earlier that linking the economy with morals and the alignment of man with virtue was of primary significance among the economic axioms. The emphasis on bourgeois values, focus on values, a social approach, cooperation, public happiness and an ethics based on virtues are all important in the economy, and the concept advocated by Aristotle and St Thomas along with the Catholic Church's social teaching are very close to these ideas. The book by Luigino Bruni and Stefano Zamagni, who have adopted and carry forward Genovesi's intellectual heritage, is aimed at broadening the horizon after the crisis in thinking (Bruni and Zamagni, 2007). It main proposition is that the prosperity of social organisations seen in the past few decades was merely accidental, and they are no exceptions to the ordinary course of capitalist economic development, rather they represent a dire symptom of a crisis in the capitalist economy and also hope for a new start. They demonstrate that the operation of the globalised society and economy requires the re-discovery of the fundamental relationship between the "principle of contract" and the "principle of reciprocity". In their historical retrospection they confirm that market is "civilian" and has a "civilising" impact if and when it is characterised by reciprocity, and this is also the main message of the work by Genovesi, a Neapolitan priest and economist. Bruni and Zamagni think that a society that precludes the principle of reciprocity form its cultural horizon will become incapable of survival and of satisfying its members' demand for happiness. The keyword in their theory is happiness, defined more accurately and with a more relevant term, "public happiness", a category not falling in the least outside the scope of economic theory.

Clerical economic doctrines already include publications meant as manuals, like the book by Helen J. Alford O.P. and Michael J. Naughton (2001), and the academic activity of Dominican sister and economist Sarolta Laura Baritz O.P. as well as Professor Paul W. Dembinski's new book certainly deserve mentioning.

Sister Laura's value creating work stems from the recognition that the principles of the Catholic Church's social teachings provide a suitable basis for an anthropocentric economics paradigm that differs from the mainstream, let us just call a spade a spade, the neoliberal economics based on objectives of unlimited profiteering. She is convinced that economics must not be practiced without morals, as ethics is a keystone of the economy, and a prerequisite of its sustainability. She believes that the right objective is not profit maximisation, it is only a partial goal. Instead of maximising profit at all costs, it should rather be optimised. The ultimate goal of the economy is what originally was: the implementation of the public good and the satisfaction of genuine needs. She glances back as far as the ancient times making references to Aristotle, Plato and Cicero down to St Thomas of Aquino, and arriving at our times, she integrates the prevailing ideas of the current heads of the Holy Mother Church about anthropocentric economy in her argumentation.

The continent of Europe could also benefit from placing the economy on a new footing, as our region has been losing ground to the global economy. The entire developed world, including the "West", is characterised by moderate economic growth, a significant loss in the population of the indigenous European nations, the abandonment of family ties and the refusal to undertake commitments, and Sister Sarolta Laura Baritz O.P. thinks the method applied so far offers no social or political solution or consensus for shaping the future, as the researchers of the London School of Economics also found wanting.

Paul Dembinski (2017) is of the opinion that we are witnessing the decline of "thirty euphoric years". The neoliberal method of production was undermined by subprime crisis that unfolded in the Anglo-Saxon mortgage markets from 2007, which was not primarily economic in nature, rather a failure in human self-control, which ruined millions of families, businesses, livelihoods and lives. Also in Hungary, in the decades preceding and following the millennium. After the 20th-century wars, the

Great Depression and then the fall of communism, the most recent financial crisis, mankind is crying out for a new, equitable, humane, value-based and anthropocentric method of production and society.

Dembinski also describes new trajectories of action he offers as a compass. He surveys the extent to which the various participants of the financial system recognise the *raison d'ętre* of ethical questions and the need of a solution. Dembinski thinks that the professional, accounting, legal and regulatory reasons for the crisis have been clarified, but the moral perspectives have been completely disregarded. Dembinski's objective is nothing else than to mark out the new paths of action at the level of cause and effect, in order to reconcile society with the real economy and the financial system.

The Hungarian Example – For and Against

In addition to the successful crisis management methods seen in the world and the broad desire for a theoretical renewal, mention must be made of the situation in Hungary. After the systemic crisis of the planned economy pursued for forty years, followed by two decades of a neoliberal economic transition with another systemic crises added at the end of the first decade of the 2000s, and on account of the successful economic consolidation that has been carried on for nearly a decade now, we Hungarians also feel the need for a theoretical renewal and its deficit in our education.

Successful and tuned fiscal and monetary crisis management, the enforcement of the budget multiplier, granting multiple mandates to the central bank,[5] and the extension of the state's regulatory authority and ownership has been creating equilibrium in the budget as well as the foreign trade balance. Inflation is very slight and easy to moderate, and the beneficial effects of solvent demand and growth are manifest in wages and welfare benefits.[6] However, no renewal has been instituted in terms of the comprehensive economic theory to underpin the economic practice. The transformation of economic education and filling the curriculum with new content remain tasks to be performed, and they may become the bottleneck in continuing the achievements.

Guided by the intention to remedy this deficiency, our journal undertakes to provide space for academic writings contributing to the intellectual renewal in Hungary and in the international space.

This is why it is worth reading the *Polgári Szemle* all over the world.

Professor Csaba Lentner,
Editor-in-Chief of Polgári Szemle

Notes

[1] In the year preceding the 2007 crisis in the United States real interest rates went into the negative, and this encouraged the propensity to borrow.

[2] Apart, perhaps, from the Mediterranean.

[3] Through the rediscovery of the works of Ronald Coase, Douglas North, John R. Commons, Walton Hamilton, Oliver Williamson and Dani Rodrik, etc. For a taxonomic framework of these doctrines, see Lentner, 2017. About the outdated and the new central banking system, see the same.

[4] Its mainstream iconic figure is Adam Smith, author of *The Wealth of Nations*. One of his earlier works, *The Theory of Moral Sentiments* has points of similarity with the 18th-century Italian bourgeois economics. Moreover, the difference between his two books in terms of content is significant. However, posterity, and the liberalist paradigm only utilised *The Wealth of Nations*.

[5] In addition to the moderation of inflation, the central bank's policy focuses on economic growth and financial equilibrium.

[6] See the academic papers discussing the economic and social scheme in this journals issues for 2017 and 2018, https://eng.polgariszemle.hu/.

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Pál Péter Kolozsi – Csaba Lentner – Bianka Parragh

The Pillars of a New State Management Model in Hungary

The Renewal of Public Finances as a Precondition of a Lasting and Effective Cooperation Between the Hungarian State and the Economic Actors

Summary
Cohesive society, trust and social cooperation are among the social arrangements and meta-institutions required for building good institutions and a well-managed state. Before the global financial crisis, Hungary was characterized by unsustainable public finances, a flawed and irresponsible fiscal policy, and consequently, weak economic fundamentals. This represented a suboptimal state management, with the basics of co-operation between the state and the economic actors were seriously damaged. For this reason, by the beginning of the decade, the renewal of state management and, above all, public finances had become imperative. The first step was the adoption of the Fundamental Law (new constitution), including a chapter on public finances. The stabilization of Hungarian public finances is built on the Fundamental Law and the debt rule, and the

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monetary policy reforms (after 2013) and improvement in competitiveness (launched in recent years, but partly ahead of us) can also be associated with these regulations. The renewal of public finances after 2010 enables a lasting and effective cooperation between the Hungarian state and the economic actors. The new cooperative framework needs to be institutionalized and can be an appropriate basis for the creation of a well-managed state and an attitude change potentially leading to a state management actively leveraging positive incentives and seeking partnership with the relevant stakeholders.

Journal of Economic Literature (JEL) codes: H03, H21 E02, H83
Keywords: public finances, fiscal policy, monetary policy, institutional system, macroeconomics, behaviour of economic actors, cooperation

Introduction

Large government deficit, increasing sovereign debt, the private sector running into debt, high taxes, high tax evasion, low employment, unsustainable growth with high inflation, outstanding external vulnerability, these characterised the Hungarian economic policy in the years preceding the crisis. By the beginning of the decade, the renewal of state institutions had gained key significance, however, it needed to be preceded by the reinforcement and consolidation of the state and the creation of firm macroeconomic underpinnings. The reason is that these institutional pillars are required for the development of a state operation capable of orienting the relevant social partners towards a cooperative behaviour and thus laying the foundations of a new method polity model, including a new management of public finances.

In this study, first the significance of the institutional matrix, and more specifically, of confidence and cooperation, and then the framework of a cooperative state management of public finances are presented. Then a summary outline is given of the actions taken in this decade to reinforce the Hungarian state and allow the permanent renewal of state operation. In addition to Hungary, the identification of the criteria of a successful and efficient state is in the focus of decision-makers and research communities all over the world, and the topicality of the issue is underlined by the fact that last year the Nobel Prize was awarded to an economist, namely Richard Thaler, who has given high priority to the study of correlations between state operation and individual and social (community) behaviour.[1]

Social confidence and cooperation as part of the institutional environment

In the absence of good rules and good forms of behaviour, sustainable economic development is ruled out. Bad rules and forms of behaviour can cause serious damage: this is one of the fundamental propositions of the institutional approach, which is increasingly accepted and widespread, and pervades also the proclamation of reforms in economics hanged out on the entrance of the London School of Economics last December.[2] An "institutional background" can be considered optimum if the various institutional levels are cascaded: formal rules fit to informal ones, and written statutes do not break with the community's past, experiences and cultural endowments. During the elaboration of formal rules, the cultural and social background that characterises the particular community at the given moment (or period) must be taken into consideration in order to avoid unintended consequences.

The stable institutional foundations also allow for the completely different paces of institutional development in the case of formal and informal institutions (rules). Formal rules may be changed overnight, however, the informal restrictions giving the framework of individual and collective behaviour only allow a gradual evolution. Consequently, a regulation is good if it allows for the local conditions, and bad if it wants to press new forms of behaviour on the community going against them.

Thus it may be accepted that the economy cannot be separated from the background of political and social institutions, as the rules of the game that determine individual decisions are given by the political and social frames.[3] Thus instead of restrictions binding individuals hand and foot in their decision or obstacles paralysing economic development, social institutions should rather be viewed as facilities capable of raising the standard of welfare if managed appropriately. There is no need to assume that the institutional background is unalterable: ultimately, economic and social change is nothing else but the refinement of the institutional network, in other words, its adjustment to new challenges and situations. Historical experience underpins that a country's competitiveness depends to a large extent on the adaptability of the institutional system and matrix. A community can only be successful if it gives the right responses at the right time to appropriately asked questions. One of the main findings of North's research was exactly that in less developed states the conservation of the backlog can only be traced back to the fact that, for various reasons, these states have been incapable of improving their institutions and creating a stable and low-risk institutional environment. There is a disagreement in the literature about the driving force of institutional development and the factors that are responsible for "getting stuck", but there are general conditions that can typically be considered as the bases of development. According to Rodrik (2000), one such meta-institution is democracy, which allows the entire political and social community to decide on the direction of development. Another example includes the level of confidence and cooperation characterising a given society. In the absence of confidence, transaction costs are high, and this renders the building up of an optimum institutional matrix impossible. A rising confidence level, however, gives the opportunity of building an institutional framework consistent with higher social welfare.

Williamson, another Nobel Prize winner of the institutional school, defined four levels of the institutional structure, built on one another, and having an impact on the performance of the economy and society in the broad sense of the word. The first level 1) comprises ethics, customs and norms, with the 2) fundamental rules of the institutional environment, 3) the management structures and 4) the daily decisions and institutional solutions used for the allocation of resources settled as the next layers, respectively. Confidence between the state and the affected social groups corresponds to the second level, which may not be irrespective of the fundamental rules and relationships of the given community, and which is capable of determining the management structures and, through them, daily decision-making.

Fundamentals of cooperative state operation

Our basic proposition is that a state capable of building a cooperative relationship with its citizens, the business sector, banks and all other affected parties (collectively referred to as stakeholders) can be more successful than the one that is incapable of doing so.[4] As a result of this, and accepting that the higher level satisfaction of social needs inevitably entail a demand for an efficient partnership, in this study the question of bringing the state closer to this cooperative operation will be tackled. This study is built on two presumptions.

1) The effect of state actions depends greatly on environmental factors, with the level of confidence and cooperation between the state and the stakeholders having particular significance.

2) The "state of the country" (status), evolving on the basis of the existence or absence of cooperation between the state and the stakeholders largely determines if the state is capable of prompting the affected social groups to act cooperatively.

As a starting point, in this study it is presumed that the quality of state operation (economic policy) can be reasonably improved by making stakeholders[5], especially the market and other state participants

– interested in the success of state actions;

– identify themselves with the objectives of state operation, the particular state action or programme;

– commit themselves to the achieving the state objectives.

In a certain sense, efficient state operation is the achievement of the above-described "status", as it means cooperation between the state and stakeholders in the broad sense, and it is presumed that it is more efficient than the mode of operation built on the absence of cooperation. As the reinforcement of public confidence may result in a beneficial commonality of interests, the renewal of state operation should be conducive to cooperation and the reinforcement of public confidence at the level of basic principles, objectives, the target system and the targeted structure, as well as in practice, promoting change not only in specific action but also in the approach (frame of mind, attitude, value system) vis-a-vis the state.

The other presumption in this study concerns the interaction of cooperative and non-cooperative forms of behaviour. In this framework, the two extreme polity models include the cooperative and the non-cooperative states. A state is considered to behave cooperatively if it sets up a framework and regulations that are optimal for the partners required to observe the rules. In contrast, a state's non-cooperative approach includes mistrust of the stakeholders, and for this reason the typical regulatory instrument of such a state is the excessive encumbrance of those expected to comply with the rules. The above descriptions are simplistic, due primarily to the fact that the adopted polity model may manifest in various ways in specific situations, and in the case of certain state actions, the scope of the relevant partners may, of course, differ.[6]

Depending on the stakeholders' response to state behaviour, in our pattern, four different status may be achieved:

1) cooperative state with cooperating stakeholders: this is the well managed state, with mutual cooperation between the government and the stakeholders (to give an example from the field of taxation: the government levies low taxes and taxpayers have high tax awareness and propensity to pay taxes);

2) cooperating state with non-cooperating stakeholders: stakeholders respond to the state's supportive behaviour in a non-cooperative manner, in other words, they practically exploit the elbowroom given by virtue of the government's behaviour (returning to the previous example: in this case taxes are low but tax evasion is high, and the size of the shadow economy is considerable);

3) non-cooperative state with cooperative stakeholders: this is the opposite of the previous state, when the society is cooperative (presumably arising from the state cooperation in a previous state), but the state is not (using the tax policy example, this means that there is a propensity and capacity to pay taxes, and the state responds by overtaxing and an excessive curtailing of incomes);

4) non-cooperative state and non-cooperative stakeholders: this is the state of distrust, when neither the state nor the stakeholders are characterised by a cooperative attitude (the government levies enormous taxes and the taxpayers' typical approach is to evade them).

In a social perspective, the optimum state of affairs is the well-managed state, as both the cooperating parties and, indirectly, the entire society benefit from cooperation, because it contributes to the improvement of public confidence and to the implementation of public welfare as the utmost social goal. It can be readily accepted that neither a "state using up its social basis", nor a "naive state" are sustainable (balanced), in contrast to the state of affairs when neither the state nor the stakeholders are cooperative, as the latter may also represent equilibrium, since no one is capable of improving by merely changing his/her/its own behaviour. Transition between the two equilibrium states is not self-evident: the main question is the stakeholders' response to the state's cooperative behaviour.

Table 1: Cooperation matrix for the state and the stakeholders

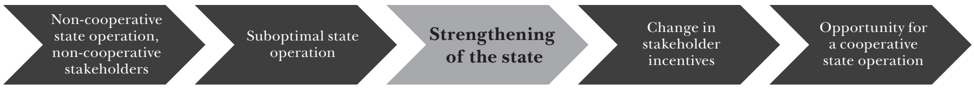
	Cooperating partners	**Non-cooperating partners**
Cooperating state	*"Well-managed, incentivising state"*	*"Naive and exploited state"*
Non-cooperative state	*"State using up its own social basis"*	*"Non-cooperative, punishing state"*

Source: Edited by the author

From the right bottom corner of the matrix, representing a suboptimum position, the left upper corner representing the Pareto optimum, can only be reached if state cooperation coincides with cooperation by the partners. This means that in order to achieve the condition of a cooperating state, the state needs to be sure that the response to its cooperative actions will be cooperation instead of a continuation of the previous non-cooperative.[7] As a precondition, this requires the reinforcement of the state, as permanent cooperation is only conceivable between equal parties, as a weak state cannot develop a cooperative environment, and only an efficient and powerful state is capable of getting the private sector to permanently cooperate.

It must also be taken into consideration that in the case of the structural reforms, which provide the basis for strengthening the state, costs exceed benefits over the short term, but in the long term, the beneficial effects outweigh costs.[8]

Figure 1: Steps in the development of operation as a cooperative state



Source: Edited by the author

Below is an analysis of the way the government actions taken since the early 2010s have facilitated the strengthening of the Hungarian state, in other word, the way they have laid the foundations for the Hungarian government's shift towards cooperative operation. The authors hope this study will be followed by analyses focusing on the second phase in building a well-managed state, presenting the areas where the expansion of the cooperative polity attitude is demonstrable.

Hungary's economy before the crisis

The decade that started in 2000 saw macroeconomic developments in Hungary that turned the Hungarian economy from a spearhead to a tail-end Charlie in the region, and proved that imbalances leads the entire economy to an unsustainable trajectory.

1) The starting point of economic problems is the failed and irresponsible budget policy, as explained by Baksay and Palotai (2017). The budget deficit was salient even in a regional comparison, the state spent a lot on social transfers and little on productive goals (pension costs amounted to more than 20 percent of the budget spending). Year after year the Hungarian government spent 6 to 8 percent of its given annual economic performance more than its revenues. Naturally, the missing amount had to be financed primarily from external loans, and as a result, deficit stuck at a high level triggered a substantial rise in the sovereign debt. Hungary's sovereign debt amounted to 55 percent of GDP in 2002, this ratio had risen to 65 percent by 2007, and to 80% by 2010. In addition to the significant rise in the sovereign debt in

absolute terms, its structure also changed in an unfavourable direction (high FX and foreign debt).

2) The disequilibrium had its impact felt in all the other areas of the economy, of which the labour market is of paramount significance. Although in the decade preceding the crisis the activity rate started to increase, in a regional comparison it still remained low. In Hungary hardly more than 60 percent of the 15-60 age group were on the labour market, while the corresponding average of the EU15 exceeded 70 percent, and the Czech Republic had the same labour market activity. In all these, the state's responsibility can be clearly demonstrated, as the low employment rate was accompanied by high and unfavourably structured work-related taxes, and by a system of social transfers. In the case of a single employee paid an average wage or salary, in 2007 taxes exceeded 50 percent, two-thirds of them being employer and employee contributions. Only Belgium had a higher tax wedge among the OECD countries, the corresponding values were slightly above 40 percent in the Czech Republic and Poland, and below 40 percent in Slovakia.

3) The budget deficit led to increasing external indebtedness, while wage hike and the transfers to the population resulted in excessive consumptions and consequently, lower savings. Dues to the soaring deficit and declining savings, the current account deficit rose and led to increasing external indebtedness. Between 2002 and 2006 the state's financing requirement amounted to 7 to 8 percent of GDP, while household savings never exceeded 2 percent of GDP.

4) It represented a serious threat that up to the eruption of the crisis, household loans rose rapidly. The loan portfolio of the household sector to the available income approached 80 percent, while this ratio was 20 percent lower in the regional partner countries. A particular challenge included the fact that lending shifted towards foreign currency loans, and by 2008 households' open FX position had amounted to nearly 20 percent of GDP, as against 2000, when Hungarian families were still net savers up to 5 percent of GDP.

5) All this was combined with high inflation, considerably above the regional average, for the most part due to tax hikes. With the erosion of discipline, monetary policy was rigorous, resulting in high real interests. All this naturally contributed to a surge in FX lending.

The unsustainable fiscal and monetary developments seen in the years preceding the crisis caused stability and competitiveness problems, and as a result, Hungary was incapable of making use of the opportunities offered by the 2004 accession to the European Union: in a regional comparison, Hungary's growth data remained moderate, and duality in the economy, i.e. SME productivity remained considerably below that of large companies, became a fundamental barrier to closing the gap. The growth financed from increasing indebtedness and driven by consumption concealed structural problems, and the evolution of a debt spiral was facilitated by the fact that the Constitution in force before 2011 failed to include a chapter on public finances, in other words, no constitutional rule limited excessive sovereign indebtedness.

Strengthening Hungarian public finances

When the economic crisis fed through to Hungary between 2007 and 2009, fiscal adjustment fell simultaneously. The combined effects of crisis and tightening resulted in a considerable recession, and the challenges could only be managed by applying unconventional economic policy instruments (Matolcsy and Palotai, 2016).

Parliament approved the Fundamental Law, the basis of renewal in public finances and in economic policy, in April 2011, and this started a new chapter, among others, in public finance management in Hungary, allowing the renewal of the entire system of public finances. For the purpose of this analysis, the following regulations of the Fundamental Law (which provide the basis for the debt rule) can be considered important.[9]

"(4) The National Assembly may not adopt an Act on the central budget as a result of which state debt would exceed half of the Gross Domestic Product.

(5) As long as state debt exceeds half of the Gross Domestic Product, the National Assembly may only adopt an Act on the central budget which provides for state debt reduction in proportion to the Gross Domestic Product.

(6) Any derogation from the provisions of Paragraphs (4) and (5) shall only be allowed during a special legal order and to the extent necessary to mitigate the consequences of the circumstances triggering the special legal order, or, in case of an enduring and significant national economic recession, to the extent necessary to restore the balance of the national economy."

A debt rule raised to a constitutional level is a requirement affecting the entire economic policy, as the debt to GDP can only be reduced sustainably if all the economic policy lines set it as their objective. The success of the "Hungarian method" is well illustrated by the fact that in contrast to the sharp increase in the sovereign debt before 2010, after that year it started to fall: from above 80 percent, debt to GDP fell to around (below) 75 percent. Meanwhile the ratio of FX debt to the total debt dropped from above 50 percent to 25 percent, which means that the FX debt was halved.

Meanwhile, a genuine turnaround was achieved in the real economy as well. Labour market developments deserve a special mention. By 2014 the activity and the employment rates had risen by 6 percent on 2007, representing one of the fastest rises in the European Union. From the beginning of the crisis, activity increase had primarily been driven by welfare transfers and tax restructuring.

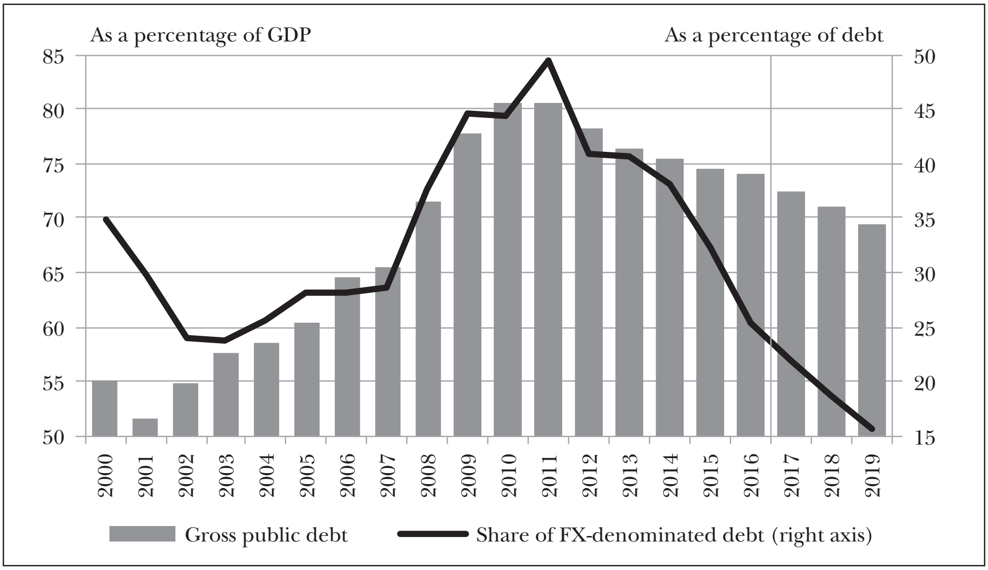
Below is an outline of the most important economic policy actions taken in Hungary during the renewal period after 2010, which allowed the above developments and state reinforcement.[10]

Stabilisation of Hungarian public finances

Fiscal trends and turnaround

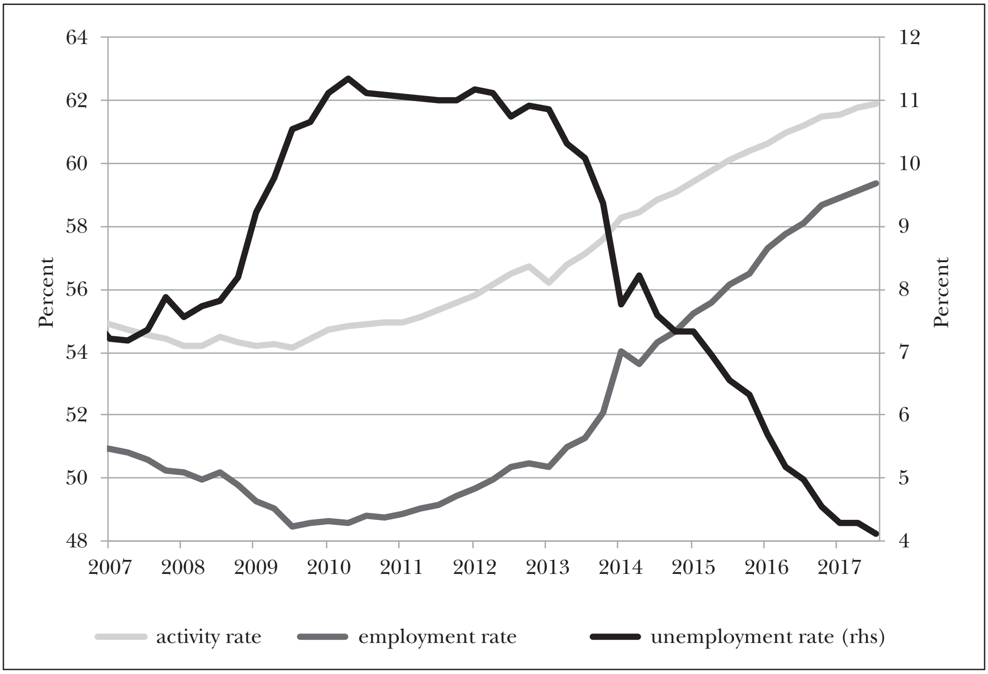
One of the clearest indications of deterioration in Hungarian public finances was the surge in the budget deficit followed by stabilisation at a high level. As a result,

Figure 2: Gross public debt forecast, calculated at an unchanged (end-of-2016) exchange rate over the forecast horizon



Source: MNB, 2017b

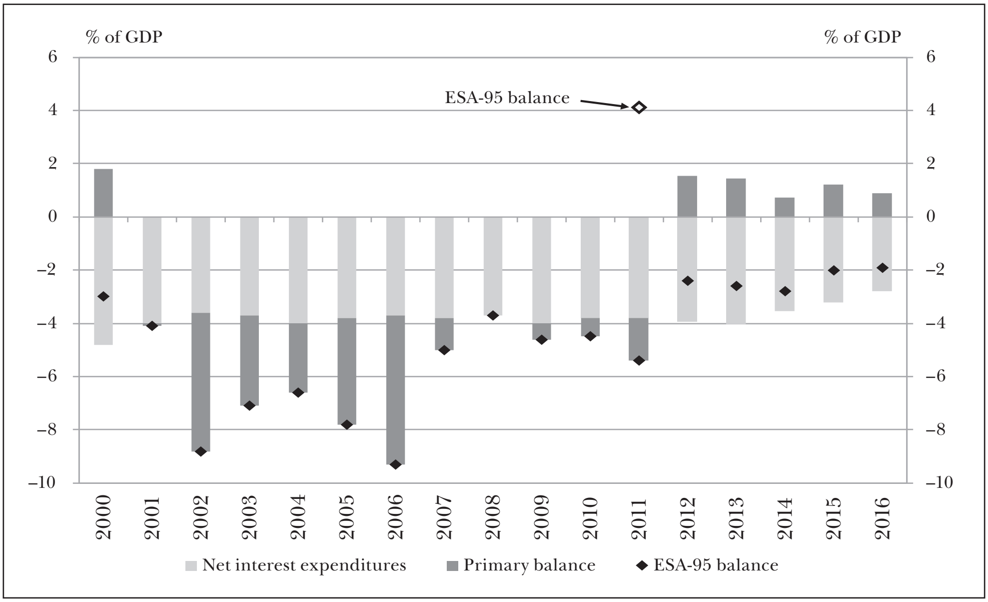
Figure 3: Labour market developments (2007-2017)



Source: MNB, 2017b

Hungary was under the European Union's Excessive Deficit Procedure between 2004 and 2013. Fixing public finances started during 2010 and 2011, when the balance calculated according to the then valid methodology of the European Union suddenly rocketed to 4% of GDP. After 2012, the budget deficit remained below 3 percent of GDP according to every EU-compatible indicator. Deficit decrease was due to an improvement in the primary balance (net of the interest balance), and to falling net interest costs after 2013.

Figure 4: Fiscal position (2000-2016)



Source: Matolcsy, 2017b

The improvement in Hungary's fiscal balance was outstanding even in an international comparison: after the crisis the Hungarian budget balance improved at the highest rate among the EU Member States. Between 2003 and 2007 the fiscal deficit was around 7 percent of GDP in Hungary. A similar deficit could only be seen in Greece. However, in 2014 and 2015, Hungary's deficit fell to around 2 percent, representing a 5-percent improvement, as against Germany, showing the second highest improvement with its improvement below 3 percent.

The most important fiscal and other reforms affecting the budget included the Table 2.

In the above list, special emphasis should be placed on the tax reform, which included, as an iconic step, the transformation of the personal income tax regime, cutting taxes by 2.5 percent of GDP on the whole.[11] After the 2011 adoption of a flat-rate personal income tax, the tax wedge fell from the nearly 60-percent measured in 2009 below 50 percent, and thus the Hungarian tax regime partly closed the gap to the international community (Varga, 2017a).

Table 2: Reforms After 2010

Tax reform	Expenditure cuts	Debt management	Other measures
Reduction of work-related taxes Adoption of a flat-rate personal income tax Family allowance Job protection action plan Increasing consumption and turnover taxes (excise and VAT) Levying taxes on extra profits	Structural Reform Programme Review of the invalidity pensions Tightening early retirement Cutting the period of subsidies paid for the unemployed	Permanent reduction in government debt Reducing the share of FX loans Improving the basis of Hungarian investors Increasing the average term	Community service Phasing out of FX loans (conversion to HUF) Reform of the private pension fund plan

Source: Matolcsy, 2017a

Figure 5: Transformation of the personal income tax regime

2011	
Flat-rate personal income tax	Family tax allowance

2012
Complete phase-out of tax credit

2013
Complete phase-out of “super grossing”

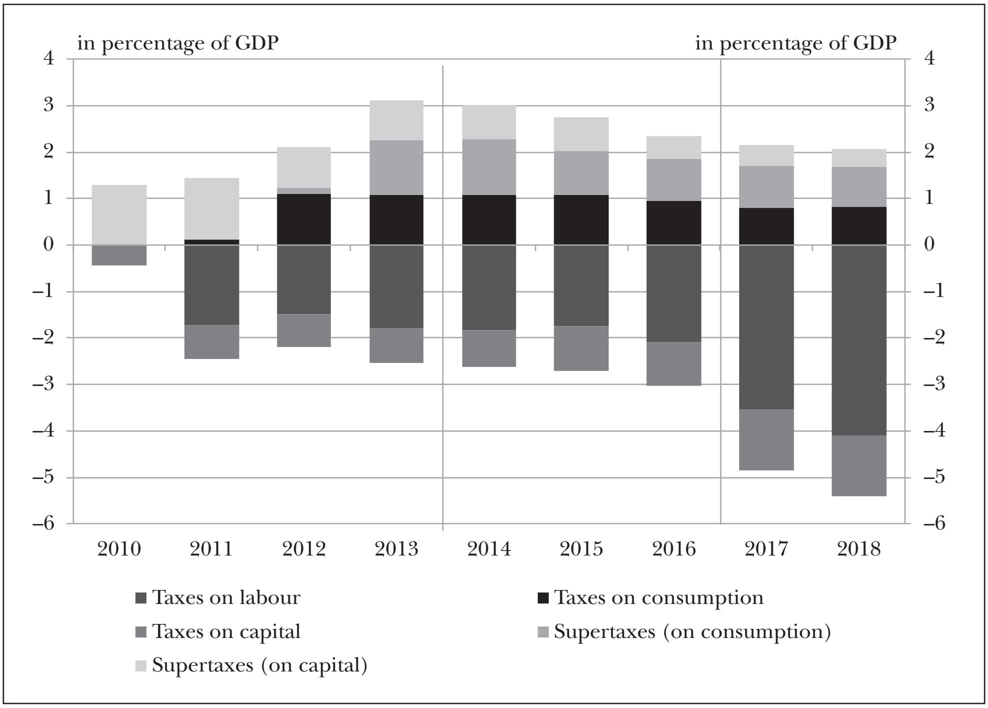
2014
Extension of family tax allowance to contributions

2016	
1% reduction in personal income tax	Increase in the family tax allowance

Source: Matolcsy, 2017a

Work-related taxes were replaced by consumption taxes, and the average personal income tax rate on the average wage was reduced from more than 20 percent in 2009 to 15 percent in 2016, placing Hungary below the average of the European Union. The Hungarian tax regime was placed on a new footing: work and capital-related taxes fell, while the revenues from consumption and special taxes increased (Palotai, 2017). The tax system became focused on consumption and performance. It pays to work hard and have a higher performance. Special taxes provided substantial support to the budget: These revenues amounted to 2 percent of GDP in 2013 and still nearly 1.5 in 2016. Between 2010 and 2012, the most significant special taxes included the one levied on financial institutions (bank levy) and the income tax imposed on the power sector, while after 2013, the duty payable on financial transactions became the most important item.

Figure 6: The cumulated static effect of the 2010 tax changes on the budget



Source: Palotai, 2017

Consolidation of local governments

Prevention of the regeneration of local government debt is a common national economic interest. While the financial balance of local governments deteriorated considerably between 2007 and 2010, financial risks increased.[12] As local governments assumed liabilities in excess of their actual financial capacities, central debt relief became unavoidable, as the bankruptcy of local governments in large masses would have caused unpredictable problems in the national budget. The government relieved local governments of their debts in three steps.

1) First, the debts of villages with a headcount below 5000, amounting to 1710, were assumed in the framework of tax consolidation.

2) In the second step of debt consolidation, the state assumed part of the debts of the local governments of communities with a headcount exceeding 5000, in the amount outstanding at the end of 2012, and their charges accrued up to the date of assumption.

3) The last phase of local government debt consolidation was performed in the spring of 2014, when the state also assumed the debts of municipalities with a population exceeding 5000. The total cost of the debt consolidation amounted to HUF 1300 billion.

It was also recorded that a local government may only have a share in a business if its responsibility does not exceed its financial contribution, and that a local government's business activity may not jeopardize the performance of its mandatory duties. As from 1 January 2012, several restrictions apply to local governments' debt generating transactions (borrowing, security issuance). These rules are set out in the Stability Act. Local governments may validly enter into debt-generating transactions, other than small-scale ones, only with the central government's preliminary approval. Another regulation that serves the stabilisation of finances in the local government sector is that since 2013, no operating loss may be planned in local government budgets. As from 1 January 2012, the healthcare institutions maintained by county institutions and the Local Government of Budapest and as from 1 May 2012, the hospitals maintained by community governments were transferred to state maintenance.

Reform of the social security system

At the end of 2010, Hungary was challenged by an increasing budget deficit generated by the mandatory private pension funds, while the budget deficit target set by the European Union had to be met. In response, the government terminated the "state umbrella" protecting private funds, and as a result, huge numbers of fund members returned to the public pension plan. This transformation was especially necessary because approximately one-fourth of the pension payable for private pension fund members flew to these funds, and as a result of the PAYG scheme, the current revenues providing a coverage for pension costs fell considerably, and the generated deficit had to be financed from the central budget. This mechanism automatically led to a rise in the sovereign debt in the phase preceding the fund members' retirement.[13] The sustainability of the public pension scheme remained a relevant issue after the reform, as demographic and employment-related factors must also be taken into consideration in this context, while the extremely high ratio of very low paid employees is another problem in Hungary. The solution may be in the encouragement to have children and in increasing employment, which have been promoted by numerous actions in recent years.

Healthcare, the other pillar of the social security system, influences a country's economic capacity primarily through the amount and quality of available manpower by affecting the active time spent in work and labour productivity. The concept worded in the Semmelweis Programme, inseparably related to the New Széchenyi Plan, focussed on raising funds and the government's increased responsibility in order to help healthcare recover after the crisis and to rebuild it.

– In the framework of the Semmelweis Programme a public institutional system for health organisation was built to manage the patients' path and perform functional integration in order to improve sector efficiency through resource allocation.

– Gradual increase in the real value of health-related public expenditures paved the way to the moderation or elimination of erroneous and damaging incentives of financing, and to the retention of qualified labour. Included in the economy development strategy, the Semmelweis Programme "does not consider healthcare as a sector immoderately exhausting public funds, but as a significant potential engine for the economy".

– Wage increases in healthcare, the 70 percent rise in financing primary healthcare, the consolidation of hospital debts and the structural changes implemented to reduce debt over the long term all contribute to the sustainable operation of healthcare. The control of certified public data and procedures, and the renewal through giving preference to patients' interests and patient security over the interests of the care system may have a key role in modernisation. Restoring the prestige of freelance physicians and medicine in general, and the integration of private resources into the system are also pivotal.

Renewal of public finance audit

With the entry into force of the Fundamental Law, a new era started in both public finance discipline and control. A chapter on public finances, including several rigorous provisions about the management of public funds, was added to the Fundamental Law (see above).

1) Following the adoption of the Fundamental Law, Act LXVI of 2011 on the State Audit Office was the first cardinal law adopted by the National Assembly. The purpose of the new regulatory framework, effective as from 1 July 2011, is to improve the efficiency of the State Audit Office's operation and action to protect the taxpayers' money and the nation's wealth. Pursuant to the new act, the State Audit Office has become one of the most significant elements in the system of economic checks and balances that ensure the democratic operation of the Hungarian state. The new statute introduced numerous important changes, as it extended the SAO's audit powers, perceptibly increased the organisation's independence and made the audit office's work more transparent. The act grants extensive powers to the State Audit Office, in other words, the SAO is entitled, as a general rule, to check the use of any public fund or publicly owned asset.

2) The Fundamental Law raises the Fiscal Council among the organisations of a constitutional status, equal to the State Audit Office and the National Bank of Hungary (MNB). The Council's powers stem from the Fundamental Law, as its duty is exactly to enforce the constitutional rule of debt, and not to allow it remain merely a written word. The Fundamental Law stipulates that in order to reduce the debt portfolio, the Fiscal Council has the right of veto, and with this the Hungarian legislators undertook voluntary restraint.

In addition, numerous other laws were re-codified. Most significantly, the act on public finances, which was renewed and placed on a new footing.

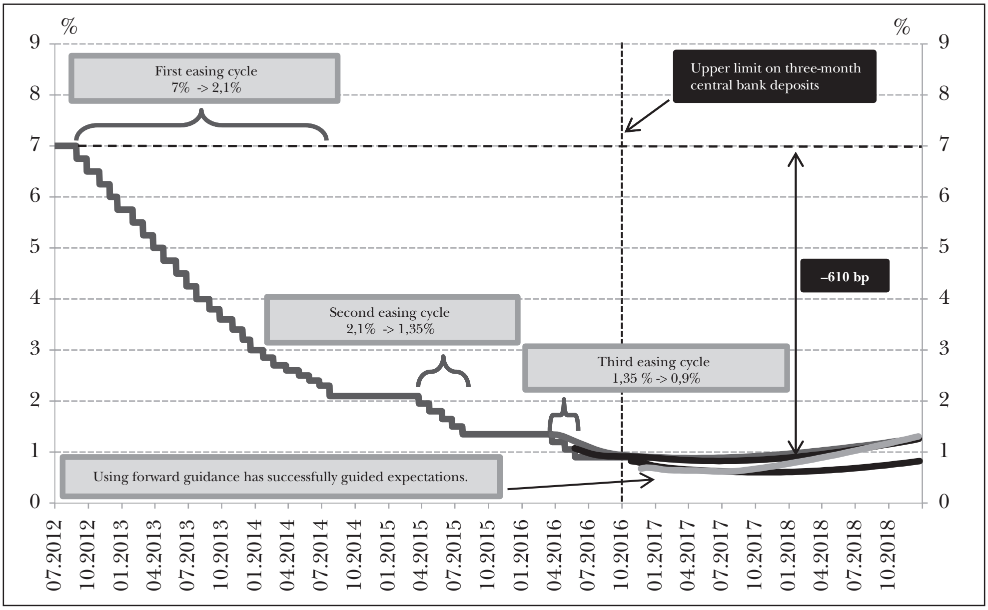
Turnaround in Monetary Policy

Through the renewal and wide application of the monetary policy instruments, in 2013 the National Bank of Hungary (MNB) joined the central banks that wished to mitigate the consequences of the crisis by a proactive monetary policy, with some actions taken in a new approach in addition to traditional ones (see Parragh, 2017). In compliance with its duty stipulated in the MNB Act, it launched several programmes in support of economy stabilisation and the government's economy policy endeavours.[14] For the purpose of developing a well-managed state, the following are considered as the most important. The central bank's actions are presented on the basis of Matolcsy and Palotai, 2016 and Kolozsi, 2017.

Interest rate-cutting cycles and monetary easing

Between 2012 and 2016, the Monetary Council lowered the initial 7 percent central bank base rate to 0.9 percent in three interest rate-cutting cycles, altogether 32 interest rate-cutting steps, and loan rates and money-market yields fell in parallel. Such a long easing cycle and such a low nominal interest rate had been unprecedented in Hungary since the change of regime. At the beginning of the interest cut cycle, inflation was around 6 percent, and from the end of 2013, the inflation started to reasonably decline. Once the 0.9 percent base rate had been reached, the MNB committed to maintain the base rate at a permanently low level.

Figure 7: The central bank's base rate and developments in interest rate expectations



Source: Komlóssy and H. Váradi, 2017

Lowering the base rate and easing monetary conditions: 1) it reduced the interbank and securities market rates; 2) it supported economic growth and the medium-term achievement of the inflation target; 3) it reduced credit limits; 4) it prevented further drastic drops in consumption and investments. Due to the more relaxed monetary conditions, in 2017 HUF 600 billion HUF interest was saved by the government, amounting to a total of HUF 1600 billion since 2013.[15] Interest rate cuts increased economic growth by about 1.1 percentage points in the aggregate.[16]

The adoption of lending incentive programmes

As one of the first actions of the 2013 monetary policy turnaround, the MNB launched a targeted lending programme to stop decline in lending to small and medium-sized businesses, a sector of outstanding significance in employment, and allow lending processes normalise. In addition to the third, deregulatory phase of the Funding for Growth Scheme, at the end of 2015, under the name Market-Based Lending Scheme, the central bank also announced a programme in support of transition to market-based lending.

In the framework of the programme, lending and leasing transactions served new investments in the amount of approx. HUF 1700 billion, while the Funding for Growth Scheme contributed 2 percent to economic growth between 2013 and 2016, increasing the employee headcount by approximately 20.000. In order to facilitate transition to a market economy, in January 2016, the MNB launched the Market-Based Lending Scheme, which, in combination with the Funding for Growth Scheme, contributes greatly to keeping the extension of SME lending in the 5-10 band required for sustainable economic growth.

Self-Financing Programme: the reduction of external vulnerability

Prior to the launching of the Self-Financing Programme, i.e. between 2014 and 2016, due to the increased amount of forints issued, the Hungarian government was able to repay approximately EUR 11 billion (HUF 3400 billion) from the HUF seigniorage income. Its role in bank financing also increased significantly: by 2016 foreign investors had been replaced by domestic banks as the most important owners in the market of HUF-denominated government securities. Between 2011 and 2015, foreign investors predominated in the HUF-denominated government securities market. However, at the end of the first six months of 2017, the ratio of Hungarian sectors exceeded 80 percent. Credit institutions' share rose from 30 to 37 percent, while the households' increased from about 5 to above 20 percent (in 2012, the government made increase in government securities in household ownership a strategic goal). The ratio of foreign currency in the sovereign debt fell from 42 percent in 2014 to 25 percent in 2016, which roughly corresponded to the value recorded in 2008, before the crisis.[17]

Phasing-out of household FX loans and their conversion to HUF

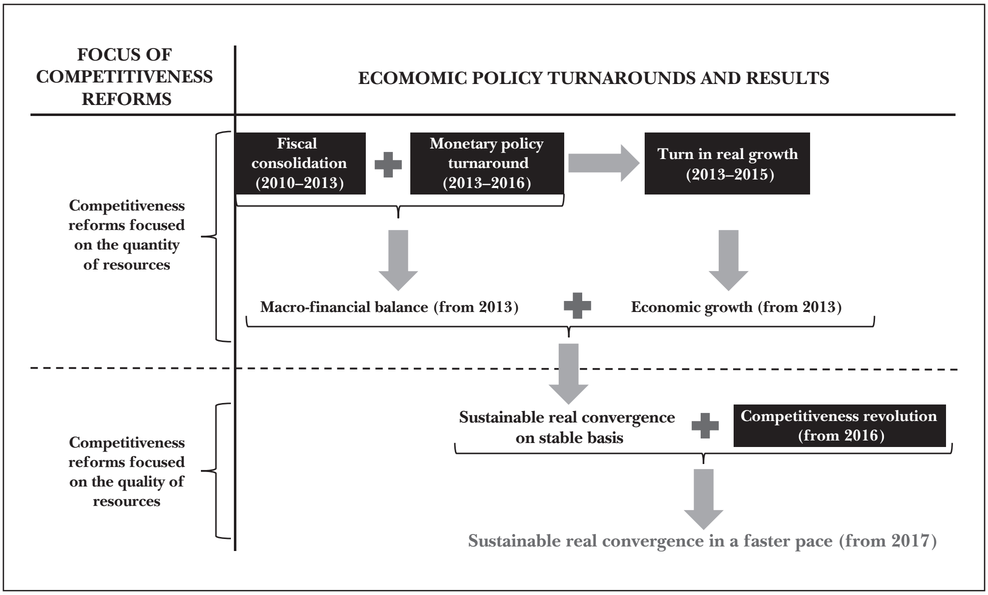
The indebtedness of the population in foreign currency had been one of the high-priority risks in the Hungarian economy since the early 2000s. The risks and system-level challenges justified the government's action against uncollateralised household FX loans (Nagy, 2010; Nagy and Prugberger, 2011), and in 2014-2015 also the conversion of FX and FX-denominated loans.[18] FX loans were phased out in two phases (first, household FX-based and FX mortgage loans, and then other household FX loans). Within this framework the MNB selling approx. EUR 9.7 billion to banks without the central bank's reserves falling below the expected international standards. As a result of conversion to HUF and the settlement of accounts, Hungary's financial stability improved considerably, as did risk control. This is why the phasing-out of household FX loans, especially coupled with the Self-Financing Programme, could be one of the actions credit rating agencies specified as a reason for upgrading the debt of Hungary.

Turnaround in competitiveness

A national economy is competitive if it optimises the use its available human, physical and natural resources in the interest of the highest possible but still sustainable level of welfare (MNB, 2017a, p. 11). Firm foundations, a stable macroeconomy and financing, a potent and stable institutional background, streamlined and efficient regulation, and high-standard education and healthcare are indispensable for a competitive economy, to serve as a basis for a smoothly operating and predictable environment encouraging investments and innovation, and closing the gap over the long term may start.

The budgetary and monetary policy turnarounds performed since 2010 have restored the macroeconomic equilibrium required for the improvement of competitiveness, and after 2013, they allowed the economy to grow at a pace exceeding the average of the European Union. The fiscal measurements and the central bank's actions facilitated economic development[19] and increased employment,[20] and in addition to the money and capital markets, the achievements of the growth-oriented economic policy are recognised by the international organisations and large credit rating agencies. However, a faster and permanent convergence requires an improvement in the qualitative attributes of resources. For an escape from the medium-developed economy status, the acceleration of convergence is indispensable, and requires reform actions performed with primary focus on the quality criteria of competitiveness. In order to preserve the achievements made since 2010 and accelerate permanent convergence, it is indispensable to make efforts at improving efficiency and increasing value creating capacity and productivity (turnaround in competitiveness). In order to regain Hungary's former regional leading position and to break free from the trap of medium development, the gap must be closed more rapidly than previously and the exploitation of the growth pattern needs to be carried on and improved.

Figure 8: Reforms in competitiveness and turnarounds in economic policy



Source: Szalai and Kolozsi, 2016

Epilogue

As a combined effect of debt reduction, fiscal stabilization and the turnaround in monetary policy, in 2013 Hungary could start to close the gap. As a prerequisite of the polity model change the state had to be reinforced, and the framework for co-operation between the state and various social groups had to be developed. After accepting the institutional foundations brought once again into the limelight, parallel with increase in the demand for reforms, rise in social confidence and cooperation may allow the creation of a higher-standard state operation. As a first step in the creation of an appropriate institutional background, the state was reinforced and is now capable of receiving cooperative responses from the relevant social groups, especially market participants and citizens, to its own cooperative actions. This study describes the steps that highly facilitated the reinforcement of the Hungarian state, and through this, the transition to a cooperative polity model and the change in the entire state operation.

Arising from the achievements made in recent years, the Hungarian state has already got sufficient elbowroom to take actions that presume both a room to manoeuvre and sufficient weight to enforce a cooperative response from the stakeholders to the government's initiatives at cooperation. The following include, but are not on any account limited to, more significant examples of actions taken in the direction of a well-governed state:

– Tax cut policy, which, in combination with an improvement in tax compliance and the renewal of tax collection (NAV 2.0 concept), shows that the state is gaining strength, and that it is a government strategy affecting large masses and representing cooperation between the state and taxpayers. Prior to the adoption of the flat-rate personal income tax, the tax base was the income increased by 27 percent VAT, and the rates were 17 and 32 percent. Currently, the tax base is not adjusted, i.e. the tax base is more than one quarter less, and the rate is uniformly 15 percent. In addition, tax credits have been terminated and the available family tax allowance has increased considerably. However, in comparison to the size of tax cuts, personal income tax decrease was considerably smaller: while in 2010, the amount collected as personal income tax was 6.4 percent of GDP, in 2017 it amounted to 5.2 percent, representing an increase in nearly HUF 200 billion in nominal terms. These values are modified by numerous factors, however, the trend shows that the tax payment morale may have improved (in the case of VAT that trend was even more obvious).

– Constructive cooperation between monetary and fiscal policies, representing a break with the previous practice of competitive and contrasting operation of the central bank and the government, and making efforts at the achievement of economic policy objectives via synergies, while maintaining the central bank's independence. There is a long list of economic policy areas jointly affected by fiscal and monetary policies, and the jointly managed economic policy challenges (for more details, see Matolcsy and Palotai, 2016), but perhaps the most conspicuous example for constructive cooperation was the phasing out (conversion into HUF) of household FX loans, which could not have been implemented without a coordinated action of the government and the central bank.

– The central bank's programmes based on the voluntary cooperation by banks, which are successful because of banks' constructive and cooperative response to the MNB's incentives. In the case of the Self-Financing Programme launched in 2014, the combined and complementary transformation of the MNB's instruments, the negative FX issuance by the Government Debt Management Agency (ÁKK) and the bank sector's demand for government securities promote the implementation of the self-financing concept, i.e. reduction of the country's exposure and thus vulnerability to the rest of the world. In this programme, the ratio of FX in the sovereign debt fell from 50 percent to 25 percent. In the course of the Market-Based Lending Scheme launched in 2016, the banks with access to the central bank's instruments undertake a lending commitment, which is, by definition, a kind of cooperation with the other participants of the banking system and with the central bank. Lending undertaken by the banks has allowed a shift in the SME developments from the previous drop to a 5-10 percent annual rise.

– The transformation of public finance audit, with the reinforced State Audit Office adopting and operating programmes which "channel" the behaviour of the users of public funds. Examples include the State Audit Office's Integrity Project, launched in 2011 for an annual measuring of the public sector's corruption risks and the level of their control. The State Audit Office's courses endeavouring to share good practice in public finances fit well to this advisory role: in addition to revealing errors, in the course of inspections, the auditors also meet forward-looking management solutions and good practices they subsequently share with the stakeholders in the framework of the seminar series entitled "Good Examples Are Contagious. Best Practices in Using Public Funds". Between 2011 and 2017, the State Audit Office organised 17 such seminars. Another kind of steering role is undertaken by the State Audit Office's news portal that allows for the daily tracking of the work done at the office, thus setting an example for the entire public finance system in respect of transparency.

Due to the state's position as a special economic participant and a regulator, it can substantially contribute to the improvement of the national economy's competitiveness. The improvement of competitiveness requires the efficient application of coordinated and targeted action packages, which was subject to the renewal and strengthening of the Hungarian state, as an indispensable precondition, implemented ever since 2010.

Looking ahead, both the paradigm change that may lead to a state operation proactively applying positive incentives and making efforts at partnership, and the institutionalisation of the achievements made so far are of strategic significance. "Institutions matter", Nobel Prize winning economist Douglass C. North's theorem, which has become something like a catchphrase, can thus be affirmed in contrast to the neoclassical doctrine. The rules of the game set by the given political and social framework determine and shape the decisions made by social stakeholders, and especially markets and individuals, in other words, the stable and efficient institutional matrix presumes the building up of a state that encourages the entire society to cooperate. As in the case of the informal frameworks that determine individual and collective behaviour to a major extent, improvement may only be gradual, and so transition to a cooperative polity model needs time. Hungary's current leverage is due exactly to the fact that the stabilising actions and economic policy turnarounds implemented in this decade provide an appropriate basis for a switch to a polity model built on trust.

Notes

1 Perhaps the most relevant part of Thaler's heritage concerns government institutions set up for the purpose of steering and pushing individuals in the direction that represent a more optimum output at a community level (nudge units).

2 *33 Theses for an Economics Reformation.* http://www.newweather.org/wp-content/uploads/2017/12/33-Theses-for-an-Economics-Reformation.pdf.

3 What is an "institution"? This concept was first used by the renowned American lawyer and economist, Walton Hamilton, in 1919, and the American economist John R. Commons, a follower of institutionalism, was the first to point out the complexity of the concept of an "institution". The term "institution" includes written laws and regulations, unwritten norms, culture and habits, in other words, all the "collective frameworks" that influence and channel an individual's behaviour. The history of ideas consider Thorstein Veblen as the founder of institutional economics. The Norwegian-American economist was the first to widely emphasise that economic behaviour largely depends on the social institutions and the environment of the economic actors, and consequently, one and the same kind of solution is inapplicable to countries with completely different backgrounds and operation.

4 According to Domokos, 2016, the opportunity for the state to implement good governance is given in the framework of gradual reforms, through becoming a reliable and efficient partner, and by the adoption of a two-phase strategy.

[5] About the stakeholder approach see Kecskés, 2011, p. 43.

[6] In the frame of cooperation, persons and organisations act in concert to achieve common goals, on the one hand, and the practice of arriving at an agreement between stakeholders is also improved, on the other. Cooperation between the participants gives way to an increase in the economic and social benefit.

[7] To put it simple, in a game theory approach, the question is practically: when the payment matrix becomes from a prisoner's dilemma to a stag hunt. Here we dispense with its detailed explanation.

[8] Structural reforms cause changes in the deep layers of the economy and the society through altering the institutional framework, the legislative environment and the institutional rules. They change public thinking and the improvement of the state brings the improvement of public confidence in its train. See Matolcsy, 2015, p. 232.

[9] See Articles 33-44 of the Fundamental Law (chapter on public finances).

[10] Although these rules limited the powers of National Assembly, they were indispensable for the creation of the new framework of public finances. See Kecskés, 2015.

[11] For further details and the consequences see Baksay and Csomós, 2015.

[12] The businesses in the majority ownership of local governments also piled a significant amount of debt because up to 2011 the State Audit Office had not been authorised by law to audit businesses in local government ownership. Local governments, on the other hand, did not pay sufficient attention to controlling the indebtedness of their businesses.

[13] There are also several other arguments in support of transformation (low actual costs, high costs borne by members, below-the-expected development in the Hungarian capital market, etc.).

[14] For more details about the central bank's actions see Lehmann et al., 2017.

[15] About this correlation, see Csomós and Kicsák, 2015.

[16] At the end of 2017, market investors already welcomed the MNB's easing policy. See Eder, 2017.

[17] See Kolozsi and Hoffmann, 2016; Nagy and Kolozsi, 2017

[18] Conversion to HUF was performed in a period when both the legal background and the economic conditions were given (see Kolozsi et al., 2015).

[19] Economic growth has exceeded 3 percent on average since 2013.

[20] In mid-2010 the employee headcount was 3.7 million, which had increased to 4.4 million by 2016.

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József Varga – Sándor Kenyeres

Current Questions of the Transformation of Hungarian Taxation

Summary
In this paper the authors provide an international comparison of the Hungarian tax system. The main claim made in this publication is that although taxes are relatively high in Hungary compared to the regional competitors, and this seriously affects Hungary's competitiveness, the recent years have seen a number of positive developments in changing the tax system and eliminating the asymmetries of consumption and work-related taxes. This paper provides an in-depth analysis of the transformation of the Hungarian tax system between 2008 and 2017. It sets forth a set of possible tools for reducing the shadow economy and presents the significant measures taken to that effect in Hungary. At the end of the paper, the authors provide an analysis of the paradigm change envisaged in 2018, which will have a substantial impact on the future, and briefly discuss the most important upcoming changes in taxation.

Journal of Economic Literature (JEL) Codes: H20, H25, H26
Keywords: Hungarian tax system, tax regime, tax reduction, tax on labour, whitening the economy, change of taxation paradigm

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Introduction

After the 2008 financial crisis, the transformation of Hungarian taxation has accelerated. In the first part of the paper a diagnostic review of Hungarian tax rates are provided in an international comparison. It is concluded that tax rates are approx. 40%, by nearly 10 percentage points, higher than the average rate applied in the surrounding competitor countries (EP, 2016).

Since 2008, the structure of the Hungarian tax system has undergone significant transformation. Between 2004 and 2008, work-related taxes rates increased and consumption taxes declined. After 2008, however, these trends reversed: turnover and consumption tax rates began to rise, while the rate of work-related taxes started to decline. Currently, the latter trend is still ongoing.

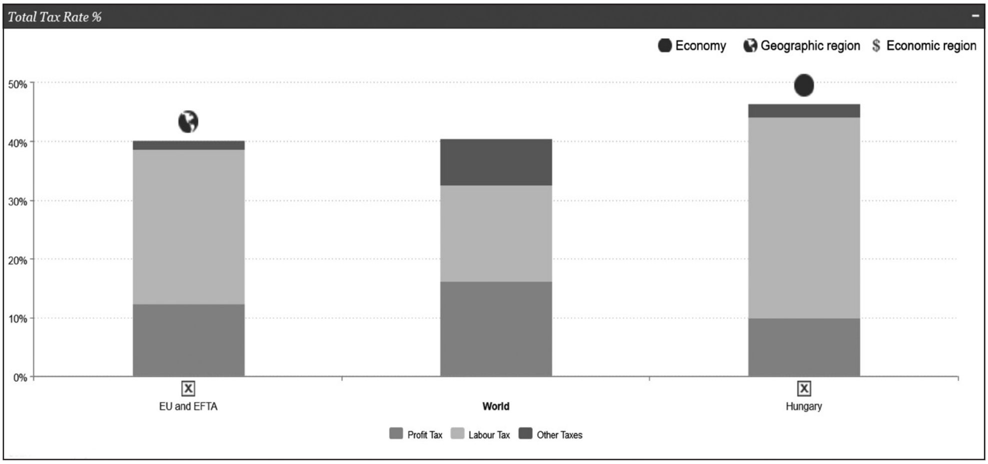
The Hungarian tax system in an international comparison

In an international comparison, Hungarian enterprises pay high taxes: in 2016, the average tax rate was 48.4%, with the world average being 40.8%, and the average rate in the EU and EFTA Member States being 40.6% (PwC, 2016). In 2017, this rate was 46.5% in Hungary and 40.3% in the EU and EFTA Member States, with the world average being 40.6% (PwC, 2017). A careful analysis of the data, shown in Figure 1, reveals a particularly significant correlation. While the world average profit tax and work-related tax rates are equal, both being 16.3% (the average rate of other taxes is 8.0%), in Hungary, the profit tax is only 9.9%, but the employment tax rate is as high as 34.3% (with other tax rates being 2.3%). Thus, work-related taxes are more than double the world average. In the literature on Hungarian taxation, it has been pointed out on numerous occasions (e.g. Csomós and P. Kiss, 2014; Balog, 2014) that in light of the above data, it is imperative to cut work-related taxes in order to reduce the illicit economy and to increase Hungary's competitiveness.

There is also a striking difference between the time periods required to comply with tax liabilities (Figure 2). In 2016 the world average was 261 hours, the average of the EU & EFTA Member States was 173 hours, and the average in Hungary was 277 hours (PwC, 2016). According to the data provided in the PwC (2017) publication, the world average time to comply with tax liabilities was 254 hours, the average of the EU & EFTA Member States was 164 hours, and the corresponding value remained unchanged at 277 hours in Hungary. Figure 2 also provides information on the ratio of the time required to comply in each of the three tax types: in Hungary, time required to comply only with work-related tax liabilities was nearly as high (146 hours) as the time to comply with all tax liabilities in the EU & EFTA Member States (164 hours).

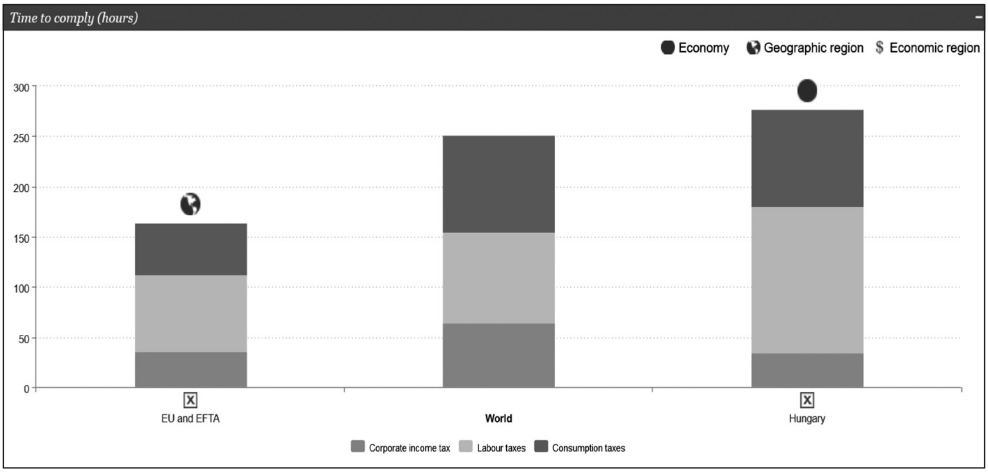
A useful indicator for assessing a country's tax rates is obtained by establishing the extent of state intervention, which is another important area in economic policy. A country-by-country comparison of government revenues as a percentage of GDP ranks Hungary among the countries imposing higher burdens, as in 2015 its revenue-to-GDP ratio was

Figure 1: Total tax rates (world, EU & EFTA, Hungary)



Source: PwC, 2017

Figure 2: Time to comply



Source: PwC, 2017

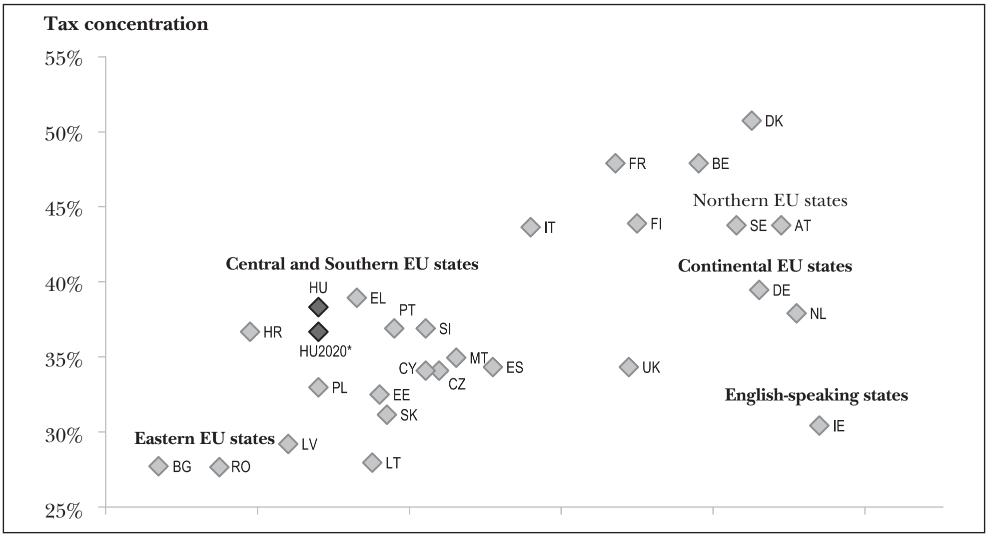
48.2%. However, this rate is not as spectacularly high as the other areas of taxes analysed above: for example, Denmark (53.9%), France (53.5%), Finland (54.9%) and Norway (55.2%) all have higher ratio than Hungary and are therefore ranked higher. As a perceptible positive trend, in 2016 this value fell to 44.8%in Hungary (HCSO, 2016).

While the above-mentioned countries precede Hungary in terms of per capita GDP, the Czech Republic, Croatia and Slovakia have revenue-to-GDP ratios slightly exceeding 40%, lower than Hungary. The correlation between high economic growth rates and more moderate state intervention witnessed during the past decade in countries of the Visegrád Group (V4) should be taken into consideration for the development of Hungary's economic policies. For Hungary, it is especially the example set by Poland that seems to be the path to follow, with a revenue-to-GDP rate under 40%.

Another relevant area is the development of tax revenues as a proportion of GDP in Hungary. According to the study entitled "Overview: the European Parliament's Work on Taxation" (EP, 2016), the total tax revenue in Hungary contributes 39.2% to GDP. In a breakdown, 18.5% of GDP comes from direct taxes, including income taxes, while 7.5% from indirect taxes (VAT and consumption taxes). Consumption taxes and work-related costs have an approximately equal share in the total tax revenue.

In Hungary taxes are high compared to other countries in the region: relative to 39.2% in Hungary, Slovakia (28.3%), Romania (28.3%), the Czech Republic (35%), Poland (32.5%) and Bulgaria (27.9%) all have lower rates to GDP (EP, 2016), and moreover. The situation caused by high taxes is further aggravated by the fact that the in Hungary the per capita GDP at a Purchasing Power Standard is merely 68% of the EU average. In contrast, the taxes levied in Poland and the Czech Republic only amount to 32-33% and 35%, respectively, with similar or significantly higher GDP (Figure 3). Based on fiscal statistics, it can be concluded that over the short term, Hungary should aim to close the gap to Poland in tax rates (Varga, 2017).

Figure 3: Correlation between taxes and GDP in Europe

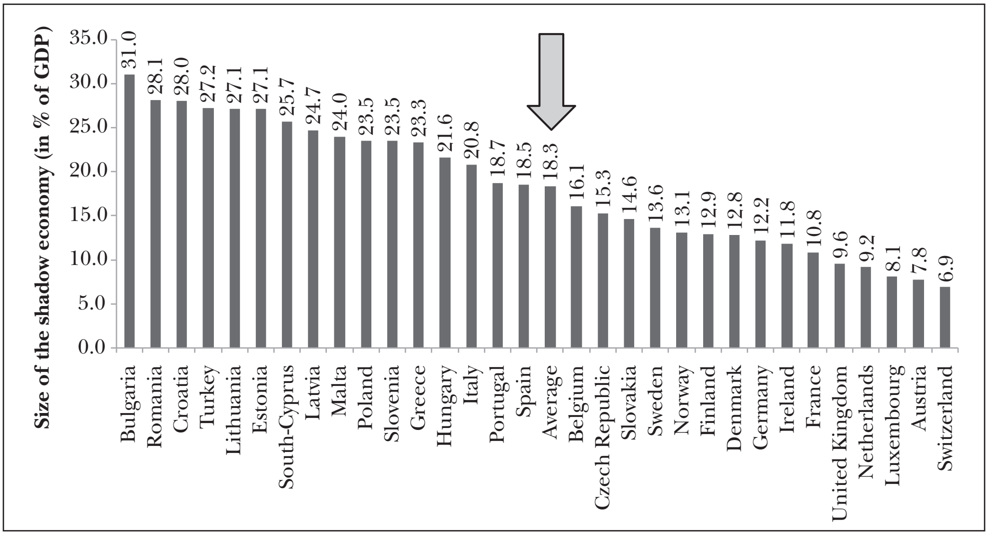


Note: GDP in PPP (average of EU= 100%)
Source: Izer, 2016

Potential methods of reducing the shadow economy in Hungary

In the international reputation of Hungary, the size of the shadow economy is an important factor. In 2015, the ratio of the hidden economy as a proportion of GDP was still in the range of 22-23% (Figure 4) in Hungary. According to Schneider (2012), 35-38% of the shadow economy results from the increase in taxes and social security contributions (Balog, 2014). In comparison to Hungary's regional partners, the size of the shadow economy is 6-8 percentage points lower in Slovakia and the Czech Republic, while 1-2 percentage points higher in Poland.

Figure 4: Shadow economy in Europe, as a percentage of GDP



Source: Schneider et al., 2015

Based on the work of Schneider et al. (2015), in his presentation Izer (2016) ranks Hungary in the middle of the list of European countries in terms of shadow economy size. The authors of the underlying study claim that the size of the shadow economy cannot be reduced through economic, legal, management or psychological means alone; addressing it requires an interdisciplinary approach. Domokos indicates that in recent years, the shadow economy in Hungary has shrunk to 20-21 percent of GDP from a previous 24 percent (Hvg.hu, 2016). A further 5-percent reduction is expected to yield an additional HUF 500-600 billion in revenues. Balog (2014) points out that a high tax morale clearly reduces the size of the shadow economy, as in such a case, taxpayers do not participate in the operation of the black market even though they would benefit from tax fraud.

Lower taxes presumably contribute to an improved tax morale. An important element of improving the tax morale is for taxpayers to be aware that the taxes they pay serve the right social causes, which they also support. This underlines the importance of consideration in spending public funds. As shown by Domokos, Németh and Jakovác (2016, p. 25), "the audit findings of the State Audit Office confirm that the control systems of both public entities and state-owned business associations need to be improved significantly in order to ensure good governance and public sector management. All these call for a paradigm shift; new horizons should be opened up in the public sector management approach. It is indispensable to ensure that the performance of organisations entrusted with the management of public funds or public assets is transparent, accessible and measurable, because this is the only way to ensure successful, efficient, economical and sustainable public management, and thus, to increase social welfare".

The measures taken in Hungary in the recent years with the aim to improve the efficiency of tax audits mainly focused on preventing the concealment of corporate incomes. The most efficient such measures include the introduction of online cash registers, the tax registration procedure, and the capping of cash payments between companies and the system of tax summaries. In order to prevent the concealment of incomes, a number of measures have been introduced after 2010 (structural changes, the transformation of the tax system, enabling the tax authority to collect information, the ability to focus tax audits on high-risk activities and taxpayers). Among structural changes, the most important step was the merger of the tax and customs authorities. Establishing an adequate framework for taxation is more difficult at a European Union level due to the conflicting interests of the Member States. Within the EU, community trade in goods and its insufficient documentation is an important area with regard to value-added tax fraud. The European community has been unable to introduce a uniform system for the submission date and contents of VAT returns (Varga, 2017).

In the existing VAT system, due to the disappearance of the VAT content of declared incomes, a reverse charge mechanism has been introduced in many areas where fraud is highly prevalent. In such a system, VAT is not passed on by the issuer of the invoice. The buyer is liable to pay and is entitled to deduct VAT at the same time. This prevents budget deficit from the VAT system. When supported by proper controls, this system can work efficiently. The more products are included in the reverse charge system, the less VAT retains its value-added nature (Act CXXVII of 2007 on Value Added Tax).

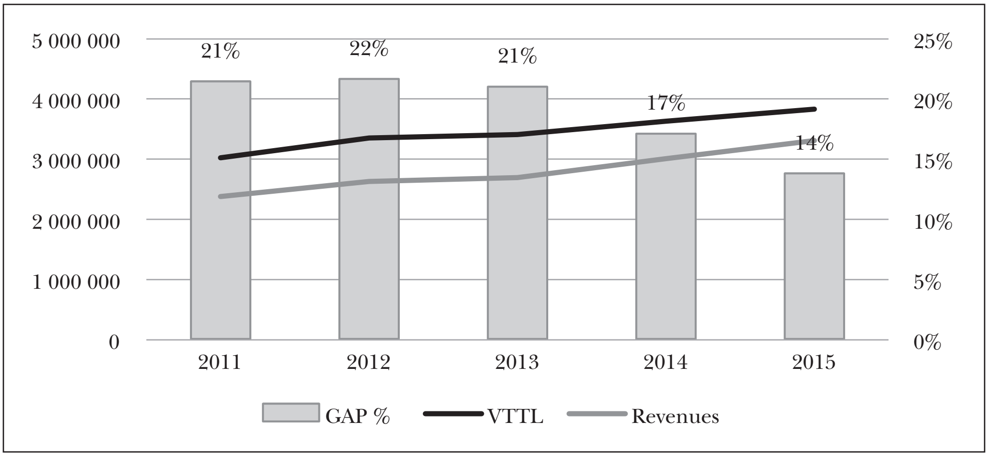
In order to allow the tax authority to set up its data collection activities, IT developments need to be made and the legal environment needs to be established first. An efficient tool in fighting income concealment was the introduction of the system of itemized domestic VAT summary statements. This requires taxpayers to submit an itemized statement on the data of invoices containing VAT above a certain value limit. At the time of introduction, the threshold for obligatory reporting was HUF 2 million, currently it is HUF 1 million. It was supposed to be changed to HUF 100,000 as of July 2017, but it has been deferred to July 2018. These reports must be submitted both by sellers and buyers. In order to check VAT declaration liabilities in advance, the Electronic Trade and Transport Control System was established to tracks the movement of goods on public roads (Varga, 2017).

An efficient way to reduce the illicit economy was the requirement of the use of online cash registers. While the previously discussed systems concerned B2B trade, the objective of online cash registers serves the fight against hidden B2C trade. The so-called online invoicing system is expected to yield results similar to those of online cash registers (Csíki, 2016). The amendments made to Act XCII of 2003 on the Rules of Taxation now provide a legal framework so that tax audits can focus on high tax evasion risk activities and risky taxpayers.

The activities performed in the "black" and "grey" economies are not documented in the national accounts. If an economic event has been registered and declared in a certain tax category, it will inevitably appear in regard of all other forms of tax. Economic turnover data need to appear turnover tax declarations. Controlling turnover taxes is of particular importance in this regard.

Every year, the European Union assesses Member States' value-added tax deficit. The analysis is based on the rate of VAT Total Tax Liability (VTTL), calculated from data on national income. The net basis of assessment is calculated first, which gives the VTTL by applying the weighted tax rate average to it. This is then compared to the actual amount of value-added tax collected. The difference between the two gives the value-added tax deficit (VAT Gap), which is displayed as a percentage amount in order to facilitate comparison among Member States (CASE, 2017). In terms of the VAT Gap, Hungary is showing an improving trend. Analyses regarding the year 2015 were finalized in 2017.

Figure 5: VAT gap in Hungary, 2011-2015



Note: VTTL and Revenues on the left axis, GAP% on the right axis
Source: CASE, 2017

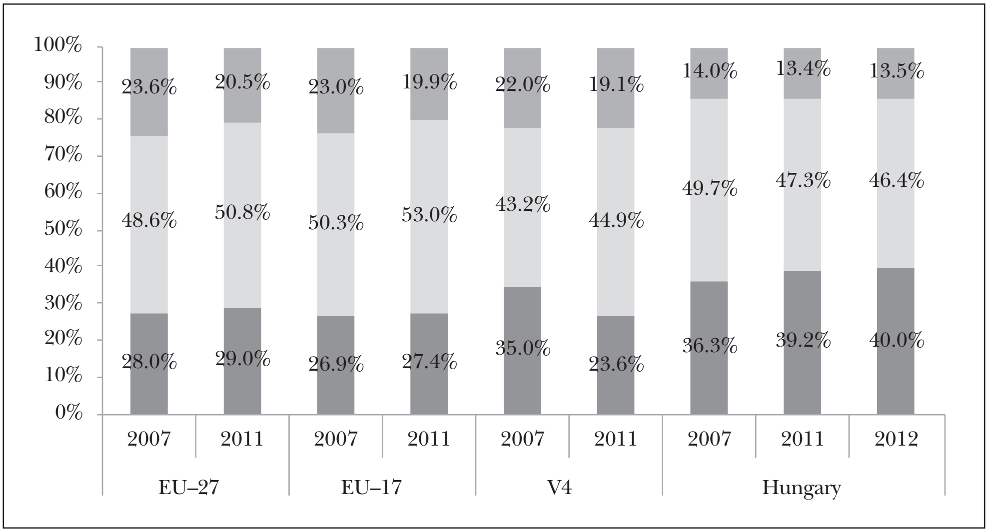
The Figure 5 shows that the VAT gap decreased significantly, from 21% to 14%, between 2011 and 2015. Results for the year 2015 already show the effects of measures taken in recent years to reduce the illicit economy. These include the introduction of the Electronic Trade and Transport Control System (ETTCS), lowering of the threshold of obligatory reporting from HUF 2 million to the current HUF 1 million, considering itemized domestic VAT summary statements and the impact of the reverse inland charged tax. The EU study confirms that the steps taken to reduce the economy are effective in case of turnover taxes.

New steps in the Hungarian tax structure

In Hungary from 2008, especially from 2010, we can observe a significant transformation of the tax system. Lentner's (2016a) study denominates the 2010 tax revulsion as one of the three key economic policy revolutions of the past fifty years. One of the most important areas of tax redistribution is the discontinuity of the tax path, in which the proportion of taxes on work in Hungary between 2004 and 2008 has been increasing, the proportion of consumption taxes has been decreasing. After 2008 this trend reversed: the proportion of turnover and consumption taxes increase and the proportion of taxes on labour declines.

The examination of all incomes and consumption taxes is a relevant economic issue. Csomós and P. Kiss's (2014) study shows that the weight of consumption taxes both in the European Union and considering the V4 countries throughout 2007 and 2011 has steadily increased over the period under Council Directive 2006/112/EC. While the weight of these taxes inside all tax revenues grew by 1 percentage point in the EU, by 1.2 percentage points in the V4 countries, in Hungary it grew by 3.7 percentage points (Figure 6). At the same time the weight of work-related taxes has been reduced by 3.3 percentage points in Hungary. This trend shows the government's intention to create a work-based society and lower the tax and contribution burden on labour.

Figure 6: Changes in tax regimes considering the EU, V4 and Hungary



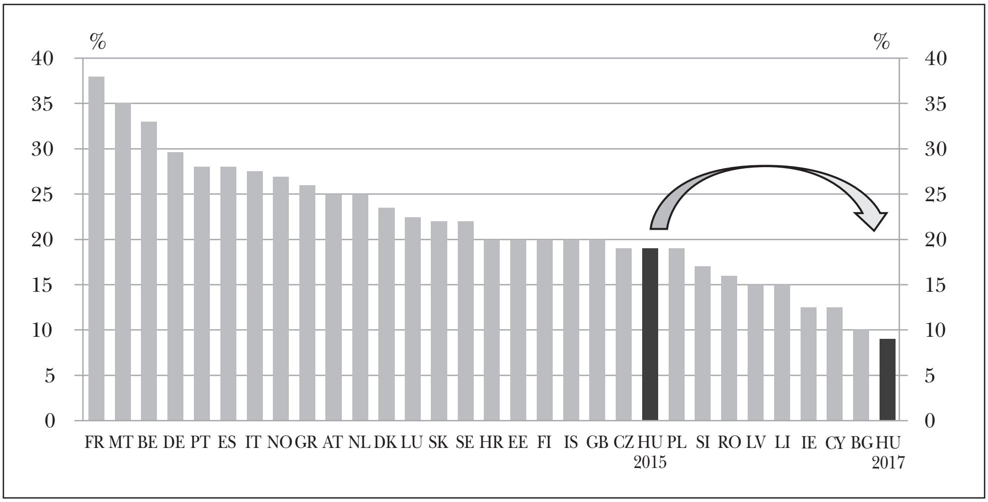
Note: Bottom: taxes on consumption to total taxes, in the middle: work-related taxes to total tax
Source: Csomós and P. Kiss, 2014

Considering the domestic tax system, it is necessary to mention the special taxes playing a particular role in it. As shown by Matolcsy (2014), some of the special taxes, also considered to be sectoral taxes, are, in fact, turnover and consumption taxes (e.g.

telecommunication tax, financial transaction tax, insurance tax), another part are wealth taxes (e.g. public utility tax), and a third part are capital taxes (e.g. bank taxes and income tax on energy supplies).

In his study Lentner (2016b) analyses the situation of special taxes in connection with the relevance of widening the tax base. According to Bozsik (2014), the special taxes levied in the sector have a major role in the Hungarian tax system, as in addition to providing a significant budget revenue, they reduce profit-repatriation. The 2017 unification of the corporate tax rate in Hungary was a significant step in shifting from consumption taxes towards work-related taxes. In the case of enterprises with a net sales revenue of HUF 500 million, this means a 10 percentage point decrease compared to the previous 19%. In the case of companies with a net turnover of up to HUF 500 million, this results in a 1 percentage point decrease. For sole entrepreneurs the personal income tax was also set at 9%. With this step, Hungary has placed itself among the most favourable countries in terms of corporate tax rates, actually applying the lowest corporate tax rate among the EU Member States (Figure 7).

Figure 7: Upper limit of corporate tax rates in 2015 and the Hungarian tax rate in 2017



Source: Mosberger, 2017

In terms of taxes small and medium-sized enterprises (SME) is an important factor of the long-term health of the economy, especially considering the employment. Positive changes in taxation have also been made in this area. The taxes imposed on the SME sector between 2010 and 2015 have reduced from 57.5% to 48.4% (György and Veress, 2016). The taxes payable by the SME sector were also decreased significantly due to the indirect effect of simplified taxation. Another significant cut for this sector included reduction of the rate of the social contribution from 27% to 22%. Reducing the social contribution can also have a positive impact on employment, especially in the industries in which labour cannot be replaced by a cheaper solution (Ambrus, 2016). It is not negligible that through the 5% reduction in the tax wedge, the rate payable by the employer has decreased relative to the employee's obligations. This measure is expected to contribute to the moderation of work-related duties and increase the competitiveness of Hungary over the long term.

2018: Paradigm shift in taxation

In addition to tax restructuring, the efficiency of tax collection is also being improved. The goal is to make the submission of tax returns and payments unavoidable. On 1 January 2018, the Hungarian economy woke up in a significantly different country. The administrative procedural law has been changed, independent administrative arbitration has been launched, and new civil law has been created. The structure of the procedural rules for taxation has been changed completely. The Act on the General Public Administration Procedures (CL of 2016) is no longer considered as the underlying law of tax laws. The regime preceding 2017 and set out in the Act on Taxation, supplemented by the necessary elements of administrative regulation, was divided and included in three procedural laws: the Act on the Rules of Taxation (CL of 2017), the Act on Tax Administration Procedure (CLI of 2017) and the Act on the Implementation of Tax Administration (CLIII of 2017).

The structural changes in procedural law is characterized by the fact that transition is governed by a separate law and the ongoing cases are judged on the basis of the previous legislation. In addition to the changes of procedural rules, companies are obliged to use a new electronic interface (business gateway), however, there is a one-year moratorium granted for these taxpayers to do so.

There is a paradigm shift in taxation. Before 2017, the tax authority acted in a follow-up approach: after completion of a transaction the taxpayer reported and paid or settled the tax. The tax authorities had access to the aggregate data for the reporting period after reporting. Specific information on the transaction was only recognized through a single audit. In the current system, applied from mid-2018, it will be mandatory to report transactions real-time in an increasing number of cases. Transactions must be reported to the tax authorities simultaneously with issuing the bill, done automatically by billing programmes. According to the draft act, entities failing to issue invoices using a computer programme will be required to submit the relevant data on appropriate granted forms. Employment-related data services have already been fully operating for several years, and allow the tax authority to monitor the transactions and review them before the submission of tax returns. The aim is to compel high-risk taxpayers to comply with the law.

In addition, the above-mentioned radical transformation of the tax system continues. In order to improve the structure of consumption, fish, fish offal, pork offal, catering and locally made non-alcoholic beverages are subject to 5% VAT. To spread electronic services, the use of internet may also be included in the 5% bracket.

The additional reduction in employment taxes is a welcome development in 2018. The social contribution rate has been decreased from 22% to 19.5%. The effects of this have been fed through the tax and contribution system. The taxes payable by small tax payers have not decreased, but the value limits to the payable taxes has been increased in accordance with the decreasing levels of social contribution. The social contribution payable on certain types of incomes only includes health contribution, and its rate has also been decreased to 19.5%. So, from 2018 onwards, the employer's burdens related to the employment have been reduced significantly.

Although the contribution to sickness benefits are additional sources for the budget, and consequently the supply system, it does not serve the employer's interests. Its modification in the near future can significantly simplify conditions.

Any increase in the average wage also increases the employer's burdens. The increases performed in the minimum wage (from HUF 127,500 to HUF 138,000 per month, representing an 8% rise) and in the guaranteed minimum wage (from HUF 161,000 to HUF 180,500 per month, representing 12%) are significant. Social contributions decreased by 2.5%, which, in case of low wages, cannot offset the effects of compulsory wage increases. This might have a negative impact on employment in sectors with low incomes.

Considering capital gains the obligation to pay health contribution is unconventional. Bank interests were discharged in 2017. The paradigm shift should also include the transformation of taxes and other burdens.

The tax paradigm shift will be implemented by:

– Transforming the tax audit system
– Completion of tax reporting services
– Moving the emphasis from income taxes to consumption taxes
– Using advanced information technology.

The new regime will prevent tax evasion. Tax returns will be prepared automatically by the tax authority and will only require minimal personal contribution from taxpayers. Taxpayers will have to provide detailed information on every economic event. So far, the tax authority was only allowed to act officially after the submission of tax returns. In the future, it will have real-time information on all economic processes and will prepare taxpayers' settlements on that basis. Taxpayers' data service must be continuously monitored.

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Péter Novoszáth

New Hungarian Economic Philosophy to Improve Households' Financial Situation

Summary

As a result of the neoliberal economic philosophical doctrines that spread in the 1980s, decreasing attention was paid by researchers and other experts in the European Union to developments in households' financial position and consumption in boosting economic growth. This is despite the fact that the examples set by the increasingly faster growing countries, especially India, China, Brazil, Mexico and South Africa, seem to markedly confirm that developments in incomes and household consumption have an increasing role in the acceleration of economic growth. As globalization and the 2008 economic crisis undermined the financial position of households in the European Union, and thus also in Hungary, and a growing part of the population was thrust into increasingly deeper poverty, so people started to become once again aware of the actual consequences of deterioration in households' financial position on developments in economic growth. Having recognised all this, the Hungarian government fundamentally altered Hungarian economic policy. Tax hikes were replaced by tax cuts, and previous high taxes were replaced by tax credits to facilitate households' position. In contrast to the previous austerity packages, actions were taken with the primary aim to increase the income left with households. This is also the purpose of the utility cost cut procedure. In this framework, long-term changes were performed with the aim to allow the government ensure public services in the field of waste water management, drinking water, natural gas and electricity supply, district heating, waste incineration and mass catering on a non-profit basis, in order to increase the income

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retained by the population rather than the profit made by public service providers. This article presents the theoretical background to this economic philosophy and the most important social effects of the adopted actions.

Journal of Economic Literature (JEL) code: D1, D6, D7, E2, L3
Keywords: electricity prices for household consumers, financial assets and liabilities of households, household expenditure by consumption purpose, household savings, natural gas prices for household consumers

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Developments in households' financial position, which have been in the focus of policy and technical debates going on in emerging markets for a long time, are also increasingly attracting considerable attention in developed countries, especially since the 2008 financial crisis (Ampudia and Ehrmann, 2017; IMF, 2013; World Bank, 2008; World Bank, 2014). Households tend to get into a disadvantaged situation, because they do not facilitate consumption and find it difficult to accumulate wealth.

The principal aim of our research at the Public Finance Research Institute of the National University of Public Service is to provide an in-depth study of the macro- and microeconomic structural information representing developments in household assets and liabilities, in order to

(1) understand the interrelationships between the economic behaviour of households and developments in the various macro-economic variables;

(2) evaluate the effects of the various economic shocks, economic policies and institutional changes on household portfolios and their various dimensions;

(3) identify the various aggregated macro-economic variables that have the highest impact on households' financial position, savings, and developments in relations between consumption and investments;

(4) render the decisions on households' various options and reactions to economic shocks predictable;

(5) create and optimise economic models to realistically demonstrate households' economic behaviour;

(6) provide useful insight into correlations between the economic conduct of households, monetary and fiscal policy, financial stability and economic growth.

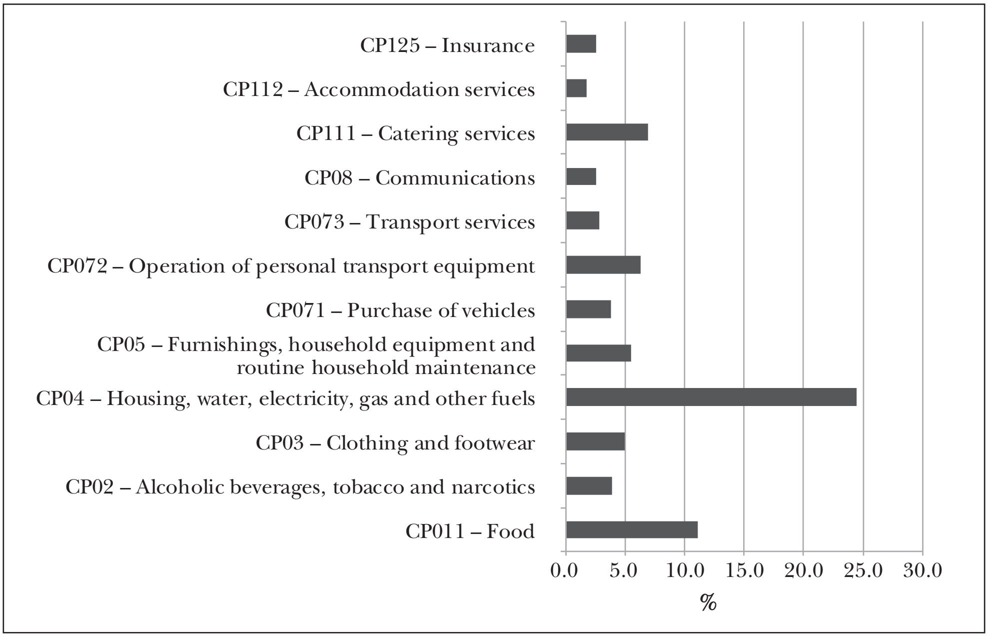
Developments in household expenditures

The aggregated demand of an economy comprises the amount of money spent by households on commodities (C), the expenditures on investment projects (I), government expenditures (G) and exports (X) less imports from abroad (M). The standard formula is:

$$AD = C + I + G + (X - M)$$

Household expenditures are the most important part in the aggregate demand (Howarth, 2015). They can be classified into numerous categories, and include household spending related to transport, food, fuel and clothing.

Figure 1: Household spending in EU, 2016 (%)



Source: Eurostat, 2016

In the European Union, for example, 76.4 percent of household income was spent on daily expenses in 2016, the highest amount, representing 24.5 percent of all their income spent on overhead costs, while 11.1 percent was spent on food. Figure 1 gives an illuminating presentation of the average amount households spend in a week in the European Union in 2016, in a breakdown of various goods and services.

The composition of household spending changes with their income position and with time. Households spend the overwhelming majority of their income on commodities and services required for their standard everyday life, but certain goods and services are not indispensable and do not closely relate to their daily activities. For this reason, increase in incomes encourages households to spend the increment on products representing highly flexible income in their demand, like summer holidays or recreation, as against low income-flexibility foodstuffs. Over time, spending on certain objects and services that come into fashion increases in comparison to those that go out of style. Changes in taxes and subsidies may encourage households to purchase certain products and services or warn them off from buying them. Relative price changes may cause changes in the composition of household consumption, as the prices of certain goods and services may rise in comparison to others.

Factors determining household expenditures

The level of spending is determined by numerous factors. First and foremost, changes in the national income, provided that it has a significant impact on the income available for households.

The current level of national income

In the event of a rise in income, consumers tend to increase their spending on goods and services with higher income flexibility, like for example, luxury products, summer holidays, wellness and leisure-time products and services. In contrast, when their income falls, households postpone expenditures on the most redundant products and services until their income starts to rise again.

The level of savings

Expenditures and savings mutually exclude each other, which means that if the income becomes fixed, any change in household savings will inversely affect expenditures. Numerous consumption factors will have an inverse impact on savings. Household saving depends on the ratio of the total available income used for consumption: *Total available income – consumption = savings* (MNB, 2017).

Any income not used is accumulated in the form of financial or non-financial assets. The accumulation of non-financial assets is presented in capital investments, while the net accumulation of financial investments are accounted as financial savings. (In gross terms, the accumulation of financial assets is considered as investment, and those of liabilities as financing.) Financial savings, also termed net financing capacity, is thus the difference between savings and investments: *Savings – investments = financial savings (net lending, net financing capacity).*

The total available income comprises incomes from production (in other words, added value), employee incomes, social allowances and proprietary incomes, less any income taxes and social security contributions paid by the households.

Expectations

If households are confident and have *positive expectations* for the future, then current expenditures may also rise. This may result in economic growth and enforce the positive expectations.

Unemployment

Unemployment has two impacts on household expenditures. On the one hand, the unemployed pay less due to their lower personal incomes, and on the other, unemployment triggers negative expectations, even among the employees, and this may contribute to fall in spending and the encouragement of savings.

Income tax rates

Change in tax rates may clearly affect the disposable income after taxation and thus influence household expenditures.

Interest rates

Interest rate changes may either encourage or discourage households to save or borrow. The main forms of saving (rise in the rates of deposit interests, government securities, bonds and investment funds) result in more saving and less consumption. On the other hands, increase in the costs, e.g. rates, of debts owed, like mortgage and bank loans, reduce households' financial assets, distracting expenditures towards higher loan instalments and reduces other expenses by households. Rising loan rates may reduce the number of new loans, and there will be a rise in the number of those who postpone borrowing until interest rates start to fall. Expectations and confidence have a significant impact on household behaviour. For example, rising interest rates may erode confidence and cause households take a kind of "wait and see" attitude and postpone certain expenses until prospects start to improve (Howarth, 2015).

The role of households in economic development

Due to their consumption, households make one of the key sectors of the economy. Economists usually classify households' contribution to economic performance into two categories. On the one hand, in the form of various factors, they provide services to the economy, and on the other, they generate demand for finished products and services in the market (Seth, 2015).

a) Households provide businesses with such important production factors as land, labour, capital and so on.

b) In the market, it is households that purchase the finished products and services manufactured by businesses.

Households have an enormous role and significance in economic development:

– *Households produce a significant part of the products and provide the major part of services.* In Hungary there is a high number of family businesses, owning minor production or service provider units. These households are entrepreneurs making various goods and offering diverse services. These businesses employ a significant part of the labour force, they are key economic stakeholders and at the same time they have a peculiar and high significance within households.

– *Households purchase a significant part of the manufactured goods and services provided.* Households are among the key end-consumers of the goods manufactured and services provided by companies. In accordance with their tastes and preferences, they generate considerable demand for businesses' products and services. For the most part, businesses manufacture their products and services in the market according to households' requirements and demand. For this reason, it is also households that primarily determine the activities of the production line made by businesses.

– *Households pay a significant amount of taxes.* Households are the government's principal sources of tax income. They are the key taxpayers. Households pay income taxes, employee contributions, at certain places also property taxes, gift taxes and various other contributions, etc. as direct taxes to the central budget. Similarly, households also pay several indirect taxes to the government, like turnover taxes, customs duties, value added taxes, etc. All these tax revenues are collected and used in order to improve the economy and welfare activities.

– *Households contribute a significant part of the most varied professions.* Most of the professional services, like those provided by physicians, teachers, lawyers and engineers, etc. come from households. These activities are very important for the given country to be able to boost its economic development. These professional services also have a key role in improving people's living standards.

– *Households have significant savings.* The incomes remaining after consumptions become savings. After having provided numerous services to the economy, they make considerable incomes. For the most part, after consumption they keep their remaining incomes in banks or at other financial institutions. These savings are among the main sources of debt financing and capital investment projects in Hungary (Seth, 2015).

Impacts of the world economic crisis in Europe, decrease in household consumption and prolonged stagnation

In contrast to Asian countries, in the majority of the Member States of the European Union, domestic consumption and domestic demand was not only unable to offset missing export revenues, but rather the reverse: drop in household consumption significantly contributed to the further deepening of economic recession.

In the past decade, the contribution of household expenditures to GDP at any time fell or at most stagnated in several countries. As GDP also declined in several countries due to the crisis, in these countries this meant a decrease in household expenditures in real terms. The most conspicuous decline in household consumer expenditures to GDP was recorded in Luxembourg (10.5%), Malta (10.4%), Estonia (10.1%), Romania (9.8%) and Cyprus (8.9%) (Eurostat, 2012).

This procedure is also confirmed, in another respect, by the fact that the number of households in a difficult financial situation gradually increased month by month, and as a result, already before the outbreak of the crisis the purchasing power of households underwent considerable decline in the European Union. In cooperation with BIPE Consulting and Polling Institute, in November and December 2011, Cetelem made an Internet-based survey of more than 6500 interviewees in Europe with

Table 1: Developments in household consumer expenditures before and after the outbreak of the financial and economic crisis (as a percentage of GDP)

	1999	2004	2009	2011
1 Cyprus	81.1	75.6	77.4	72.2
2 Greece	75.7	73.6	76.8	67,6
3 Bulgaria	72.5	70.5	70.1	61,9
4 Malta	80.7	76.7	69.7	70.3
5 Portugal	62.2	62.8	63.9	67.3
6 Lithuania	66.6	65.8	63.7	65.7
7 United Kingdom	62.1	61.3	62.0	61.3
8 Romania	71.0	68.1	61.2	61.5
9 Poland	63.1	64.0	61.2	60.8
10 Latvia	61.0	61.2	61.1	62.3
11 Italy	60.8	59.4	60.4	61.0
12 Spain	63.0	60.4	59.2	56.8
13 Slovenia	59.3	56.8	58.0	55.1
14 France	55.0	55.9	57.3	53.8
15 Slovakia	56.1	56.5	55.9	56.2
16 Germany	55.4	55.8	55.8	53.8
17 Austria	55.5	55.9	53.9	51.8
18 Hungary	56.4	54.3	53.8	51.0
19 Estonia	62.0	59.3	52.9	49.2
20 Finland	48.3	49.2	52.2	51.0
21 Czech Republic	54.7	51.5	51.0	48.4
22 Belgium	51.5	50.0	50.3	50.5
23 Denmark	48.6	47.5	48.4	46.3
24 Sweden	47.4	46.4	47.8	44.9
25 Ireland	47.1	43.7	47.0	44.4
26 Netherlands	49.7	48.3	44.9	44.1
27 Luxembourg	46.9	44.3	36.9	30.0

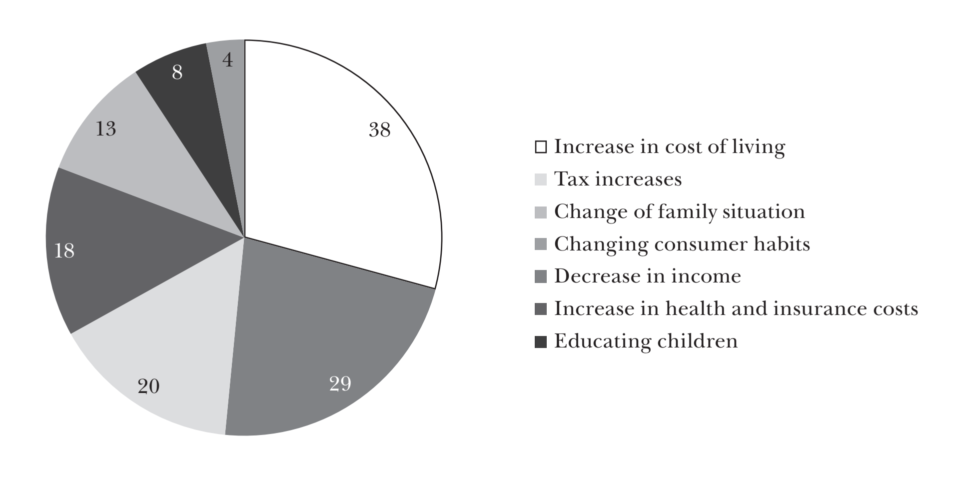
Source: Eurostat, 2012

the help of the TNS Sofres, and revealed that in the opinions of the majority of middle-class households, their financial position has deteriorated or at least has not improved in the past ten years (Cetelem, 2012).

In the countries surveyed by Cetelem, 60 percent of middle-class European think that their financial position has not improved in the past ten years. This opinion prevailed primarily in Hungary and Italy.

Most respondents mentioned the considerable increase in the costs of living and fall in incomes as the most significant factors in the deterioration of their financial position. Income reduction is less perceptible in Italy and France, however, rise in the

Figure 2: Why has the financial position of the middle class deteriorated in the past ten years? (Average of the EU12, as a percentage)



Source: Cetelem, 2012

costs of living was mentioned in the first place in 11 of the 12 surveyed countries and in the second place in one (it ranked second in the Czech Republic, where it slightly preceded by reduction in incomes). Whether the various daily price hikes (food, fuel, transport, etc.) or rises in the basic costs (rental, overhead, water supply, sewage, electricity, natural gas, telephone, etc.) are taken as a basis, currently they put higher pressure on middle classes as well as wage- and salary-earners because incomes fail to rise as rapidly as costs. In a decade, the ratio of spending on residence, overhead costs, insurance, telecommunication, health and education linked to household budgets rose from 28 to 33 percent (Cetelem, 2012, p. 26).

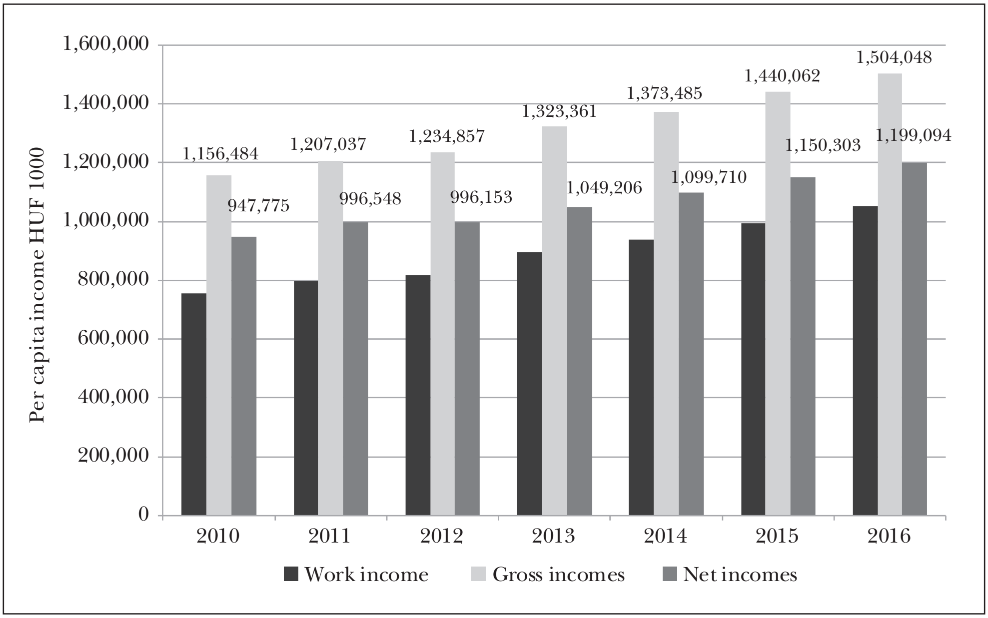
In the emerging countries of the world, especially in Asia, despite the economic crisis, consumption by the population and the strengthening middle class maintain economic growth and are the number 1 driver of economic development in spite of the missing export revenues. However, as a result of the neoliberal economic philosophical doctrines that spread in the 1980s, decreasing attention was paid by researchers and also practical experts in the European Union to developments in incomes and consumption by the middle class in improving economic growth. Various tightening and cost-efficiency measures are adopted one after the other, and keep curbing the purchasing power of the population and the middle class for more than a decade in most Member States of the European Union. For several years in the Member States of the European Union, and probably for decades in some extremely indebted Member States, household consumption and consumption by the middle class has come to a stagnation, and consequently, market opportunities have shrunk. This is why it was important for the researchers and decision-makers of the

EU institutions and Member States to re-invent the significance of the financial position of households. The significance of cutting the costs of living, whether overhead or other costs constituting considerable items in the household budget, should not be underestimated on any account in the growth of household purchasing power (Kovács and Novoszáth, 2013).

Developments in Hungarian household incomes

Household incomes are composed of three major types of incomes: income from work, social allowances and other income. The higher the ratio of income from work, the more favourable the income structure is. Since 2010, the ratio of income from work has increased from 65.3 to 70.1 percent on average (KSH, 2017).

Figure 3: Developments in the per capita income of households (2010–2016)



Source: KSH, 2017

The per capita annual average gross income was HUF 1,504,000 in 2016, 4.4 percent higher than in 2015 and 30.05 percent above the corresponding 2010 value. The per capita annual net income was HUF 1,199,000 representing a 4.2 percent rise on 2015 and 26.52 percent on 2010 in nominal terms. Increase in the per capita incomes resulted from the combined effect of two factors: rising wages and allowances, and increase in the number of people employed. As an aggregate outcome of the above, in 2016, the real income was 3.8 percent higher than last year.

Purpose and aim of utility cost cuts

Over the past six years, consumption also underwent major changes in terms of structure: the ratio of both power and mainstream gas fell in household energy expenditures (to 33.5 and 35.1 percent, respectively) (KSH, 2017). Hungarian households spend 81 percent of their income on daily expenses, of this, the highest amount, representing 32 percent, is spent on overhead costs, while 31 percent is spent on food. One of the oldest observations in economics, Engel's law states that in the case of households, higher living standards entail a lower ratio of spending on food. For this reason, reducing value added tax on fundamental foodstuffs is important for the population with income below the average. In addition to saving several tens of thousands of forints per year, it also guarantees safe livelihood for the majority of the population.

An analysis of the composition of consumption also reveals that while during the 2005 data recording, the housing costs 25 percent of all expenditures, by 2012 this item had already amounted to 33 percent. In the eight-year period immediately preceding 2012, a drastic rise was seen in housing costs within all household expenses. During the regimes prior to 2010, certain public utility service providers were given the opportunity to increase prices on 15 occasions. As a result, after the year 2000, the prices of all kinds of energy grew faster than the average price. The most rapid increase was recoded in natural gas prices (Századvég, 2014).

For example, in 2007 in Hungary gas prices skyrocketed despite their fall elsewhere in the world. As a result, by 2010 the price charged for natural gas in Hungary had grown to one of the highest in Europe. This is why the government formed in 2010 launched its utility cost cut programme. The main goal of the programme was to set public utility prices families could afford. Hungarian families should have access to the cheapest energy in Europe. Naturally, a minimum profit must be ensured for the public utility service provider to be able to finance improvement in its services and maintain the security of supply, but such profit should not be unlimited, as they wished.

Table 2: Utility cost cutting steps

Utility Cost Cuts (Phases 1, 2 and 3)								
	2013				**2014**			
	1 Jan.	**1 July**	**1 Nov.**	**Total**	**1 April**	**1 Sept.**	**1 Oct.**	**Total**
Natural gas	–10%		–11.1	–20%	–6.5%			–25.19
Electricity	–10%		–11.1	–20%		–5.7%		–24.55
District heating	–10%		–11.1	–20%			–3.3%	–22.63
Water supply + sewage		–10%		–10%				–10%
PB gas		–10%		–10%				–10%
Waste		–10%		–10%				–10%
Chimney sweeping		–10%		–10%				–10%
	Phase 1		Phase 2		Phase 3			

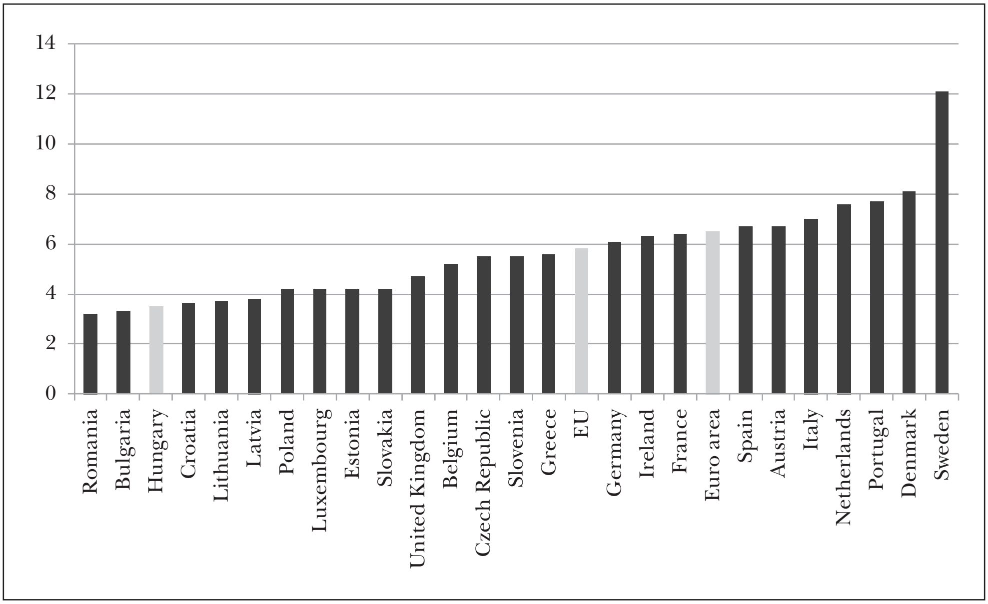
Source: Horváth, 2016

The first phase of utility cost cuts started on 1 January 2013. The price of natural gas, electricity and district heating was reduced by 10 percent, and this action was followed by proposals and actions for similar cuts in household PB gas, waste disposal, water supply, sewerage and chimney sweeping fees. On 29 April, the National Assembly codified utility cost cuts in law (Act LVI of 2013).

As a result of the utility cost cut actions performed in Hungary, the prices of natural gas, electricity and district heating were reduced in three steps by 25.19, 24.55 and 22.63, respectively, in 2013 and 2014. The fees charged for water supply and sewerage, the provision of PB gas, waste disposal and chimney sweeping decreased by 10 percent.

According to the statements made by Eurostat, in the first part of 2010, Hungary ranked 17th in the list of European countries in terms of natural gas prices, but in the first half of 2017, Hungary had the 3rd lowest natural gas price (Figure 4).

Figure 4: Average gas price for households per 100 kWh in 1st half of 2017 (EUR, all taxes and levies included)



Source: Eurostat, 2017

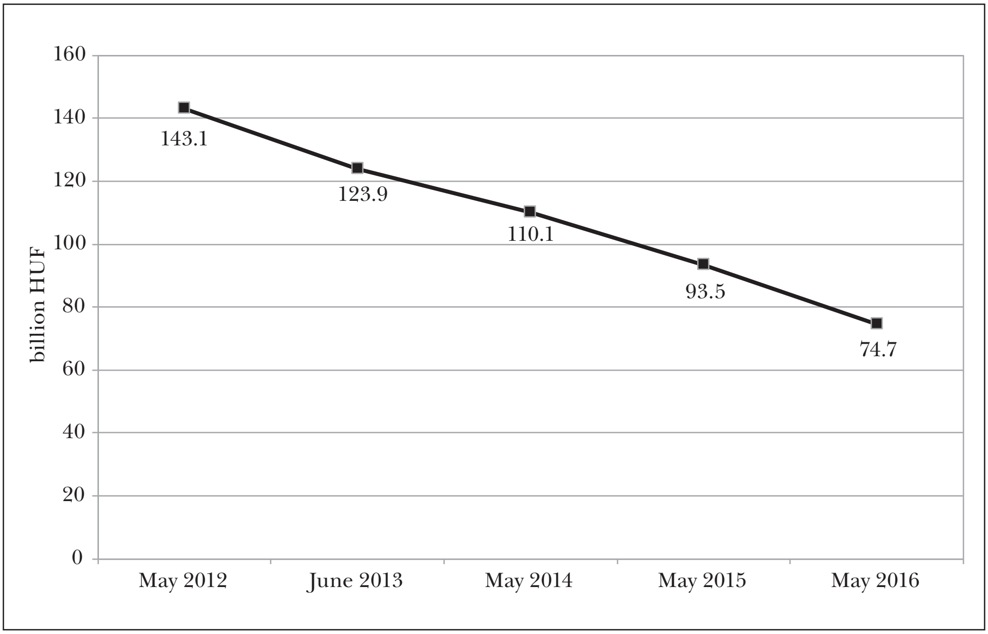
In respect of electricity prices, in the first part of 2010, Hungary ranked 16th in the list of European countries, but in the first half of 2017, Hungary was already the 3rd cheapest country. In the period between 1 January and 31 December 2013, the Hungarian population could save HUF 642 billion as a result of utility cost cuts. Consumers saved most on electricity: HUF 278 billion, while in the case of natural gas, the total amount saved by the population amounted to HUF 240 billion. Currently, households save HUF 268 billion annually.

Based on the data provided by the Hungarian Energy and Public Utility Regulatory Authority, a retired couple can save about HUF 83-116 thousand a year, while a family with two children pay HUF 109-112 thousand less.

The housing problems affecting the highest number of people are overhead costs, rent and overdue home loans. According to a European survey, 26 percent of the population, i.e. 2.6 million people are in arrears with due household payments. This includes overdue public utility fees in a considerably higher number of cases (2.3 million people) than arrears with rent or home loan repayment (680,000 people), and 63 percent of those who live on incomes below the poverty threshold, placing Hungary last in the list in 2013 (Koltai, 2014).

Utility cost cuts also had a beneficial impact on the fate of previously accumulated arrears. Between 2012 and 2016, overdue accounts payable in natural gas, electricity and district heating fell by 48 percent (Figure 5).

Figure 5: Amounts outstanding between 2012 and 2016



Source: Edited by the author based on Horváth, 2016

Simultaneously, the number of both late paying households and disconnected users have fell considerably in the past few years. The number of defaulting households dropped by 45 percent and disconnected users by 31 percent between 2012 and 2016.

This is not the first case that other European countries follow in the footsteps of the government led by Viktor Orbán. The complete privatisation of the energy and utility service provider sector, and the subsequent rapid rise in the energy prices are not isolated phenomena in Europe, however, the powerful countries of the continent have managed to hold the service providers in check. Nevertheless, accompanied by the sympathy of the majority of the population, the British Labour Party campaigned promising to chop energy prices, in accordance with the Hungarian example, during the 2014 general elections in the United Kingdom. During the 2014 general elections, the leader of the British Labour Party promised his electorate to freeze the overhead costs of households and family businesses for 20 months if his party is elected to govern. Ed Miliband thought that the various energy supplier companies have been billing more than justified for too long a time, and they could do it because market competition was insufficient. The politician urged energy suppliers in a letter to help him make his plans work (Baker, 2015). However, the energy service companies responded indignantly to his concepts: they thought that such a decision might even cause power failures.

The British consumer protection organisations, however, pointed out that an increasing number of minimum pensioners and low-income families were incapable of paying their public utility bills. In its 2016 report, CMA established that 90 percent of the domestic energy consumers disconnected from supply in the United Kingdom are simply unable or unwilling to change their energy suppliers (CMA, 2016). According to these, market mechanisms are far from working appropriately and fail to ensure adequate control of the service providers that misuse their market positions and the high-level enforcement of the population's interests. Therefore, it was no accident that during the 2017 general elections, the Labour Party was not the only one to promise the British electorate to prevent increase in the energy-related expenses of households if they are elected, the conservatives did the same. Nevertheless, the policy adopted by rightist conservatives slightly differs from that of the Labour Party, as instead of freezing prices, they promised their constituents the adoption of a new price cap regulation. In their opinion the solution they offered is able to respond to changes in the market conditions considerably more flexibly.

In relation to the debate sparkled around Scottish and Southern Energy (SSE), in November 2016, the six large British energy supplier companies undertook to freeze natural gas and electricity prices for at least six months, up to April 2017. This enabled saving at least some GBP 100 and offering consumers one of the lowest prices in the market. The announcement made by SSE, a company with 8 million consumers, took the other energy suppliers by surprise, as with the winter coming, they rather expected price rises. Simultaneously, SSE's initiative has not made followers up to this very day. Most of them did not even respond to the news, including the British Gas and Npower, while the French EDF only commented, through their spokesperson, that they were continuously monitoring their prices. Journalists cleverly concluded their reports saying that they would inform the public if news of any development whatsoever came in this topic, but since November 2016, not a single statement has been made by any other energy supplier (Borell, 2016).

A 10-percent cut was also made in the Czech Republic, and minor price reductions were performed in Bulgaria and Germany (Magyar Nemzet, 2013).

In addition to energy price cuts, however, numerous actions have been taken all over the world to mitigate some or another significant household expense. The best-known examples include various personal income tax reductions and tax credits for families with children or single parents. They also include regulations endeavouring to moderate the prices of banking services and loans. In December 2015, for example, in the United States the Obama administration adopted actions that facilitated access to banking services for millions who did not have a deposit or current account of their own (Timiraos, 2015).

Previously, the European Commission only believed in market omnipotence

Századvég research institute canvassed a representative sample of people by telephone and with the help of questionnaires between 26 and 30 April 2013, interviewing 1000 persons selected at random (Századvég, 2013). According to this survey, a significant majority of the Hungarian population was aware of the criticism of the government's utility cost cut actions. The overwhelming majority (59%) of those who had heard the opposition parties' criticisms evaluated them as unreasonable. Based on this survey it can also be concluded that the overwhelming majority of the population (82%) supports utility cost cuts at the same or more than before. Hardly more than one-tenth (11%) supported these actions less as a result of the criticisms. Thus, overall the April 2013 public opinion polling performed by Századvég confirmed that the majority of the population did not consider the criticism of utility cost cuts justified. Support to these actions by the population remains high.

Contrary to the spirit of the founders of the European Union, the European Commission wants to decide on an increasing number of questions over the heads of nation states. The Brussels bureaucrats want to deny nation states the opportunity to adopt sovereign decisions on controlling public utility service providers.

These issues were touched during the consultation because under the title *Energy Union,* the European Commission came forward with a proposal to remove the competence to set electricity prices from Member States (Government of Hungary, 2017). Pursuant to the proposal may in Brussels, the Member States would be required to prepare a time-schedule to "release all the regulated prices". Practically, this would put an end to utility cost cuts, and give a carte blanche to large companies once again to freely set utility prices. As this would again be in the interests of transnational companies rather than Hungarian families, the government firmly opposes it.

Despite the facts, the European Commission seems to only believe in the omnipotence of the market and refuses to even consider any alternative solution. With support from the private companies interested in this industry line, in December 2015 the European Union launched an attack against the Hungarian utility cost cut procedure. To prepare for the attack, several Member States were subjected to similar investigations (Somogyi, 2015). The verdict had practically been made: when the investigation was launched, the investigated states had abused their dominant position to jeopardise the existence of the privately owned public service provider companies. To date the EU has never started an infringement proceeding against a private energy supplier or public utility provider abusing its dominant position, or even caused damages to consumers by overbilling or shifting its unnecessarily incurred or prodigal costs to consumers.

In its written position the European Commission claims that market liberalisation entails lower costs. In contrast to this, the previous reports of the European Commission clearly reveal that between 2010 and 2015 the consumer price of electricity increased by 20 percent in the Member States (by 50 percent in the United Kingdom and 37 percent in Portugal). Household natural gas prices makes things look even worse: In five years, consumer prices grew by 25 percent on average in the European Union (in Spain, for example, by 72 percent). Meanwhile, utility costs fell in the largest extent in Hungary within the European Union (EC, 2014).

The Hungarian experts representing the European Union's position think that the centrally managed utility cost cuts are less successful than the market coordination pressed by the European Union. In their opinion, in the Czech Republic and in Slovenia, where the household markets have been completely privatised, prices actually dropped far less than in Hungary, but in nominal terms, they are barely less than in the countries where prices have completely been liberalised (Felsmann, 2016).

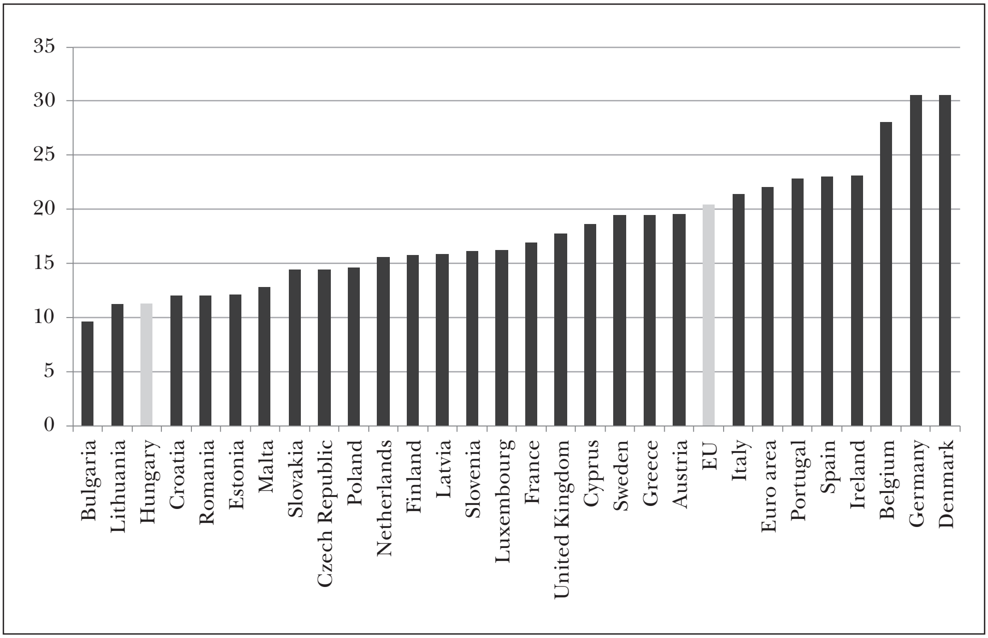
In contrast to this, the truth is that currently the world's highest energy prices are charged in the European Union, and especially in countries with a fully liberalised market. In recent years the most rapid price hike have been recorded exactly in these countries: in the United Kingdom, for example, prices have risen by more than 50 percent.

In 2010 Slovenia charged the 13th lowest prices, while in 2016 it slipped back to the 17th place. The electricity prices applied in the Czech Republic in 2016 exceeded those in 16 countries (Figure 6). All these clearly confirm that market liberalisation is no solution to price reductions at all, and moreover, they are not efficient enough for an appropriate control.

According to Estonian representative Kaja Kallas, they already have experience in the system recommended by the European Union, which she thinks resulted in utility cost cuts in their country (SZA, 2017). The Estonian electricity price was undoubtedly the 3rd lowest in 2016. However, it was even lower in 2010. Thus, in a comparison, their positon has actually deteriorated rather than improved, while Hungary's position has considerably improved. Figure 6 clearly shows the countries where prices fell and the extent of decrease. Relative to 2010, by 2016 prices have decreased most in Cyprus, Hungary and Malta *(Fig. 6).*

Utility cost cuts are made in most cases at the expense of the extra profit made by service providers, this is why service providers fight against it using every means and involving the top politicians of the European Union, heads of the individual institutions and professionals and journalists ready to enforce their in a country and across the borders. Under the pressure of the lobbyists of public utility service providers, the bureaucrats of the European Union prepared a complete attack. They intend to

Figure 6: Average electricity price for households per 100 kWh in 1st half of 2017 (EUR, all taxes and levies included)



Source: Eurostat, 2017

introduce a uniform regulation all over the European Union that would terminate the opportunity of any kind of price regulation and price control by the Member States. Thus, in the interest of – perhaps unlimited – increase in their profits, public utility service providers could raise the prices of natural gas, electricity and other public utilities several times a year. We would get back to the point where were during the Hungarian governments before 2010: overhead costs would rise drastically, and we could save even less for improving the standard of living, for learning and for healthier life styles, for recreation and having a rest, and for a more meaningful leisure time.

Probably every Member State of the European Union would be capable of what Hungary is doing now: to reduce the prices of energy for households, and subsequently for the entire economy. But we obviously do not want to be deprived of the assets that enable us to make significant achievements. For this reason, Hungary is compelled to defend, in the strongest possible terms, the position it has taken and followed and should not give up the various means of price regulation by the government or the utility cost cut proceedings. If a single energy market that results in the reduction of consumer prices is ever established in Europe, Hungary may also find it attractive to establish such a business environment. However, for the time being, the European Commission should at last prove for its citizens that it is capable of defending citizen interests against the profit interests of a small lobby. In the future it should take a stand against private energy or public utility service providers that misuse their dominant positions and cause damages to consumers by overbilling or by shifting their superfluous or prodigal costs to consumers. In order to realise extra profits, they exploit consumers with the European Union's support.

In December 2017 the Energy Council approved the position represented by Hungary about the maintenance of regulated energy prices. Based on the draft directive approved at the council meeting, the Member States may depart from the mandatory phasing off of regulated energy prices, considered as a rule of thumb. Regarding the scope of price regulation and the time period until it needs to be maintained, the practice of European courts should prevail, thus price regulation could be maintained in Hungary for small and medium-size enterprises, households and protected consumers. The adopted general approach ensures a considerably wider elbowroom and powers for Member States to guarantee safe, sustainable and affordable energy supply for consumers, using methods that are the most appropriate for the given country's economic and social conditions (Magyar Idők, 2017).

Summary

In Hungary, increase in the income and decrease in the burdens of households came into the focus of economy policy decisions after 2010. In this respect, the most important change included personal tax cut. This procedure is still in progress. On the first day of 2016, this tax was cut from 16 to 15 percent, and calculations show that as a result, 4.5 million employees could retain HUF 120 billion. In addition, the situation of approximately 380,000 parents raising two children is also facilitated by the four-year family allowance rising scheme started in 2016. In this scheme, the amount of the monthly allowance due to employees with two children rose from HUF 20,000 to double, in four equal steps of HUF 5000 each, thus in 2019, every beneficiary will be entitled to HUF 40,000 per months as a credit from taxes. Added up, each HUF 5000 allowance enables the affected people to retain HUF 15 billion annually. In the government's concept, the purpose of this credit is to allow parents give their children appropriate education and care. Ultimately, parenthood and parenting should not be tantamount to the assumption of financial difficulties.

In the case of tax cuts, in addition to employers and larger companies, private persons, families with small children and customers at shops could all find their accounts in an amended statutory regulation. The largest change was achieved by the participants of the Hungarian business sector with the multi-annual wage agreement concluded by the government in late 2016 with the interest representation bodies of employees and employers. Pursuant to this agreement, the state undertook to substantially reduce the taxes levied on businesses if employers significantly increase the remuneration paid to their employees. Clause 1 of the agreement entered into force at the beginning of 2017: in January the minimum wage and the lowest wage payable for skilled workers increased by 15 percent and 25 percent, respectively, while in exchange, the government lowered the social contribution levied on companies by 5 percentage points. This action relieved the affected parties of taxes and dues in the amount of HUF 400 billion. Pursuant to the agreement, this procedure will continue in 2018: the minimum wage and the guaranteed minimum wage for people with secondary-school qualifications will increase by 8 percent and 12 percent, respectively, and businesses will be able to account another 2.5 percentage point tax credit, representing about HUF 200 billion. This means that in the form of direct tax credits, the government spends significant amounts on enabling businesses to close the gap to the remuneration paid in the western part of the European Union. Citizens' tax position has also been modified.

It is also worth mentioning changes in the rules of paying value added taxes. The government has decided to curb the value added taxes on certain fundamental food products and services. Value added tax was reduced to 5 percent first on pork in 2016, then one year later, on fresh milk, eggs and chicken, and in 2018, also on fish and offal. Value added tax on Internet use, food served and non-alcoholic drinks made in restaurants were also modified: VAT has fallen to 5 percent on both services. In the aggregate it may be established that the most important changes in the period between 2016 and 2018 have brought a drastic reduction in taxes.

As a result of the actions taken, retail trade turnover has been continuously increasing for 52 months. According to the forecast of the National Bank of Hungary (MNB), this rapid growth in incomes and consumption will prevail up to 2020. However, in addition to consumption, household savings also increased significantly after 2010, and in 2015 the level of savings exceeded the level characteristic of 2010 by more than HUF 1200 billion. The following table shows the time series of the transactions performed by Hungarian households, using key economic categories.

Table 3: Developments in household transactions (2006-2015) (HUF billion)

Item		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total available income		17,641	18,329	19,147	19,281	19,416	20,113	20,567	20,950	22,069	23,687
Consumption	–	15,750	16,673	17,505	17,077	17,172	17,808	18,337	18,676	19,458	20,217
Savings		1891	1656	1642	2203	2244	2304	2230	2274	2611	3470
Capital investments	–	1123	1249	1361	1297	1060	832	782	817	847	848
Financial savings		768	407	281	906	1183	1472	1448	1457	1764	2623
Financial transactions	+	2078	1915	1678	881	861	525	566	1027	1489	1495
Transactions with liabilities	–	1310	1508	1397	–25	–322	–947	–882	–430	–275	–1128

Source: Edited by the author based on data from the MNB, 2017

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Márton Járosi – Pál Kovács

Energy Policy of Hungary

Summary
In Hungary, the energy sector was modernised on the basis of public ownership after World War II. Hungary's large, centrally controlled and vertically integrated energy systems were established at that time. Simultaneously with the regime change, western-based energy orientation also began in the energy sector and in 1990 it continued with the implementation of privatisation. Hungary's accession to the European Union provided grounds for and reinforced the process ideologically. This was followed by full liberalisation called "market opening". The policy of the second Fidesz government, formed in 2014, is characterised by the restoration of an energy policy serving national interests. This process is described in the article in a European perspective.

Journal of Economic Literature (JEL) codes: N73, O13, Q48
Keywords: Hungary, energy policy, electricity supply, Paks Nuclear Power Plant, National Energy Strategy, energy security

Privatisation and liberalisation after the regime change

In Hungary, the energy sector was modernised on the basis of public ownership after World War II. Hungary's large, centrally controlled and vertically integrated energy systems were established at that time. Simultaneously with the regime change, western-based energy orientation also began in the energy sector. In 1990, after the taxi drivers' blockade, it began with imports and price liberalisation in the energy industry, and continued with the preparation and subsequent implementation of privatisation. Eastern (Soviet) advisors were replaced by western consultants; some of the Hungarian "specialists" also joined them. In 1995 and 1996, extreme privatisation

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took place with foreign dominance. Hungary's accession to the European Union provided grounds for and reinforced the process ideologically. This was followed by full liberalisation called "market opening", which meant, in the electricity industry, that electricity became a stock exchange commodity and market prices became separated from the prime cost.

Energy policy of restoration

Relying on the legacy of the founding fathers of the European Union, the policy of the second Fidesz government formed in 2010 was driven by the idea of a "Europe of Nations" based on Christian roots, which has also been laid down in the new constitution. The restoration policy of the government can be summarised as "capitalism, social responsibility and Christian democratic economic policy". It broke with the neoliberal doctrine that the market rules everything. The state's responsibility once again came to the fore. It was recognised that under market economy conditions the interests of the community cannot be successfully enforced solely by regulatory instruments; the active presence of the owner in the market is also essential. The energy policy was shaped by taking into account the financial capabilities of the country. Its foreign energy policy was characterised by opening to the East and strengthening Central and Eastern European regionalism. All forms of energy privatisation were stopped. The restoration and recovery and, in certain areas, expansion of the community ownership of utility systems began.

Global trends in the energy sector

Global trends in the energy sector are the characteristics of the "new world order" (Fenyves, 2013): "free market", the instability of political and financial systems, deregulation and globalisation. In this world, reliable long-term energy planning, such as the planning of energy and capacity demand and of establishment and operating costs, is very difficult, almost impossible. The main influencing factors are financial limitations, (lay) public opinion, media, economic fluctuation (inflation, interest rates and foreign exchange rates) and political considerations. According to the famous saying of British political economist Susan Strange (1986), in the current so-called "casino capitalism", speculation and financial trading are the most important.

Fossil resources

The consequences of the surge in shale gas production in the US,[1] which may allow the US become an oil exporter, are still unforeseeable, but will certainly be very significant. "It will change American foreign policy, in the sense absolutely that American foreign policy will not be focused on energy, but on strategy. Due to shale gas, it will not be dependent on oil-producing countries and compelled to serve dictatorships in the Middle East" (Tálas, 2014). Increased natural gas usage will result in a decline in coal usage, which will push the world's coal market in the direction of supply, and will also reduce the price of coal. The United States and Canada are likely to become net oil exporters by 2030 and will be larger producers already in 2 years than the world's two currently biggest oil powers, Saudi Arabia and Russia. Simultaneously, the main directions of hydrocarbon transport will change.

Consequences for world powers

Energy prices are low in the US. This may lead to the repatriation of a significant part of previously outsourced industrial production. Accordingly, the United States may slightly increase its exports associated with energy-intensive industries until 2035, contrasted by a possible decline of combined European and Japanese exports by nearly one-third. Through its technological monopoly, the USA will acquire a new "weapon". The theatres of struggle for world domination, raw materials, energy and oil may be rearranged. The significance of Middle and Far Eastern countries in world politics may change. The role of petroleum-producing countries (OPEC) may be revalued. This means that the world's lines of power will shift, which may have a destabilising effect. The propaganda of globalism about the sustainability of consumption may become stronger: you can consume, consumption is sustainable, there is no need to switch paradigm. At the same time, the various myths of "saving the world" (climate protection, struggle against global warming) may weaken. However, the chances for the only correct action, adaptation, may decrease.

European Union – "Energy communism"

"Setting the objectives of the energy economy as seen in the Europe 2020 strategy can be attributed to the political and philosophical attitude of certain leaders of the European Union, and mostly to Jeremy Rifkin's intellectual influence. According to Rifkin, changes, which can be conceived as an industrial revolution, have taken place when the methods of energy generation and communication have changed. Now the internet and the use of renewable energy form the basis of the quality change, the third industrial revolution, in which collectivised production and consumption are pursued using smart electricity networks, in the form of some sort of *energy communism* (Katona, 2013). The theatre of this grandiose experiment is the European Union, where there are five programme points for building the future:

1) use of renewable energy;

2) implementation of local, distributed energy generation;

3) provision of solutions to electricity storage by starting to use hydrogen energy and other methods;

4) establishment of smart electricity networks, creating a kind of energy internet, in which everyone is both generator and consumer (producer + consumer = prosumer) at the same time;

5) conversion of transport to electric and fuel-cell drive."

This programme would create a new "industrial platform", a mega-technology, on which new generation methods are realised. The establishment of a carbon-free economy in the EU by 2050 would require about EUR 270 billion per year. It is a fact that the favourable effects of this "revolutionary experiment" on the European living space are not visible. The results of the European Union's efforts are marginal also in global climate protection and do not offset the strong increase in emissions by emerging economies. The fact that the countries will scale back their energy- and emission-intensive production and consumption and thereby the European Union's carbon-free economy is propelled to the top within the foreseeable future seems a highly unlikely vision. Such a radical change is hardly to be expected in the current space of power. The exploitation of renewable energy sources and the increase of energy efficiency may be the dogma of self-salvation, but it is not only ineffective in the consumption-centric medium of modern economy and society, but would also probably tragically set back the development level of economically weaker societies.

Consequences of EU accession in Hungary

At the time of accession to the European Union, our country was under enormous pressure. The highly profitable industries, including energy supply, were acquired by large, in part state-owned Western European companies, just under the pretext of EU accession. In fact, they expropriated our markets. Whatever remained in the hands of the state are still in good working order, and this is why no considerable breakdown has occurred in our electricity system, which was felt by the population. By contrast, the majority of the power plants, which had become, in essence, foreign property, with the exception of the Paks Nuclear Power Plant and the transmission grid, have significantly deteriorated. The provision of electricity supply on the supply side has become a commercial activity to a significant extent. Today, about 30 per cent of domestic electricity consumption is supplied from abroad.

Energy balance

The structure of Hungary's energy balance has been unfavourable since the beginning of the hydrocarbon era, the 1960s. The proportion of natural gas has become excessive in the Hungarian energy balance and in its use for heating and electricity generation. Currently two-thirds of all primary energy sources come from Russian imports (calculated without fissile fuel). This situation cannot be changed substantially for a long time with any energy source, even with renewable energy. We have to live with this. Therefore, the responsible government seeks to expand its latitude, by taking into account these conditions, in international natural gas supply and storage.

Hungary can join the shale gas revolution later (Leszák, 2014). Primarily the regulations and licensing hinder today European and Hungarian developments related to unconventional gas reserves, while a surge in production would result in a completely new situation in the markets of the continent. The occurrence of shale gas in Europe would allow within 6 to 10 years that unconventional gas reserves appear in the markets of both the continent and Hungary to a considerable extent. The unconventional gas technology is relatively new and changes quickly, so it is not impossible that gas production will also be economical in the more distant future in Hungary (in the Makó trench). It is in Hungary's interest to create a regulatory environment that allows for economical production.

Environmental protection

The recognition of the limits to growth have strengthened environmental movements that raise the consciousness of humanity. It is regrettable that these noble efforts have also increasingly fallen victim to manipulation by global powers (Héjjas, 2013). The Greens have become policy-shaping factors both in Europe and in our country. Globalism tries to put this, too, to its own service. Economic operators and politicians have recognised the business and propaganda potential in environment protection and tried to influence such movements. The attitude towards renewable energy has become unduly pronounced within energy policy. More environmentally sound solutions, "renewable energy", are much more expensive than conventional sources, further increase costs to consumers and re-create the basic problem, imbalance, while investors get extra profit from high-priority grants. It would be a minimum step towards rationalisation if renewable sources were also evaluated through the market and their costs also included the financial burdens caused by them, which others are still forced to cover (external costs).

Renewable energy lobby in Hungary

One of the key characteristics, which however carry risks, of the Hungarian energy policy was the uncritical commitment to the EU's unilateral renewable energy policy. "Renewable energy strategies" were developed in this spirit. The agricultural lobby, with close ties to the MSZP (socialist party), was the main standard-bearer in this matter, since the large-scale production of biomass considered a priority allowed fabulous EU grants to be obtained. There was real competition in the energy market only for these grants for a long time. Previously, the SZDSZ (liberal party) was the main champion of environment protection, and it endeavoured to use this field to strengthen its political support. More recently, the LMP (new liberal party) has replaced it and is making efforts at taking over its role. Unfortunately, the MSZP, which has lost its power, is changing its position in energy matters also increasingly in this direction. This is clearly manifest in the fact that they have abandoned the national consensus previously reached on the issue of the expansion of the nuclear power plant.[2]

Climate protection

In terms of taking into account environment impact, "climate protection" is important in our country; it is dealt with by the National Adaptation Strategy (NAS-2). It consists of three main parts:

– National Climate Change Strategy (NÉS*)* (NFM, 2013) which aims to reduce global warming as much as possible;

– Decarbonisation Strategy (DS), which aims to reduce, theoretically eliminate, carbon dioxide emissions;

– National Adaptation Strategy (NAS), which aims to manage and adapt to the impact of inevitable climate changes and to minimise possible damage.

Energy receives an excessively pronounced role in the above strategies. The Hungarian energy policy also begins to recognise this: "As long as climate policy is closely linked to energy policy, no success can be reached in the energy sector; therefore, it must be separated from the energy policy", said Pál Kovács*,* Minister of State of the Ministry of National Development at the National Mining Conference (Portfolio.hu, 2013).

We cannot meaningfully influence climate change on the Earth. The role of human activities in climate change, or even the possibility of substantially influencing it, is not scientifically proven. Decarbonisation intending to curb is manipulation by agents of globalisation. It is not true that "it is in our strategic interest... to implement sustainable economic growth", as stated by NÉS-2 (p. 4). In fact, constant economic growth, on which the global economy is based, is not sustainable. Without limiting our consumption ourselves, humanity cannot be saved. The question is whether there is any chance to build a world of other values.

It must be understood that, although each topic has to be addressed due to our commitments to the European Union, our own resources may only be used for objectives that promise substantial results. As many of the grants provided by the European Union for various projects as possible have to be used for goals that we also consider sensible. This is how the National Adaptation Strategy becomes really important for us, which is indeed about the future of the country.

Our only chance for survival or, more modestly, for renewing the life of our nation is if we, as a small nation, smartly adapt to both changes on our Earth that we virtually cannot influence and to shifts in world politics. We must agree with the "Adaptation vision" set out in the NÉS-2 (p. 8): "prepare for the inevitable and prevent what can be avoided". We must have a similar attitude towards global world politics. In order to be able to cope with all this, it is insufficient for us to be smart, we must also remain healthy and viable. This is how we get to the fundamental recognition the NAS is about. One must start from the whole, the requirement of viability. All sub-strategies pointed out for different reasons must serve this requirement collectively, in a complex way, with the minimisation of inconsistencies as much as possible. This is in the interest of the community. We must stand on the good side, the side of life, and we need to find allies for this both in the European Union and all over the world. Our nation's cultural history provides grounds for this.

Energy security

The dependence on the import of primary energy sources from Russia cannot be reduced significantly in the foreseeable future; absolutely not with renewable sources, and only in part with domestic lignite. The effects of even the best measures will be felt only in the long term. This recognition must lead the foreign energy policy of the government. The European Union should promote the security of supply primarily with the common market of imported primary energy sources. By contrast, dominant states have their separate ways. Bypassing about half a dozen EU Member States, the largest east-west gas pipeline was established between Russia and Germany, and the procurement of natural gas from the east, which is essential for Europe, has been degraded to a separate agreement between Russia and Germany. There have been hardly any primary energy projects with a common European interest for the development of our region to date. Since, in this respect, the Visegrad countries share common interests in the energy sector, it is possible and necessary to coordinate them with the framework of enlarged Central European regionalism.

It is possible to achieve the security of supply primarily by political guarantees and common energy investments providing grounds for them, not giving up the notion that the single market of energy sources must also be strengthened in the European Union. The task of Hungarian energy policy is to influence the EU's energy policy with due consideration to Hungary's interests. Any change can be achieved in the EU only with determination coupled with professional competence if there is a goal that can be well communicated and to which the Member States' consent can be obtained. To do so, we must take advantage of the potential of the Visegrád cooperation and other similar efforts appearing elsewhere. The "Visegrád countries" must take joint action to modify the regulation of the energy market by the EU. Market regulation must be democratised in such a way that these rules may take affect only by the unanimous vote of the Member States, and it must be allowed that Member States be able to opt out from internal market regulations that are detrimental to them. Joint action must be taken in order to diversify gas supply and against the discrimination of nuclear power generation as well as in the operation and construction of nuclear power plants. It must be ensured that the European Union accepts the necessary and appropriate assumption of this role by the state.

National Energy Strategy 2030 (NES)

The Hungarian energy policy had to take it as a basis that we can count only on ourselves in terms of the security of supply. Taking this into account, Hungary must follow a strategy that, apparently in accordance with the EU's objectives, achieves the security of supply, reduces dependence on imports, and facilitates that both retail and industrial consumers obtain electricity at an affordable price.[3]

In Hungary, establishing a rational primary energy structure is vital for the whole national economy, and fundamentally determines the coordinated feasibility of the fundamental requirements of energy policy (security of supply, sustainability and competitiveness). The NES completed in 2010 interpreted the security of supply as one of the pillars, a factor that is partly a function of the tolerance of society, but the increase of which is in the national interest. The NES not only determines the optimal directions for development until 2030, but also spells out the basic solution also for the period up to 2050: the need to achieve an electricity sector based on three pillars, i.e., nuclear, coal and renewable sources, and the possible paths for achieving this.

Gas supply

Along with ever-decreasing domestic production, the country will be supplied with Russian gas in the long term. The supply of natural gas is ensured as a result of good energy cooperation with Russia and the establishment of gas storage capacities. Gas supply to Hungary is ensured under an agreement until 2021, and negotiations have been started for the post-2021 period. For us, the most important is that the Russian raw material reaches Hungary under any circumstances.[4] The revival of the South Stream would be in our interest, while we gladly participate in the Turkish Stream.

The primary energy source with the largest share is natural gas, which is especially important from several points of view and which cannot be changed even in the long term. The responsible government must aim to increase the latitude of energy market operators by taking into account these conditions and to help supply the consumers with an energy source that is available reliably and at a reasonable price. The most important tools of this are:

– supporting the wholesale gas market through to the diversification of sources, expansion of liquidity and its development in a regional direction;

– acquiring state ownership in the case of strategic infrastructure elements important for the security of supply and key market operators.

Through the repurchased gas market infrastructure and its strong presence in the market, Hungary will be able to operate as an important market centre in the Eastern and Central European Region. Due to its presence in the market, our bargaining positions will improve when agreements are concluded for the reservation of gas capacities, which is key for supplying the country.

Renewable sources

There are good options for using traditional *biomass,* because the area and yield of forests in Hungary keep increasing. Only half of the full annual surplus (which can be used) is suitable for industrial use in part, while the other half is of firewood quality. With the combustion of this and organic waste, a significant amount of heat energy can be produced, which can be primarily used for individual heating and making hot water. Several previously coal-fired power plants have been converted in whole or in part to biomass firing in Hungary. Only small biomass power plants and district heating works operate in a few municipalities. In 2016, the electricity generated from renewable energy sources provided for only 5.5 per cent of the total gross electricity consumption (Hárfás, 2017). It can be established that with its share of over 50 per cent most of it was still provided by biomass, that is, wood combustion.

Wind energy and *solar energy* accounted for 27 and only 1.75 per cent, respectively, of the total quantity of electricity, 2,406 GWh, generated from renewable sources. Taking into account their installed capacity and the quantity of electricity generated, wind power plants could generate electricity only at an annual utilisation rate of 22.5 per cent: wind turbines with a total capacity of 329.3 MW installed in the system could operate in reality at an average capacity of only 71.9 MW over the year. The fulfilment of the commitments made to the EU with respect to the use of renewable energy sources could only be achieved with very significant state subsidies. It is a question whether there are/will be funds and from where/whom, and at what pace it is worth carrying out the programme. The government does not want to put this burden on the population, but putting it on industrial consumers would worsen the positions of businesses competing in the world market.

At a *biogas* plant, energy generation is only an accessory activity, since the primary goal is to reintegrate biological waste into nature with minimum nuisance and mainly at minimum costs. In Hungary, about 46 biogas plants produce biogas currently with a total electrical capacity of 37 MW. Of these, 31 form part of farms, with a total capacity of 21 MW. About four or five additional plants are currently under construction.

Electricity supply

The dangers of liberalised electricity markets also have their effect on our country. The level of wholesale prices is so low that it does not in itself guarantee any return on investment into any production equipment. In fact, it usually does not cover major refurbishments and overhauls either. The availability of a number of power plants keeps declining. The construction of power plants in Hungary has become an unavoidable necessity. Since there has been no power plant construction plan since privatisation, there is no responsibility for supply, we are at the mercy of the intentions of market operators. The consequences of irresponsible energy privatisation and liberalisation have fallen on us.

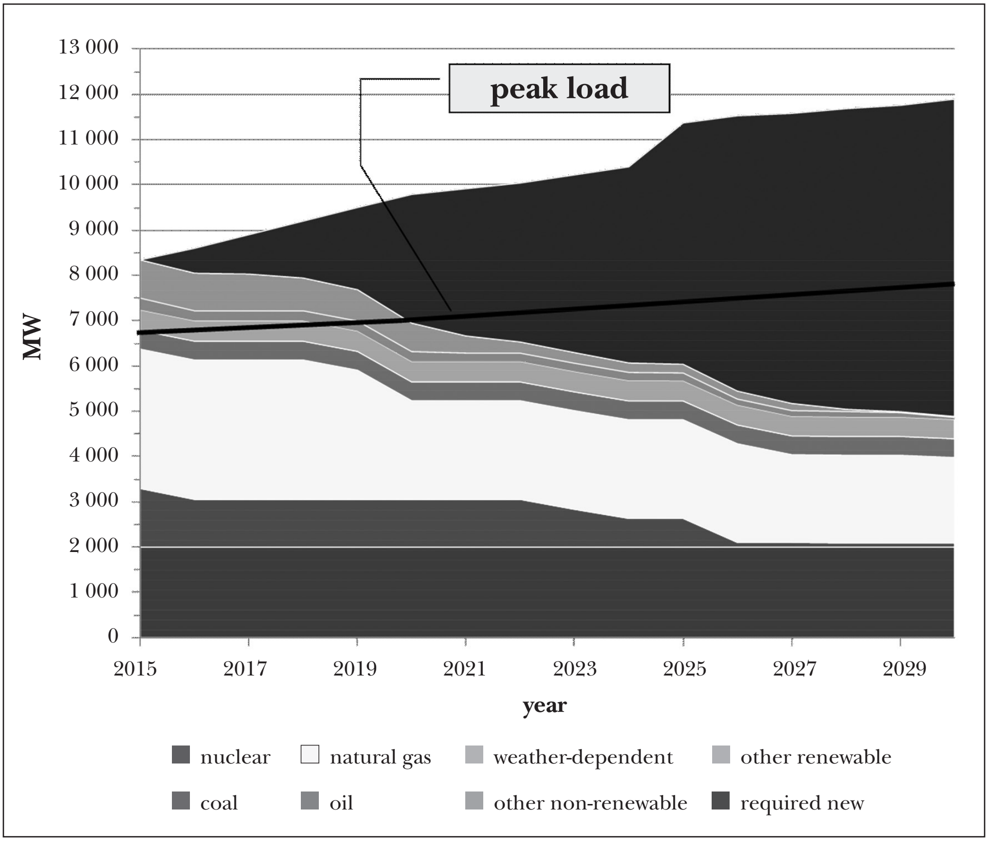
Electricity supply can be maintained only with significant imports amounting to 30 to 40 per cent. As a result of the subsidisation of renewable sources by the state, surplus capacities have occurred temporarily in certain EU Member States. However, the low market prices do not cover the fixed costs of conventional power plants; therefore, their shutdown is continuous and the possibility of imports decreases. The capacity available for exports was still 3,600 to 7,700 MW in 2016 during the winter peak load. However, there will be a capacity shortage by 2025 also in the Central European Region, they will be unable to export. Every Member State must prepare for its own secure supply of electricity. The security of electricity supply is not guaranteed. The efforts of the government for the expansion of the Paks Nuclear Power Plant and the importance of the expansion of lignite-based power generation by the Mátra Power

Plant must be assessed in the light of this. "The question is not whether there is a need for Paks II, but what else do we build in addition to meet the requirements" (Innotéka, 2017).

Construction of power plants

According to the technical analysis of Magyar Villamosenergia-ipari Átviteli Rendszerirányító Zrt. (MAVIR, Hungarian Transmission System Operator Private Limited Company), the required installed capacity of the Hungarian electricity system may be 13,551 MW until 2030. Of this capacity, large power plants may represent 11,051 MW capacity and small power plants (wind, solar, hydro, etc.) 2500 MW capacity in the future (Mavir, 2015).

Figure 1: The necessity of fund raising



Source: Mavir, 2015

A study on the subject shows that the total gross capacity of domestic power plants was about 8,900 MW at the end of 2014 (of which, however, only 7,290 MW was available in reality) (Hárfás, 2015). Of this capacity, as a result of phasing out due to wear and tear,[5] only 4,887 MW capacity may remain in the service of domestic electricity generation by the end of 2030. It follows that about 8,600 MW new power plant capacity will need to be established until 2030. This in turn means that in addition to the 2,400 MW capacity of the two new units at Paks, it will be necessary to install an additional 6,300 MW capacity (gas and renewable) in the system to ensure a secure supply of electricity to domestic consumers in the future.

Lignite power plant

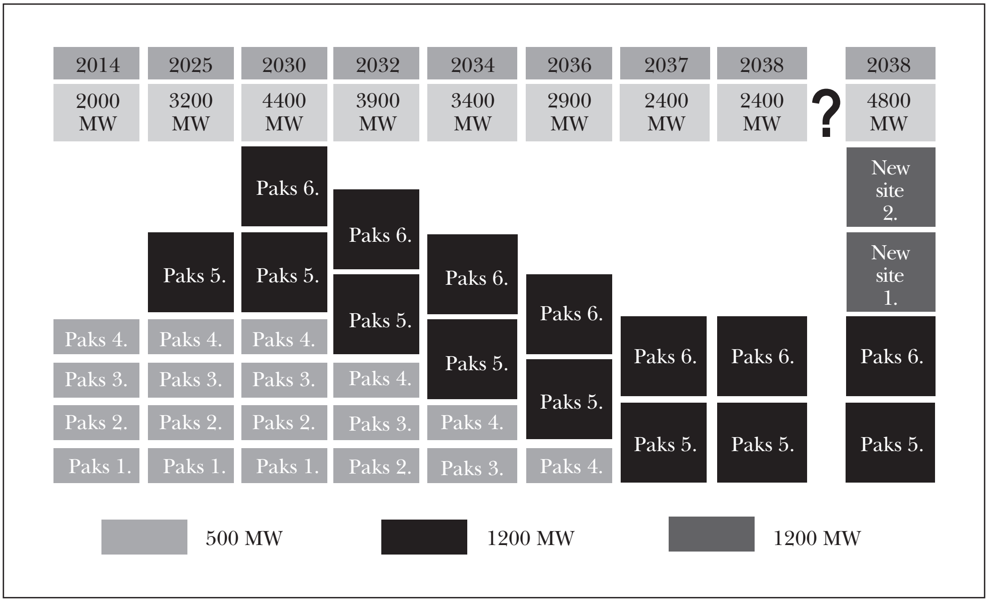
It would be obvious to also use the domestic lignite resources, because they ensure a stable prime cost for electricity generation. The already planned development has fallen victim to climate protection, the "virtual bugbear" CO_2 quota. In the near future, a decision must be made between two alternatives regarding the utilisation of lignite, considered a major domestic fossil energy source, for energy purposes. One alternative is to build a lignite-fired power plant for economic reasons and reasons of security of supply. Alternatively, it is advisable to reserve lignite for a later time, when we can count on natural gas to a smaller extent or only at very high costs. In both cases, the increase in CO_2 emissions due to lignite-fired power plants can be offset by the increased use of nuclear energy (instead of natural gas).

Maintenance of the capacity of the Paks Nuclear Power Plant

All this means that it is absolutely necessary to maintain the capacity of the Paks Nuclear Power plant, since the "lack" of the two new units in Paks would result in losing, until 2030, a capacity providing a base load of nearly 2,400 MW to the electricity system, which is key to both competitiveness and climate protection. This would represent serious security of supply risks in the future. Therefore, taking into account Hungary's inherent natural conditions and the limits of our available energy sources, the use of nuclear energy may not be circumvented in the coming decades in order to ensure secure and reliable energy supply and, at the same time, the required degree of energy independence.[6] As we have seen, there is a shortage of capacity in the electricity system. At present, the security of supply can be ensured only with significant, more than 30%, imports, that is, a power plant must be built. Since the potential for renewable-based electricity generation is highly limited, the international figures of electricity generation also make it clear that nuclear electricity generation is unavoidable.[7] This provides grounds for the need for the nuclear power plant.

The development of Paks II was a necessary decision and it also fits into world trends. In relation to the expansion of the Paks Nuclear Power Plant, it is important to reiterate that private operators, which do not have any supply obligation, do not build power plants in the liberalised energy market. This is why a responsible state is forced, in the interest of its citizens, to establish the capacities essential for supply. The construction of power plants is widely known to be a very expensive investment with

Figure 2: Development of nuclear capacities in Hungary until 2038



Source: NFM, 2012

returns over a long time. Under Hungary's present conditions, with special regard also to the fact that as a result of privatisation, the majority of the profits generated were taken out of the country by the foreign owners in the energy industry in the preceding decades, there is no money for development. That is, we can build power plants only from loans.

We entered into an agreement with Russia because besides appropriate technical quality they had offered funds under terms more favourable than market terms and the terms of IMF loans. The nuclear power plant, the ownership of which will be Hungarian, will meet all fundamental conditions of electricity generation. The price of electricity generated at the nuclear power plant is the lowest due to its extremely long service life and the smaller share of fuel costs within the total prime cost compared to other solutions. Even in comparison with gas and coal power plants and renewable sources, the costs of the nuclear power plants calculated over their entire service lives are the lowest.

According to the domestic opposition's hysteria, the Paks expansion would have a positive return only if electricity prices exceeded the current price two- or threefold. In our increasingly globalised world, only uncertainty is certain in the long term. Foresight for decades, the application of the traditional market approach are almost impossible, in particular, in very capital intensive energy projects with very long payback periods. The estimation of demand and supply and prices 20 to 30 years in advance is uncertain. Therefore, long-term decisions may and must be made only with public/government responsibility, with the intent to satisfying the actual social needs and on the basis of the information available at the time of the required action. (This is why, in order to establish a power plant, the government of the United Kingdom was also forced to assume guarantee for the price of electricity for decades in advance.) The state responsible for supply is compelled to take the risk, because market operators not responsible for supply do not take it. We expand the nuclear power plant because there is no other realistic alternative to electricity supply to the country.[8]

The European Commission's recently published Decision supports that the capacity maintenance project of the Paks Nuclear Power Plant is a project of strategic importance for Hungary from the point of view of energy policy, which will also generate profits. According to the detailed study of the body based on February 2017 data, the expected return on the project (its internal rate of return) is 6.79% to 7.90% per year, while a private investor in the market would expect 7.40% to 8.35% from a similar project.

Notes

1 It means the relatively cheap production of hydrocarbons (shale oil and shale gas) that can be produced with an unconventional technology. With the new hydraulic fracturing technology, reserves unavailable for production so far can be accessed.

2 *Népszabadság,* 17 December 2011.

3 Our government successfully opposes *globalomania* also dominating the EU and its internal assistants. "Apparently, at the level of rhetoric, we must be seen to be perfectly cooperating, while in practice we must solely represent our own interests at any price" (Bogár, 2016).

4 Russian President Vladimir Putin declared during his visit to Budapest on 2 February 2017 that "I can say one thing for sure: Russian natural gas will come 100% and reliably to the Hungarian market". Info Rádió, 3 February 2017.

5 The average age of domestic power plants is 27.4 years.

6 In Hungary, the grounds for the nuclear energy industry were laid by Professor András Lévai in the last century, who called for and taught the use of nuclear energy. He said this visionary sentence in one of his presentations in 1955: "It is no secret that our country is a specifically energy deficient country and, as such, we are among the first among the states of Europe, unfortunately, where the utilisation of the new energy source is a matter of life and death."

7 According to Prime Minister Viktor Orbán, nuclear energy will be with us also in the next century. It is a great achievement that Hungary belongs to a few countries that are considered developed in terms of the nuclear industry, excellent with regard to its educational system and outstanding with regard to its safety system. The nuclear industry is an area in which Hungary has state-of-the-art technology. *PAKS-PRESS,* 4 April 2016.

8 *Támogatjuk a Paks II. projekt megvalósítását* [We support implementation of Paks II project]. Position taken by the Energy Policy 2000 Association, http://enpol2000.hu/dokumentumok/allasfoglalasok/article/67-%C3%81ll%C3%A1sfoglal%C3%A1sok%20/554-tamogatjuk-a-paks-ii-projekt-megvalosit.

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Petronella Molnár – Szilárd Hegedűs

Municipal Debt Consolidation in Hungary (2011-2014) in an Asset Management Approach

Summary
The purpose of this study is to present Hungarian debt consolidation, its root causes and features in terms of local governments' asset management. As an additional aim, it intends to reveal the characteristics of the Hungarian municipal system, the causes that led to debt consolidation and the rule-based measures taken to prevent future indebtedness. The study focuses on the effects of debt consolidation on asset management in the Hungarian municipal system, and particularly on the operation of cities with county rights, as they have important regional duties. There are 23 of them with roughly 2 million inhabitants, thus in the aggregate they represent as many people as the capital city. This article reveals the reasons underlying the difficult financial situation of local governments, the solutions and subsequent impacts on municipal assets.

Journal of Economic Literature (JEL) code: H74, H71, H77, H72
Keywords: local government indebtedness, debt consolidation, local government debt, Hungary

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Introduction

Before 2011 the relevant literature classified the Hungarian municipal system in the transitional group among municipal system models. This means that between the change of regime and the entry into force of the Act CLXXXIX of 2011 on Local Governments of Hungary the statutes required a relatively small specific size of population to fulfil numerous tasks. Hence the local governments were charged with important tasks, as in addition to the operation of the municipalities the operating the human infrastructure was also on their shoulders. The revenue autonomy was given for that in the municipality segment, but only about 10 percent of the entire municipal system was able to utilize its own revenues appropriately. In this study we used the asset management approach to examine the municipal operation, the effects of debt consolidation, and the factors and contexts of the legislative environment influencing the asset management. In the study the municipal system was analysed, shifting the focus to the cities with county rights during the evaluations.

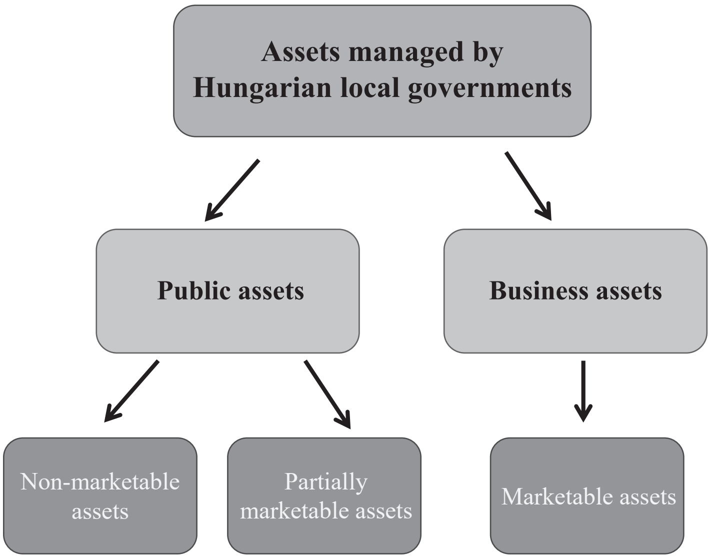
Literature review

Municipal asset management

One of the fundamental conditions of municipal autonomy is the ownership of an appropriate amount of assets for the fulfilment of their tasks. Municipal assets can include real properties, moveable, fixed or intangible assets. As it is set by the Fundamental Law of Hungary, the properties of local (and state) governments are national assets (Lentner, 2013). Although local governments do not pursue profit in the course of their operation, it is still important to maintain their assets and to continuously improve the quality of the services they provide. It is part of the goals of local governments and the performance of their duties that they cannot produce a loss during their management of finances. The efficiency, economy and effectiveness of this management are preconditions of the municipal existence (Zéman and Tóth, 2015). Local governments generally engage in non-profit cost management, and in an attempt to classify them on the basis of typical management forms in the types described in the relevant literature, local governments would be found not to fit into any of the basic types due to their special activities (Zéman, 2017). "Public assets" have been defined by many authors in the literature. According to Hegedüs et al. (2007), they include every asset required for a functioning state or used for the performance of public duties. The management of public assets includes a set of decisions on the size, operation, development, enlargement or disposal of the state's assets. Bencze (2006) divided public assets into capital and non-capital assets, the latter being the private property of the state. Based on Vigvári, asset management is the income-producing activity performed with assets other than intended for the fulfilment of core tasks. These activities are "the utilization of money and financial assets, using them in various rental relationships and in other forms, and in extreme cases the sale of properties (assets)" (Vigvári, 2007, p. 22).

During the management of public assets, the tasks that need to remain in state competence and the bodies in charge of them within the government budget must be specified. The literature devotes a great deal of attention to municipal asset management, and especially the management of real properties (Kaganova and McKellar, 2006; Vigvári, 2007).

Figure 1: The taxonomy of Hungarian municipality assets



Source: Act on Hungary's national assets

According to the Act CXCVI of 2011 on National Assets, public non-marketable capital assets are registered as being in a municipality's exclusive ownership or are classified by law as national assets of strategic significance for the national economy. National assets assigned to the exclusive ownership of local governments include: local roads and their structures; municipality-owned areas, domains and parks; municipality-owned international commercial airports and the related aeronautical telecommunication devices, radio navigation and lighting equipment, together with the establishments providing accommodation for the air traffic control service; and waters and public water facilities assigned to the local government pursuant to a special act, excluding water utilities (Lentner, 2013). According to a study by Bende-Szabó (2014), non-marketable asset are characterised by: inalienability, prohibition of limitations (with the exceptions of trustee rights and the right of use), prohibition on collateralisation and prohibition on inclusion in ay property in undivided common ownership. Partially marketable assets are the municipality-owned utilities, buildings and holdings in companies involved in public services or car parking activities (Figure 1).

The causes and procedure of local governments' debt consolidation

Regarding their regulation, local governments have undergone significant evolution, but with respect to their characteristics the basic constellation has remained; they are in charge of the organisation of public services without being the effective service providers. The municipal sub-system paid dearly for the 2006 Convergence Programme, since local governments had to solve the financing of the key social services with a decreasing subsidisation on real terms, which also meant decreasing aids on nominal terms after 2009. The reserves of the system had been completely used up by 2006, and as a result of the promised regulation of lending, local governments increasingly indebted, although this indebtedness took the form of bonds of several atypical characteristics (Vigvári, 2009a; 2009b).

Although the volume of municipal debt was very small compared to the size of central government debt, on the basis of the investigations of the State Audit Office (SAO), in 2011 the municipal subsystem had to cope with a substantial level of financial uncertainty. Local governments had no backup to repay the loans taken and their bond debts. In 2011 the SAO spent most of its investigation capacity on local governments. SAO reports revealed that the financial balances of local governments deteriorated significantly between 2007 and 2010, and the absence of operational and accumulation resources appeared simultaneously in the system. The main problem derived from the fact that local governments had not made appropriate reserves for the repayment of their liabilities. The fact that the capital assets were also offered as collateral for loans and increasing trade payables also involved risks (Lentner, 2014). So after 2010, local governments' existence was at the brink of bankruptcy due to the acute operational deficits and the expired repayment moratoriums of investment loans and bonds. It was clearly illustrated by the State Audit Office in 2012 that the municipal sector's net operating income had turned negative, and this suggested extremely serious financing difficulties.[1] Vasvári (2013) identified the operational deficit as the reason for indebtedness, while the State Audit Office (2012) blamed the investment objectives planned in the given development cycle. However, we should remember the moral hazard posed by the banking system, as municipal bond issues were primarily financed by short-term instruments, and therefore it is safe to say that the Hungarian banking system did not take a responsible approach. Moreover, the bonds did not have a secondary market, thus in effect they were used to evade procurement rules. Although the relevant loan regulations limited debt service to 70 percent of the adjusted own revenues in the municipal sector, in practice they did not present an effective limitation and borrowing was not subject to authorisation either. Despite the State Audit Office's establishment of a breach of regulation, the law was not enforced.

As a result, signs of inoperability started to appear in the municipal sector, especially at the level of villages and county municipalities with insufficient revenues of their own. The economic policy-makers recognised the unsustainability of the situation and decided to consolidate the debt accumulated by local governments in four steps between 2011 and 2014. A significant part of the assumed debt was denominated in foreign currency, and this resulted in a high exchange-rate risk, causing financial instability to both the local and the central sub-systems. The state, reorganised in 2010, had carried out a successful fiscal consolidation by 2013 (Lentner, 2015a; Lentner, 2015b, Lentner 2015c).

The consolidation of local government debt was performed in five steps. In 2011, the debt of county municipalities was assumed by the state in the value of HUF 197.6 billion. County governments competences had been limited to the maintenance of institutions, and they had no relevant revenues of their own, as half of all dues paid by the population had been paid to the central budget in 2009, and thus debt assumption was a logical move, followed by the take-over of the assets concerned.

This was followed by the assumption of debt accumulated by municipalities with less than 5000 inhabitants. The central government assumed the debts of 1710 municipalities in the value of HUF 74 billion, at a fixed rate in the case of EUR-based and CHF-based debts, and this debt was financially settled on 28 December 2012. Finally, during the consolidation of the debts of municipalities with than 5000 inhabitants, 1684 municipalities were relieved of their debts in the amount of nearly HUF 50.5 billion, denominated in local currency, and within this framework, HUF 73 million was paid to the Hungarian State Treasury as security deposits. 97 municipalities had debt denominated in CHF, and the central government budget assumed debt worth CHF 94 million contracted in 102 loan agreements. In addition, HUF 835 million owed as debt denominated in EUR under 16 loan contracts of 13 municipalities was also assumed (Lentner, 2014; 2015a; Gyirán, 2013).

In phase two, on the basis of Act CCIV of 2012 on the 2013 Central Budget of Hungary the central government assumed part of the debts (and all dues accrued on them) owed by local governments with over 5000 inhabitants and outstanding on 31 December 2012. The ratio of debt to be assumed was determined on the basis of the number of inhabitants in a particular municipality and the taxation power measured by the local business tax (based on the 2012 interim reports and the demographic data valid on 1 January of the same year), taking the adjusted mean value of the relevant municipality category into consideration. The Act CCIV of 2012 defined four municipality categories. The mean of each municipality category was calculated by the simple arithmetic average of the statistical population concerned, leaving the top and bottom 10-day-periods. Thus if the taxation power of a municipality was equal to or exceeded the adjusted mean value, 40 percent of the municipality's debt was assumed, and those with 75-100, 50-75 and less than 50 percent taxation power, 50, 60 and 70 percent of the debt was assumed, respectively. According to the 2012 interim reports, the average taxation power relating to the categories was HUF 13.3 thousand in villages with more than 5000 people, HUF 16 thousand in towns with inhabitants between 5000 and 10,000, HUF 23.5 thousand in towns with more than 10,000 inhabitants and HUF 36 thousand in the case of cities with county rights. This represented the debt of 305 municipalities in the value of HUF 685 billion, HUF 477.1 billion of which were in bonds ultimately redeemed under the Act CCIV of 2012. The agreement between the central and the local governments for the extent of the assumptions was signed on 28 February 2013 (Lentner, 2014; 2015a; Gyirán, 2013).

Phase three was announced in the autumn of 2013, when the remaining debt of HUF 420 billion was assumed by the state, given that during the technical discussions 90 percent of the municipalities had applied for a greater debt assumption. On 28 February 2014, the government assumed the remaining HUF 420 billion debt as at 31 December 2013 (Lentner, 2014; 2015a; Gyirán, 2013).

Materials and method

In the study the reasons behind the indebtedness of local governments and the difficulties encountered during their financial management were analysed. The procedure of debt consolidation was studied in the context of local governments through document evaluation and literature processing. We narrowed the focus of the analysis to cities with county rights and their debt consolidation, with the data taken from the Hungarian State Treasury.

The effects of debt consolidation were analysed first through the evaluation of the municipal assets, based on the data of the National Bank of Hungary, and the through the accounting indicators obtainable from the reports of the cities with county rights. The reports were made available by the Hungarian State Treasury, and contained the aggregated data of cities with county right between 2014 and 2016.

Achievements

Debt consolidation in cities with county rights

Due to their size, cities with county rights were included in debt consolidation in the course of 2013 and 2014, after the Act CCIV of 2012 and Government Decree no. 1808/2013 (XI.12.) on the local governments' 2014 debt consolidation had entitled them to participate.

In the course of the previous consolidation performed in 2013, part of their debt was consolidated on the basis of their performance measured by their taxation power. In the first phase of the consolidation, the value of the debt assumed from cities with county rights was roughly HUF 237.9 billion, as the central government budget assumed an average of HUF 10.3 billion of debt from the 23 cities with a relatively high standard deviation of HUF 7.11 billion.

A significant amount of debt was assumed from Pécs, Miskolc and Debrecen. The lowest amount was assumed from Zalaegerszeg and Salgótarján. In 2014, in the second phase of debt consolidation a lower amount was assumed (HUF 134.85 billion), with an average value of HUF 5.8 billion and a standard deviation of HUF 3.7 billion. In comparison with the first phase, during the 2014 consolidation, an average of 64 percent of debt was assumed, with 30 percent standard deviation and a median of 55.3 percent, thus the data was slightly unevenly spread. This can be explained by the fact that in 2014 was con-

Table 1: The debt consolidation for Hungarian cities with county rights

Municipality	Debt consolidation in 2013, th HUF	Debt consolidation in 2014, th HUF	Total debt consolidated	Consolidated per capita debt, th HUF
Békéscsaba	6,002,031	3,920,774	9,922,804	160.0
Debrecen	18,072,173	10,103,459	28,175,633	137.5
Dunaújváros	10,843,491	5,695,756	16,539,247	339.7
Eger	4,831,453	3,401,550	8,233,003	151.1
Érd	8,093,088	3,364,343	11,457,430	175.0
Győr	3,392,210	4,455,919	7,848,129	62.1
Hódmezővásárhely	15,650,835	6,891,340	22,542,175	485.9
Kaposvár	13,987,452	5,706,299	19,693,751	297.9
Kecskemét	9,152,404	7,631,905	16,784,309	149.6
Miskolc	25,661,751	10,495,978	36,157,730	217.5
Nagykanizsa	4,127,728	2,210,802	6,338,530	128.2
Nyíregyháza	12,123,347	6,707,927	18,831,275	158.0
Pécs	29,227,423	16,519,422	45,746,846	300.1
Salgótarján	2,090,110	1,167,397	3,257,507	84.8
Sopron	11,455,657	4,103,752	15,559,409	265.5
Szeged	14,075,427	11,024,642	25,100,069	151.4
Székesfehérvár	9,452,942	4,752,523	14,205,465	141.9
Szekszárd	3,529,058	2,414,675	5,943,733	173.8
Szolnok	13,702,624	7,071,966	20,774,590	283.2
Szombathely	10 638 947	4,477,818	15,116,765	193.3
Tatabánya	5,375,663	8,996,451	14,372,113	203.6
Veszprém	4,987,253	2,487,933	7,475,186	129.2
Zalaegerszeg	1,448,931	1,243,940	2,692,871	45.6

Source: The authors' research based on data from the Hungarian State Treasury

siderably more debt was assumed than in 2013 in some of the municipalities. These cities included Tatabánya and Győr, while the data for Zalaegerszeg, Eger and Dunaújváros was close to the debt assumption made in 2013. A minor amount of the debt was assumed in the case of Zalaegerszeg, Salgótarján, Szekszárd, Veszprém and Nagykanizsa (Table 1).

The aggregate of the two years' data show that HUF 372.77 billion were assumed by the central government. Pécs had the largest amount of debt assumed, followed by Miskolc, Debrecen and Szeged. Among the cities with less than 100,000 inhabitants, Hódmezővásárhely had the highest amount of debt assumed.

The average amount of debt assumed relative to the population was HUF 193,000 per capita, while the standard deviation of the debt was HUF 99,000 per capita. The per capita debt assumed was significant in Hódmezővásárhely, Dunaújváros, Kaposvár, Pécs and Szolnok, and it was low in Zalaegerszeg, Salgótarján and Győr.

The effect of debt consolidation on the financial management of cities with county rights

The financial management of cities with county rights was analysed using accounting indicators. The data clearly show that after consolidation capital strength is high, but shows a declining trend. This is due to the fact that the use of funds from the European Union significantly increases the role of passive deferrals, as confirmed by the extremely low ratio of liabilities (2%).

Table 2: The effects of debt consolidation on the management of cities with county rights

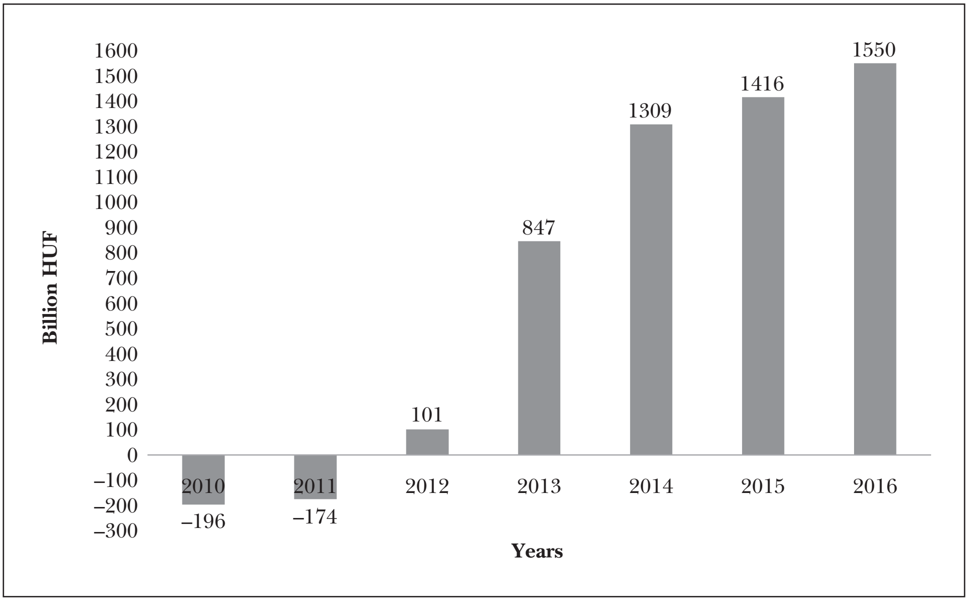
Indicator	**2014**	**2015**	**2016**
Equity ratio	94.6%	92.7%	86.0%
Leverage ratio	2.2%	1.9%	2.3%
Ratio of fixed assets	93.2%	93.4%	87.3%
Change in fixed assets	100.0%	104.8%	105.5%
Coverage for fixed assets	101.5%	99.2%	98.5%
Liquidity ratio	5.2	14.7	27.3
Acid test ratio	5.2	14.6	27.2
Cash and liquid assets	2.8	7.3	20.8
Ratio of own revenues	45.5%	45.8%	38.9%
Equity growth	5.2%	1.2%	0.3%

Source: The authors' research based on data from the Hungarian State Treasury

The fixed asset ratio gives the ratio of long-term assets to the total assets held by local governments. The data reveals that by the final year the ratio of fixed assets had slightly dropped, however, in relation to 2014 a steady 5 percent increase is shown, implying that cities with county rights can expand their operating assets at an aggregated value (Table 2). The cash flow of municipalities may be considered as fairly good in the aggregate, or in other words, local governments have excellent solvency, several times the size of their short-term liabilities on the asset side. The ratio of their revenues and increase in equity (i.e. the efficiency of operation) are relatively high, and this enables stable operation. A slight decline is shown in the last year reviewed, but the continued 2014 and 2015 trend may be the measure of a prudent municipal operation.

An adequate indicator of local governments' financial position is the central bank's statistics about trends in net financial assets. Clearly, in 2010 and 2011, aggregated liabilities exceeded the financial assets of local governments, and this points to an unsustainable situation (Figure 2). In the course of debt consolidation, the financial assets of local governments started to grow significantly, and nearly doubled compared to 2013, representing a record increase in nominal terms, as they had never had such a high amount of funds without liabilities. Municipal liabilities primarily comprise trade payables and loan debts, amounting to HUF 300 billion and HUF 80 billion, respec-

Figure 2: Net financial assets of Hungarian municipalities



Source: National Bank of Hungary, 2017

tively, in 2016. Relieved of debts, local governments could basically make a fresh start in 2015. Local government functions have undergone the most profound change since the adoption of the current municipal structure 1990. This procedure may be termed as a kind of streamlining and it was implemented through the re-centralization of several tasks, representing a shift towards a healthier framework. In addition to streamlining functions, budgetary regulations are now applied in previously unregulated areas of operation: they are not allowed to plan deficit in their operating budgets or have renewable non-current operating loans, in order to create the conditions of cost-efficient management; authorization is required for borrowing, whether in the form of loans or securities issuance (primarily of bonds and bills of exchange). The aim of this regulation is to only allow municipalities to take out loans under regulated circumstances, with the approval of the Ministry for National Economy, and to guarantee the flexibility for their contribution to projects carried out using European Union funds and for low-value loans (HUF 10 million for towns, and HUF 100 million for cities with county rights and the capital). The local government sector runs a risk arising from the fact that in the course of the majority of the municipality projects no additional funds are generated to cover debt service, resulting in an operational cash-outflow in addition to the investment costs, which may deteriorate the operating income of local governments and the financial capacity that indicates long-term financial viability (net operational income). To avoid this, local governments are not allowed to undertake new investments if their debt service exceeds 50 percent of their income. This encourages local governments to implement projects that do not generate additional operating costs.

Since 2015 local governments have the option to access additional development resources through the system of municipal taxes levied on incomes not taxed by central and local taxation regulations. In other words local government independence has increased in terms of income. Based on the theories and scientific achievements of fiscal federalism, in particular the TOM (Tiebout, Oates and Musgrave) model, a reasonable solution is taxing bases that are immobile and only have a minor impact on the economy of the municipality. The competences of county governments and the capital city's government to perform regulatory review have been extended and added legislative powers.

Both the operating and the accumulation budgets of local governments have been restricted, but on the other hand, the opportunity is provided to establish autonomous and flexible financing. So the Hungarian regulation is now closer to the stricter practice of OECD countries, contrary to the previous, rather liberal regulation (Sutherland, 2005). However, municipal economy does not only include the establishment of local authorities and functional service organisations, but also the organisation of public duties. The Act CLXXXIX of 2011 requires local governments to perform 21 mandatory duties, most of them through companies in municipality ownership. The principal risks posed by municipal enterprises are that they can affect the municipality without being included in their balance sheets, thus creating an off-balance sheet risk (Schick, 1998; Polackova, 1999; Hegedüs and Papp, 2007; Hegedüs and Tönkő, 2007).[2]

Conditional liability means that the municipalities acting as owners are liable for their loss-making companies or for the debt services of their companies, even if the latter are not operated in compliance with the accounting principle of going concern. Unfortunately, a significant amount of debt has been accumulated by municipal companies, especially those of cities with county rights. Risk management actions included the following:

1) debts incurred by and the guarantees granted to municipal companies must be indicated in local government accounts from 2014;

2) debt generating transactions by companies in more than 51 percent local government ownership are subject to authorization just as the similar transactions of municipalities as owners;

3) the acquisition of municipal ownership in companies is now limited.

Pursuant to the regulations of the Treaty of Rome and the Treaty on the Functioning of the European Union, direct state aid is forbidden and therefore municipal companies must endeavour to manage their budget to match their revenues, in accordance with the findings of the State Audit Office (Németh et al., 2016). If necessary, the financial government can use the tool of consolidation, but the persistence of the soft budgetary threshold can only be avoided by laying down general rules (Lentner, 2013; 2015b; 2015c).

The SAO outlined a 4-point package of proposals for the renewal of state management, which contained the following:

1) the performance of the heads of state-owned and municipality-owned companies must be constantly assessed in terms of compliance, effectiveness, efficiency and economy;

2) the efficiency assessment and activity of the holder of the ownership rights must be improved;

3) the heads of state-owned and municipality-owned companies must comply with strict ethical and integrity principles; and

4) the remuneration of the heads of such companies must be changed (SAO, 2015a; 2015b; Domokos et al., 2016).

Summary

The tasks, competences, financing structure and assets provide an appropriate basis for the financial management of municipalities. Based on the experiences, municipal debt consolidation was a novelty, since previously there had been a consensus that the central government should keep out of municipality debts. In our opinion this action was crucial because their indebtedness would have made the existence of numerous cities, towns and villages impossible. In this context, further actions were made in order to control or even prevent the build-up of future debts.

An assessment of the repercussions reveals that local government assets have been increasing and their management has improved since the consolidation, and this can serve as a basis for an ongoing stable operation.

Notes

[1] In the case of a negative net operating income (operating income minus principal repayment), the local government will soon be caught in a debt trap.

[2] This phenomenon was detectable in Thailand prior to the turn of the millennium.

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András Bethlendi

Sovereign Defaults and How to Handle Them

Global Economic Order vs. National Economic Policy Interests on the Examples of Greece, Hungary and Ukraine[1]

Summary
This study shows that since the Keynes-White dispute in the middle of the 20th century, the global economic policy thinking is clearly determined by White's views up until today. In the global monetary system, debt restructuring solutions are subordinated to the global economic order, and not to national economy policies, as shown by the recent examples of Greece, Hungary and Ukraine. According to this thinking, basically the debtor is held liable for imbalance and over-indebtedness. Obviously, the system cannot solve balance of payments problems between countries and the ensuing debt crises. The free movement of goods and capital is given an absolute priority. We show that out of the elements of the Keynesian system, only the introduction of creditor's liability as an instrument and the establishment of some sort of a supranational debt restructuring forum were proposed as a comprehensive solution after the 2008 crisis, besides some small-scale technical suggestions (e.g. the CAC). The reform proposals have not brought about any significant change in the management of sovereign defaults. In the euro area, after the 2010 sovereign crisis, the emphasis was laid on establishing the institutional background for the short-term financing of countries in debt crisis, rather than on genuine institutional reform of debt restructurings. And even in the worst of the crisis, the indebted countries are asked to implement more fiscal constraints and privatisation programmes as a prerequisite for further financing.

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Large international banks and investors and their home countries have no interest in institutional reforms: sovereign default remains a slow process with uncertain outcomes and even enormous costs. In our opinion, the institutional system of sovereign debt crisis management can only be reformed by the massive support of already existing international organisations. It would be a big step forward if IMF/EU abandoned their previous practice of protecting private investors and provided better safeguards for the interest of indebted countries and/or their own taxpayers.

Journal of Economic Literature (JEL) codes: E6, F3, G1, H6, K4
Keywords: international organisations, sovereign debt crisis, debt restructuring, current account deficit, international financial intermediation, financial markets, international legal procedures, Greece, Hungary, Ukraine

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Introduction

Transparent, cost- and time-efficient corporate bankruptcy laws and practices have a long tradition in the developed world. Over the past one or two decades, private individuals' bankruptcies have also been appropriately regulated in certain countries. However, sovereign default still remains to be unregulated: a non-transparent process with unpredictable political and economic costs and a highly uncertain time course. Yet even in the case of conservative and prudent indebtedness, certain events may take place that drive a country into a debt crisis. In economic thinking, it is now a relatively wide-spread view that certain rapid and completely unforeseeable events might also happen that considerably worsen countries' debt positions.[2] In order to avoid long-term economic and political crises, the international community would need a bankruptcy mechanism that would help countries to recover quickly.

The subject has recently become topical with the 2010 sovereign debt crisis in the euro area. In 2014, financing difficulties in PIIGS countries (Portugal, Ireland, Italy, Greece, Spain) except for Greece, in Cyprus and in Hungary seemed to be resolved. However, this was when the political-economic crisis started in the Ukraine, on the other periphery of Europe. Let we note that, in our opinion, the subject still remains to be topical today. As we come to the end of the current financing period which, even in economic history terms, proved to be very persistently cheap, a new wave of sovereign debt problems can be expected in countries with long-standing current account deficit.[3]

In this paper, we would like to describe the management of sovereign default and the assessment of relevant reform proposals in light of an intellectual framework provided by a dispute that happened more than 70 years ago. This is the negotiation of John Maynard Keynes and his "opponent" Harry Dexter White. These two influential experts have greatly contributed to establishing the so-called Bretton Woods international monetary system. The outcome of their debate was determined mainly by the distribution of power and interests at the time between the United States (White) and Great Britain (Keynes), and not by economic aspects. Also, this fact foreshadows one of the final conclusions of this paper, namely that debt restructurings are subordinated to the global order (i.e. the distribution of political and economic powers and interests), and not to national economy policies. After the collapse of the Bretton Woods system, no new international monetary system has been created; the current system can be seen as a continuation of the Bretton Woods system, as its institutions, the International Monetary Fund (IMF) and the World Bank (WB), and the US dollar are still dominating.[4] That is the reason why it is important to outline the dispute between Keynes and White that serves as a framework for reconsiderations of debt restructuring practices and reform measures.

The remaining part of the study is organised as follows. Based on the literature after presenting the discussion between Keynes and White, we describe the development of the sovereign credit market, the definition of sovereign default and the current practice. We introduce a grouping of different reform proposals and evaluate the reform proposals and their criticisms. The above is supported by our Greek, Hungarian and Ukrainian case studies. Finally, we conclude.

Keynes vs. White; the conceptual framework

Keynes had looked into the problem of sovereign debt restructuring already in his book on the Versailles peace system (Keynes, 2000) that came after World War I. In agreement with Szakolczai (2017), all of Keynes's activities and works clearly point to his very last undertaking: creating the Keynesian order of the international monetary system. This system is considered as the extension of Keynes's General Theory onto the international platform and, thus, can also be named as Keynes's International General Theory. In Bretton Woods, the view of the United States was elaborated and represented by White. His view is considered just as important as it was eventually put into practice and has exerted its effects ever since.

Keynes summarised his pertinent views in two of his works: *Post-War Currency Policy* and *Proposals for an International Currency Union* (Keynes, 1941a; 1941b). The main elements of the Keynesian analysis, being, in our opinion, still valid today, are as follows:

– Ever since monetary systems exist, the current account problems between countries could never be solved, except in one or two shorter periods in time.

– It is a doctrinal illusion based on no experience that any laissez faire, laissez passer mechanism (free floating exchange rate, free movement of capital, deflationary processes, etc.) can create and maintain balance. It is not supported by any economic policy experience. Imbalances are persistent and generally lead to current account (debt) crises.

– The free movement of capital often reinforces imbalance: the financial capital flows from countries with persistent deficit (and thus in difficult financial situation) to persistently active countries. Speculative capitals are moving rapidly all over the world, ruining stable (real) business undertakings. All in all, capital flows in the market exacerbate problems caused by imbalance.

– Surplus countries are just as responsible for imbalances as deficit countries. Surplus countries supplement their insufficient domestic demand by export.

– Back then Keynes had already recognized the essence of what was later named in economics the Mundell-Fleming trilemma. A small and open economy cannot simultaneously maintain free capital movement, a fixed exchange rate and independent macroeconomy (monetary policy) (see Fleming, 1962; Mundell, 1963). As far as economic policy is concerned, this trilemma can be simplified to a dilemma: the priority is given either to the national economy conducive to the public good or to the global order (Szakolczai, 2017).

– In order to solve the above problems, a supranational institution is needed to establish and operate the international monetary system.

From a position of classical economic thinking, White puts the stability of the international monetary system first and favours the fixed exchange rate regime. According to his view, basically the debtor is held liable for the imbalance and over-indebtedness. At the same time, similarly to Keynes, White acknowledges that certain capital flows need to be controlled and fixed exchange rates need to be adjusted, if necessary (see Boughton, 2002). The overall aim of his proposal was to gain dominance for the United States in the Bretton Woods system, raising a country above others due to its economic and political weight. He mocks Keynes's proposal on a new international currency vs. his own "golden dollar" proposal, while his "dollar-standard" proposal later failed in practice. He envisaged the IMF to work like a bank and not like a clearing centre, where member countries collect the capital needed for the operation of the organisation, and the amount of the capital contribution determines the amount of the available loan and the voting rights of a given country.

The above economic policy dilemma is very topical in the euro area, and for making considerations about joining to the euro area. The mainstream economic thinking in the eurozone is that every country should maintain a completely free movement of goods and capital on fixed exchange rates, to the detriment of an autonomous economic policy that would help them to develop. So the international order and the free movement of capital are given absolute priority. This will be detailed later on through the example of how the Greek sovereign crisis was handled. Greece was not allowed, among others, to impose temporary restrictions on movement of capital and goods as an obvious means of stabilisation, they could only apply fiscal constraints and deflation. In light of the above, accession to the euro area is rather in the interest of those countries whose economies are in close harmony with the economies of the core countries in the euro area. At the same time, it assumes an almost identical level of economic development and same economic structures, as giving up the autonomous economic policy does not lead to conflict of interests.

Let me note that there are national economies that never surrendered the control over the movement of capital and goods. China is a good example for this, proving that a long-lasting economic catch-up can also be managed while having significant capital constraints at the same time. As for the Mundell-Fleming trilemma, the two elements China chose are the independent macroeconomy and the fixed exchange rate.

Keynes's proposal

Below you can read a summary of the main elements of Keynes's proposal for the Bretton Woods system, based on Szakolczai (2017).

1) The system should be established on international level as on the level of a country: an international banking system with an International Clearing Union. The prerequisite for this is the existence of a supranational currency that would be accepted by all member states' central banks, and inter-state accounts would be kept in this currency. This international money cannot be identical with any national currency, as it has a different function: it should be used for international accounting only.

2) The clearing centre does not need capital, as the surplus of surplus countries should equal to the deficit of deficit countries.

3) Every country has automatic overdraft facilities, so countries do not have a creditor-debtor relationship with another country, but with the clearing centre.

4) The basic principle of the system is that the surplus countries are just as responsible for imbalances as deficit countries. So the burden of adjustment should be shared by the two parties. It means that not only the deficit countries need restriction policies, but also surplus countries need expansion policies (increasing their own domestic demand).

5) Debtor countries should not pay interest to creditors, just a fee of 1–2 percent to the clearing centre. At the same time, creditors should not receive interest, but they should also pay the 1–2 percent fee to the clearing centre, as they are also responsible for the imbalance.

6) In the event a credit does not provide solution, the second proposed action is devaluation. The role of the Clearing Union in this is to prevent competitive devaluation.

7) If the latter still proves to be insufficient, then deficit countries have the right to impose import restrictions. According to Keynes's view, the expansion of the freedom of international trade can be temporarily reversible, if the situation requires so.

8) The next tool in line is increasing domestic demand in the surplus countries. If they do so and still have surplus for an extended period, the surplus should be spent on development credits for or investments in developing countries.

9) One of the major elements of the system is the control of international capital movement and the restriction of speculative capital flows.

10) Keynes acknowledges at the same time that if the above tools are all inefficient, then the given country appears not to have enough economic capacity to maintain the same standards of living, so restrictions are also needed.

The above tools are capable of preventing unsustainable imbalances. The most important elements of the above proposal (a national currency should not become the global currency; automatic and not capital contribution based overdraft facilities; the responsibility of creditor countries) were not accepted. At the same time, many points of the IMF founding treaty[5] reflect the intellectual legacy of Keynes.[6] However, the subsequent practice of the IMF has gradually moved away from it.

Sovereign credit market dynamics in and after the Bretton Woods system

In the Bretton Woods system (in the period after World War 2 until 1970) sovereign lending was made through intergovernmental or international institutions (World Bank, IMF), and it was a strictly controlled process. With the failure of the Bretton Woods exchange rate mechanism, from the 1970s, international private banks could enter this credit market. As the oil prices increased, oil producing countries made significant surplus; part of their savings was channelled by private banking groups to developing (oil importing) countries, financing their current account deficits. Long-lasting imbalances were essentially not corrected by neither economic, nor institutional mechanisms.

The significant debt stocks and risks that were built up in the meantime led to the sovereign crisis in 1980-1981. Some comprehensive proposals were made for the formal legal framework of sovereign debt restructuring,[7] but eventually none of them were introduced. Measures for strengthening market processes were taken instead. The so-called Baker Plan made a more active lending activity of the IMF and the World Bank subject to market reforms, but did not deal with the institutional framework of debt restructuring. As the Baker Plan proved to be inefficient, the so-called Brady Plan was drawn up that laid the foundation for agreements on credit restructuring of developing countries. Besides partial debt relief, banks could exchange their unsecured dollar loans for longer-maturity and lower-interest bonds (and thus pulling out of financing), in many cases attaching special securities to them (for example, the oil reserves in Mexico). By issuing bonds for financing the debt, the secondary trade of these bonds were also built up, further increasing the share of market players in sovereign debt financing (Kamenis, 2014). These reforms basically served the creation of the sovereign financing market, but were not adequate to provide a comprehensive solution to debt crises, and what is more, made the system of sovereign financing even more complex and less transparent (for example, with the emergence of related credit default swaps and other derivative tools). The inefficiency of this system is aptly shown by waves of continuous sovereign crises (1994-1995: the so-called tequila crisis; 1998: crisis in Asia and in Russia; 2001-2002: crisis in Argentina).

In our opinion, purely market-based risk taking would be an important component of a healthy global financing system. However, institutional shortcomings make major private players' risk exposure asymmetric. Large negative risks are only virtual ones: in reality, these players undertake one large positive risk due to the lack of international regulations on and formal procedures for sovereign crisis situations. And in some specific cases, investment protection agreements between an indebted country and the United States also cover the subject of sovereign debt and thereby protect the interest of major American investors, so their real risk exposure is more limited.

Based on the literature in the sovereign credit market, a specific group of investors started to purchase the debt of countries coping with debt difficulties at a discount price; these are often called vulture funds and rogue creditors. Many times, these creditors do not agree with debt restructuring agreements, they try to stay out, and continue to demand the full amount from the debtors.

Sovereign default and its settlement mechanisms boil down to two basic questions by certain authors (Schadler, 2015):

1) Legal technical procedure for restructuring: What shall be the legal and procedural framework of state debt restructuring when the debt of the country (with a significant share of international creditors) surpasses the country's debt servicing ability without serious disruptions of its economic and social order?

2) The responsibility of international assistance and creditors: In what situations shall the IMF or another international organisation provide financial assistance to a country in difficult situation and impose an obligation on bondholders to bear part of the loss?

It is apparent that the above components have been elaborated on in Keynes's proposal, as part of a single system.

The definition of sovereign default and its current practice

The commonly accepted definition of sovereign default is that a central government of a sovereign state does not fulfil its credit type obligations, or does not fulfil them according to the original conditions, and causes damage to creditors. Sovereign default is generally followed by a shorter/longer process where the parties involved exchange their existing state debt instruments (bonds, credit, securities, etc.), in the framework of a legal procedure, to new debt instruments. This is called restructuring, which has two main elements:[8]

– Debt rescheduling: extending the maturity of the debt. This is a form of debt relief, as the instalments are smaller (and prolonged in time).

– Debt reduction: the nominal value of the debt (the amount to be paid back) is reduced, which can be accompanied by reducing the burden of interest as well.

It is hard to make general comments on the direct causes of sovereign default; it is generally caused by several factors: excessive accumulation of debt, international lending cycles, sudden and significant decrease in the price of raw materials and crops, etc. The subject of creditor liability (there is no over-indebtedness without excessive lending) that had already been raised by Keynes was often highlighted by other prominent international financial experts as well (Sándor Lámfalussy, Joseph Stiglitz, for example). Market failure often happens in this area. And often there is non-negligible asymmetry (in strength, knowledge, information) between the sophisticated, large international providers of funds and the decision makers in the governments of developing countries. Market imperfections are exacerbated by bank capital controls that transfer financing risks (interest, exchange rate, maturity) to the debtors. As a consequence, a well-known phenomenon (the so-called "original sin") happens: a financing shortage in the local currency, foreign creditors are willing to provide funds in an international currency only. In segments with lower credit rating, the main characteristic of international financing market is high volatility. Even smaller problems (emerging even in other regions or countries) trigger strong reactions to financing this circle of countries. Financing is totally independent of the financing needs of these debtors; what is more, it often happens that funds are pulled out when debtors need them the most (making the process very pro-cyclic). These problems all had appeared already in Keynes's analysis, but have been discussed ever since in international finances.

In the case of a loan provided to a sovereign debtor, the outcome of legal enforcement in court is uncertain, and state's assets would not, or would limitedly serve as an ultimate security for the repayment of the loans. It is important to show the possible costs of a sovereign default because these unwanted costs are responsible for the mechanism that allows for the existence of loans provided for sovereign states. A possible future international regulation on sovereign default should definitely take into account that incentives to repay loans should remain powerful enough.

Enforceability of a state debt is highly increased when the debt is to other states (even with more international influence) or when these states, referring to an investment treaty, take actions to protect their private creditors. In many cases, it was the IMF itself that strongly represented the interests of international creditors against debtors. A very good example for this is the Argentine crisis in 2001, where the IMF deliberately prolonged negotiations, extending the agony of the country (Stiglitz, 2007). Uncertain and long debt restructuring is the most important cost item in a sovereign bankruptcy. Finally, the Argentine government came to the decision that it is better for them to get out of the crisis on their own, without a new IMF programme, which then they accomplished successfully.

Another important cost item in sovereign default derives from reputation loss and its various economic consequences. One form of this is when private creditors, having no general legal enforcement tools in their hands, apply exclusion from financial markets, meaning they do not give new loans after bankruptcy. At the same time, it is empirically proven that sovereign default does not imply the final exclusion of the country from international financial markets. On the contrary, the memory of the markets is generally not too long. Especially after a successful debt restructuring process, markets do not discriminate, so lending to the given country can resume surprisingly fast. Exclusion from financial markets may appear in a less severe form, through the increase of loan costs, but its effects last for a short time, not more than 2 or 3 years (IMF, 2013).

Loss of reputation (confidence crisis) is manifest in the permanent deterioration of bilateral economic relations (between economic players of the creditor country and those of the debtor country), through the decline of working capital movement and trade. Freezing of foreign supplier credits is also an important channel to deteriorating trade relations. It must be noted that the breakdown of trade relations entail economic loss for both parties, so cannot be considered a lasting tool for sanctioning.

Last but not least, the negative impacts of sovereign defaults on the national economy and politics are also important to be highlighted. Effects on the domestic economy are most clearly manifest in the banking sector, especially when domestic banks provide significant funds to finance state debt — in these cases sovereign default can cause bank crisis. Sovereign default generally results in economic downturn, with unavoidable political consequences. Thus, sovereign defaults often lead to the failure of leading government officials and a change of government. Therefore, decision-makers might well be encouraged to postpone national bankruptcy out of own interests, even when bankruptcy would be a rational step on the social level (see Vidovics-Dancs, 2014). Let me note that it also implies compromising that leads to a situation where a completely weak country *de facto* loses its fiscal sovereignty.

Initiatives, proposals

In this and next chapter, we will group and evaluate the various reform proposals and their criticisms. Initiatives and proposals on reforming sovereign bankruptcies can be divided into two groups: 1) specific technical instruments that by themselves can improve the practice of national bankruptcies; 2) comprehensive proposals on a new system of institutions.

Specific prevention instruments

Experts attach particular importance to the so-called prevention instruments.

– For reducing the pro-cyclical impacts of international financing, the general use of the so-called GDP bonds. The credit costs of these bonds would move in tandem with the rate of economic growth. The costs would be higher in case of a rapid economic growth than in case of a declining economy.

– Another prevention instrument is tightening the rules for the transparency of national debts and Debt Sustainability Analysis (DSA). There are several international forums for the risk assessment of countries. The most well-known ones are IMF's DSAs. Also worth mentioning the OECD country reports that mainly reflect the (consensual!) value judgment of country export credit agencies. With an increased involvement of these forums, the information barriers to the debt situation of a certain country would be lowered. Public fund providers of OECD countries are already bound by requirements for debt sustainability, i.e. they cannot provide new funds to a country whose debt was assessed as unsustainable by the IMF. However, these rules do not apply to private players. It could be made obligatory that players who do not take sustainability signals into account should not receive any subsidies or international support.

– The strengthening of the framework of the so-called rules-based fiscal policies. A good example is the Constitution of Hungary, which includes debt rules also, so these rules are protected by a legal instrument of the highest level.[9] The rules-based fiscal policies are regarded successful if they establish not only rules on procedures and transparency, but also institutional mechanisms for the enforcement of the rules.

– The reform of bilateral investment treaties can also strengthen prevention. Well in advance of debt problems, it would be appropriate to explicitly exclude the various forms of state debts from these treaties. In the current global liquidity glut, the negative market impact of these kinds of changes would be minimal.

Handling the "too little, too late" problem

Debt restructuring is a time-consuming process in which coordination between creditors might get difficult, potentially leading to the "free-rider phenomenon"; and private creditors liquidate their positions, and exposures and costs remain at public players and/or international institutions.

Establishment of agreements between creditors could be made much faster and more efficient by the general introduction of the so-called Collective Action Clauses (CAC), which would make the agreement of the qualified majority of creditors sufficient, and this agreement would be binding for the rest of the creditors also. According to a decision of the Eurogroup (an informal body of financial ministers in the euro area Member States), a CAC is required to be included in all new euro area government bonds issued after 1 January 2013.[10]

The other element in the solution for the "too little, too late" problem would be a rule that hinders public players and international institutions from bailing out private players' credits. This could be achieved by setting Private Sector Involvement (PSI) as a condition for public and international institutions to be involved in the solution of the debt crisis or, in other words, public intervention should not be made possible without a bail-in (recapitalisation by creditors or release of the debt).

Comprehensive instruments

As is shown above, following major international debt crises, initiatives on a comprehensive institutional review of debt restructuring gain ground. The global economic crisis in 2008 gave a new impetus for proposals for the overall framework of sovereign bankruptcy, endorsed by international organisation as well. Proposals can be divided into two main groups: solutions based on either legislation or on arbitration proceedings. The supranational character, i.e. the limitation of national sovereignty, is more pronounced in the legislation-based approach.

Proposals based on legislation:

– IMF's proposal on a Sovereign Debt Restructuring Mechanism (SDRM) in 2002/2003, which was given another push in 2012/2013 by the organisation, although IMF published it again only as an expert material (so-called "staff paper") (IMF, 2013). The initiative was halted, mainly due to lack of support by the USA (Mooney, 2015). The proposal assigns a significant role to the IMF in the management of debt crises: 1) providing interim financing; 2) analysing debt sustainability, leading negotiations; 3) proposing a global solution, so sovereign defaults would be legally managed through one forum (Dispute Resolution Forum, DRF), similarly to the proposal on arbitration. The proposal includes the compulsory use of CACs and an obligation for the creditor to suspend debt enforcement during negotiations on restructuring.

– In 2010, the sovereign crisis of the euro area led to the proposal on the European Crisis Resolution Mechanism (ECRM), outlined by the think-tank Bruegel, recommending a set of rules binding across the whole of the EU (Gianviti et al., 2010). Thus, it is a supranational proposal that consists of three pillars: 1) a legal institution to resolve disputes; 2) an economic institution to analyse debt sustainability and lead negotiations; 3) a financial institution to provide interim financing.

The essence of both proposals is that the agreement of the qualified majority (more than 75%) of creditors (considering all types of instruments) represents a valid decision binding for all creditors. By contrast, the Collective Action Clause represents a decision binding for all within only one instrument. In the European Union, only the CAC was introduced, the Bruegel concept was not.

We show that as a result of the 2010 sovereign crisis, the EU laid emphasis on establishing the institutional background for the short-term financing of countries in debt crisis, rather than on genuine institutional reform of debt restructuring. Therefore, countries' debt management remained within the already existing ad hoc framework, which is, as we will see, the reflection of international power relations. At the same time, as long as debt restructuring is underway, the interim financing of a given country is arranged from the then created funds (the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM)), if the country is cooperative enough. So, instead of expiring private creditor debts, these institutions step in as fund providers. Their fundamental philosophy is based on so-called "cash-for-reform programmes". In the framework of these programmes, they demand significant fiscal constraints and privatisation from crisis-stricken countries, further enhancing economic decline and social tensions. Another important aspect of EFSF and ESM is that there is a weak democratic control over them and both of them are closely intertwined with the private sector.[11]

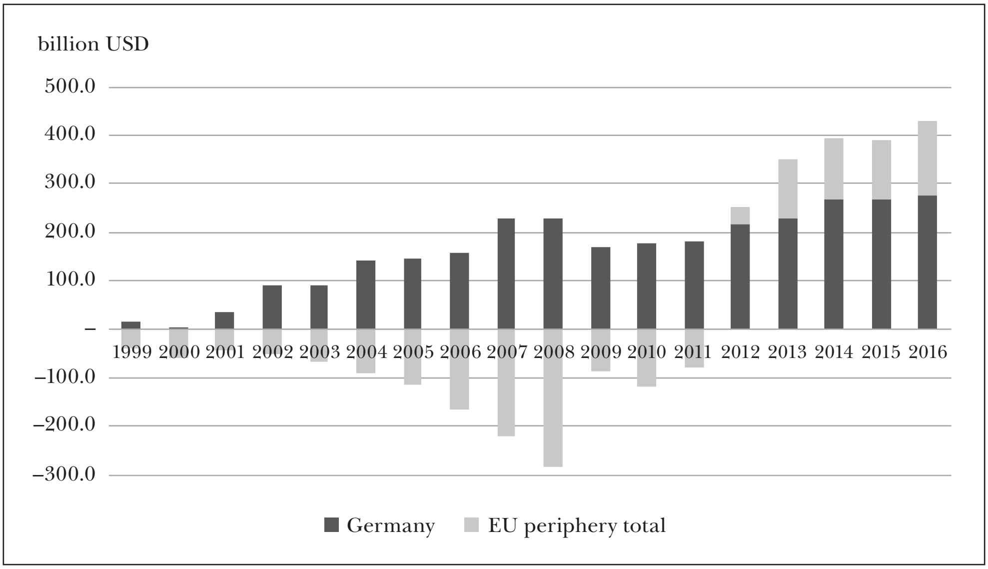
Keynes's situation analysis correctly describes the current international economic climate within the euro area. The above solution is clearly in the best interest of the "core" countries in the EU (to a large extent, Germany) that had a persistently positive foreign trade/current account balance. The previously mentioned crisis-stricken countries, most of them in the Mediterranean and some of them in the CEE region, were deficit economies in the years before 2008. The continuous deficit/surplus situations have built up a large group of debtors and creditors, and the whole system was financed by private financial institutions of core countries.[12] Therefore, the crisis basically derived from a competitiveness problem: the catching-up process in the EU stalled. This is important because it lead to an inappropriate management of the crisis. European decision-makers demanded a significant fiscal adjustment from the countries in trouble, although the crisis-stricken Ireland and Spain had lower state debt and budget deficit than most of the countries in the euro area. Therefore, the whole process is morally questionable (e.g. Greeks being portrayed as lazy in the European press) as, for example, the external trade surplus of Germany, and thus the well-being of the Germans, was financed through *de facto* German loans by countries lagging behind (e.g. the Greeks). However, neither Germany, nor the EU has implemented any meaningful programmes to improve the competitiveness of Greece. This paper is not to make a judgment on the efficiency of various regional development programmes in the EU; however, it is a fact that there was no substantial catch-up made in the last 10 years, which is aptly reflected by the change in the relative economic development of periphery countries compared to Germany. The mean (unweighted) per capita GDP of the periphery countries involved in the study was 42% of the same value in Germany in 2007. This mean percentage decreased to 38% by 2016. Changes by countries are shown in the graph below.

Table 1: Changes of GDP per capita expressed in EUR, in proportion to GDP per capita in Germany, between 2007 and 2016 (in percentage points)

Bulgaria	Czech Republic	Estonia	Greece	Spain	Italy	Cyprus	Latvia	Lithuania	Hungary	Poland	Portugal	Romania	Slovenia	Slovakia	Albania	Serbia
4%	1%	3%	–26%	–14%	–16%	–18%	0%	6%	–2%	3%	–7%	3%	–5%	6%	1%	0%

Sources: Edited by the author based on Eurostat

Figure 1: Balance on Goods and Services



Note: Periphery countries are considered to be all the countries indicated in the table above

Source: Edited by the author based on IMF

The Figure 1 clearly shows the expansion of the German export and that the periphery countries could only improve their external balance through significant internal constraints, as a result of which their economic catch-up was halted. From the perspective of the stability in the EU as a whole and the global economy, Germany was criticised for its current-account surplus, the issue was examined even by the European Commission. Germany's trade surplus already exceeds that of China on a sustained basis. *The Economist*'s most recent article on the subject was published in 2017, in which the phenomenon was called as "The German problem". The article says that Germany is a country that "saves too much and spends too little" and it is "bad for the world economy". Germany's consumer spending in proportion to GDP is persistently lower than in other big economies (USA, Great Britain, etc.) and the country's investment rate is at a low level (The Economist, 2017).

As a result of the global debt crisis, the persistent deficit-surplus relationship made debtor-creditor relations tense.[13] In this context, if policy makers of core countries had acknowledged that the demand of deficit countries had greatly contributed to their own countries' previous growth, and in turn they had shown some solidarity during debt restructurings, then the costs of the latter would have suddenly appeared in their own financial system, slowing down their own domestic economic activity. It clearly proves that voluntary loss assumption by the creditor is highly unlikely without an institutionalised form of creditor contribution, proposed by Keynes.

Based on the above it can be stated that the ESFS and ESM are given a similar role to that of the IMF, concentrating their activities on the euro area, in the best interest of the influential "core" Member States of the EU. The PIIGS countries and Cyprus were financed from these funds at the time of debt crisis. This paper, however, is not intended to detail the activities of these funds, because, as mentioned above, they have been created mainly in the interests of private creditors to provide interim financing.[14] Let us continue then with the other type of comprehensive reform proposal.

Out of *proposals for an arbitration based solution,* let me highlight a concept embraced by NGOs called Fair and Transparent Arbitration Process (FTAP). Based on FTAP, the UNCTAD established a working group on Debt Workout Mechanism (DWM).[15] This paper only mentions reform proposals from NGOs, but does not present them in detail. In our opinion, if a proposal, no matter how fair and efficient it may be, is not embraced by an international organisation and not integrated into any of their programmes, the chances for its implementation are practically zero.

The central elements of the "arbitration solution" are the establishment of an approved institution, conferred with decision-making powers (by both the debtor and its creditors) and, in the case of a country, the general use of the arbitration clause in all of the country's agreements associated with any future debt (bank loans, sovereign debt, loans provided by international organisations and bonds). One form could be a court operated by the UN. An advantage to this, compared to the IMF proposal, is that while the IMF itself is an active lender, the UN could act more independently in solving these types of problems. This approach does not require any change in international law. At the same time, it would serve as a replacement for the current debt settlement forums, the Paris and London Clubs.

In December 2014, the UN General Assembly established an ad hoc committee on sovereign debt restructuring, and the secretariat of the committee is provided by the UNCTAD.[16] This committee does the expert work to reform sovereign debt restructuring.[17] Nevertheless, there is still no forum for practical debt settlement.

All in all, every reform proposal would establish new procedural processes that would make state bankruptcy management and power relations smoother and more balanced. However, neither of these comprehensive reform proposals has been implemented.

Critical voices: no need for reforms

Based on the arguments below, IMF experts (Rediker and Ubide, 2014) consider the current practice appropriate from many aspects. The most common criticisms of the reforms, also reflected in the above-mentioned IMF material, are as follows:

1) Contrary to the critical rhetoric, restructurings were generally smooth over the past decades. Based on the data from the cited experts, the average duration of credit restructurings (from bankruptcy until the finalisation of restructuring) was 28 months.

In our opinion, an average of more than two years of uncertain financing can be considered significant, as in the meantime the economic players and the banking system cannot attract more sources, causing considerable negative impacts on the real economy. The IMF named two major debt crises (in Argentina and Greece) as outliers in sovereign debt restructuring, and removed them from the study sample. This rather questionable methodology resulted in a highly controversial distortion, as the two countries removed were the ones that underperformed the most, and not even pretence of impartiality could be maintained (see above the criticism on how the IMF handled the Argentine crisis).

2) IMF should draw more attention to risks rather than to reform proposals. IMF should name problematic countries and their financial risks in its various reports. It should exercise wider control over the development of country risks, and should not only deal with indebtedness of individual countries but also with cross-border financial processes, the unhedged currency position of the corporate sector, and various types of debts.

This argument is a bogus solution. In general, crises are hard to predict, and the reports of national banks and international organisations are not effective in holding back market processes. It is greatly demonstrated, for example, by the fact that central banks' financial stability reports had very weak forecasting power in terms of the 2007/2008 crisis (Davies and Green, 2010). Experience shows that such reports have a very limited moral impact on market players.[18]

3) For critics, the most painful solution is an initiative saying that in certain cases the condition of entry for the EU/IMF should be that private creditors take part of

the loss (bail-in). Critics say that this step would increase credit risks, which would require more IMF intervention in the future, and would definitely increase financing costs.

Our opinion about this piece of criticism is that in case this condition is *ex ante* attached to new credits in the future, the risk premium could be balanced by the impact made by creditors becoming more careful and undertaking lower financing risks only. The "search for yields" bandwagon effect could be more moderate and probably less likely turn into credit crises. One of the most important lessons learnt from recurring sovereign debt crises is that in the future a significantly lower level of indebtedness of a developing country would be desirable.

The examples of Greece, Hungary and Ukraine

In 2010, prior to the first debt restructuring, the Greek government owed EUR 310 billion to its private creditors, mainly "prudent" European banks and other financial mediators (big insurance companies, investment funds). In the first two debt restructuring processes, the troika (the European Commission representing the EU, the ECB and the IMF) provided EUR 250 billion to the Greek government; the largest part was undertaken by the EU and the ECB. However, Greece had to spend 92% of this amount to bail out private creditors and to finance its own domestic financial system (largely consisting of subsidiaries of European institutions), and only the remaining 8% could be spent freely by the Greek government. By 2012 it became clear that the Greek crisis cannot be solved without some degree of debt relief. Therefore, an agreement was made about the 50% write-off of the still existing Greek debt to private creditors, which proved to be insufficient for the following reasons: 1) by this time most of the foreign private creditors were bailed out by the funds of the troika; 2) the agreement affected the Greek national financial institutions primarily, so they went bankrupt, and Greece had to take out new loans to recapitalise them; 3) the already mentioned vulture investment funds refused to sign the agreement purchased debt instruments worth EUR 6.5 billion and took legal action to enforce their claim. Later on these funds compelled the Greek government to sign a special agreement, bringing substantial profits for them (Kamenis, 2014).

Despite the above-specified measures, the Greek debt still stood at EUR 317 billion in 2014, 78% of it owed to the troika, so from Community sources (from taxpayers' money). Due to the sharp decline in GDP, the debt-to-GDP ratio considerably increased. Therefore, the troika did not manage to solve the Greek debt problem, only to bail out its European private creditors (Jones, 2015).

As a result of the crisis, real GDP in Greece fell by 23% from 2008 to 2013. The unemployment rate was as high as 27.5% in 2013. As was presented above, the first two rescue packages did not bring a solution to the financing problem in Greece, the country's relative debt stock further increased substantially. The radical left-wing party Syriza, led by Alexis Tsipras, referred to the 1953 debt restructuring in Germany as the model for restructuring the Greek debt. The 1953 London Conference decided on writing off half of all external debt of the Federal Republic of Germany (West Germany), and the repayment of the other half was made subject to the export income producing ability of West Germany. The London Agreement, which greatly contributed to rebuilding the German economy, was signed, inter alia, by Greece as well (Jones, 2015). There is no need to emphasise the geopolitical role of West Germany in the middle of the cold war.

By early 2015, it became obvious that, despite the required austerity policy, Greece cannot fulfil its debt service obligations without a more substantial debt relief. However, the troika demanded stringent austerity measures from the Greek government in exchange for maintaining financing. Prime Minister Alexis Tsipras had to make a choice: 1) either accepts the conditions of the troika, and goes against the main point of his political programme; or 2) goes bankrupt and handles the ensuing economic and social chaos. At this point he put the question to referendum in which 61% of the Greeks said “no” to creditors’ conditions. At the same time, more than 70% supported the euro. The outcome of the referendum did not influence the demands of the troika; the democratically expressed desire of the Greek people was ignored completely. After the referendum, Tsipras signed the third rescue package (new financing, with no debt relief) that included further constraints (lower pensions, higher taxes) and structural changes (labour market, privatisation) for the next three years. Significant internal tensions, a government crisis and early elections followed. In short, as a country lacking a prominent geopolitical role and having weak abilities to protect its own interests, Greece (with the sword of Grexit above its head[19]) was beaten by core countries’ ability to assert their own interests. We cannot speak about European solidarity at all. Let me note that the idea behind the troika’s firm steps was that any allowance given to Greece would have constituted a precedent for other (larger) Mediterranean countries in debt (Spain, Italy). The third rescue programme for Greece will be completed in the middle of 2018, but it is not expected to be the last one, as public debt in Greece is at a level of 180% compared to the GDP, so still considered to be unsustainable.

Hungary was the leader in the Central and Eastern European region in the catching-up process at the millennium. However, due to the change in the economic policy in 2002, fiscal policy has focused on short-term growth goals through stimulating consumption, which was accompanied by the rapid deterioration of economic balance and longer-term growth prospects. The growing consumption of the state and the private sector was largely covered by external funding. All the different economic players (central government, local governments, companies, households[20]) raised a large amount of foreign exchange-based debt, a significant part of which was denominated in Swiss francs. By the time of the 2008 crisis, Hungary has become the most vulnerable economy in the region. Hungary was the second country (after Iceland) to receive financial assistance from the European Commission and the International Monetary Fund, totalling in some EUR 14.3 billion loans in the course of 2009 and 2010. The borrowing requirement was a fiscal adjustment, which was unsuccessful due to its strong procyclical impact (relative debt indicators deteriorated).[21]

In 2010, the newly elected government made sharp changes in the economic policy. Consolidation of the state budget with minimal damage to the real economy has become the primary aim. Another goal was to reduce the external vulnerability of the economy. Until early 2013, the Hungarian government maintained negotiations, with several interruptions, with the IMF and the Commission for further financing, but no new lending was made. On one hand, the IMF and the Commission wanted to force the Hungarian government for conditions (e.g. the withdrawal of the bank tax introduced[22]) that it would not take, on the other the most difficult part of the financing crisis was resolved by 2013 due to the successful economic policy mix introduced between 2010 and 2013.[23] Finally, Hungary got out of the crisis on their own, without a new IMF programme like Argentina in 2002.

The Ukrainian crisis erupted in 2013. In February 2014, a bit more than one week before the IMF-EU rescue package, in the middle of the Ukrainian political and economic crisis (Kiev was in turmoil), the American vulture fund, the Franklin Templeton Investment Funds[24], specialised for debt crises, purchased sovereign bonds worth USD 1 billion from Russia, and thus became the owner of more than one third of Ukraine's foreign USD bonds. At that time, the above-mentioned investment fund possessed a non-negligible stock of Hungarian FX bonds, had built up its positions in the early 2010s: held 12% of the Hungarian public debt in its hands.

Let me note that the Bilateral Investment Protection Treaty between the Ukraine and the United States covers sovereign debts as well (Woods and John, 2014), protecting the interests of Templeton and similar large investors who are thus exposed to lower levels of risks.

Under the leadership of the IMF, Ukraine received its first financial aid package of USD 17.5 billion from international organisations in 2015. Following this, Ukraine's private creditors (except for the Russian ones) made an agreement on restructuring (20% decrease in the face value of bonds, the rate of bond coupons was set at 7.75%, and interest and capital payment was frozen for four years) (Reuters, 2015). The rate of the bond haircut was lower than market expectations, so the bonds' value was appreciated and their market value did not decrease, in spite of the haircut. Some experts say that Ukraine's geopolitical position and the structure of its creditors played a significant role in that the crisis management was relatively fast and efficient.

Can real progress be expected?

In view of the Keynes-White dispute, presented above, the global economic policy thinking is still clearly determined by White's views in today's world. In the global monetary system, debt restructuring solutions are subordinated to the global economic order, and not to national economy policies, as shown by the recent examples of Greece, Hungary and Ukraine. According to this thinking, basically the debtor is held liable for imbalance and over-indebtedness. Obviously, the system cannot solve balance of payments problems between countries and the ensuing debt crises. The free movement of goods and capital is given an absolute priority. Although the example of China proves that a long-lasting economic catch-up can also be achieved while having significant constraints on capital movement at the same time. Based on our study, we conclude that out of the elements of the Keynesian system, only the introduction of creditor's liability as an instrument and the establishment of some sort of a supranational debt restructuring forum were proposed after the 2008 crisis, besides some small-scale technical suggestions (e.g. the CAC). The reform proposals have not brought about any significant change in the management of sovereign debt defaults.

We have shown that after the 2010 sovereign crisis in the euro area, the emphasis was laid on establishing the institutional background for the short-term financing of countries in debt crisis, rather than on genuine institutional reform of debt settlement. The then created institutions (the EFSF, and later the ESM) almost entirely lack democratic control, and their practices prove so far that they protect the interests of the "core" countries and their private creditors. And even in the worst of the crisis, the indebted countries are asked to implement more fiscal constraints and privatisation programmes as a prerequisite for further financing.

In our opinion, the institutional system of sovereign debt crisis management can only be reformed by massive support of already existing international organisations. Individual reform ideas, no matter how good they are, have no real chances for implementation if they lack support. A big step forward would be if IMF/EU abandoned their practice of protecting private investors and provided better safeguards for indebted countries and/or their own taxpayers. To this end, IMF should turn back to its Keynesian roots, the traces of which can still be found in the IMF's founding treaty.

Large international banks and investors and their home countries (the core countries) have no interest in institutional reforms. It is more beneficial for them if sovereign default remains a slow process with uncertain outcomes and even enormous costs. What is important for these actors is that there would be no real international solidarity and creditor liability, meaning that private sector involvement in debt restructuring (bail-in, haircut) would not be a general practice.

Notes

1 The author owes a debt of thanks to András Póra for his valuable advice.

2 See, for example, Taleb, 2012, who says that the world is characterised by major risks and limited forecastability. Out of the economic reasons for social vulnerability, he highlights over-specialisation, pointing out that although David Ricardo might be right in that efficiency is increased when every country pursues activities in which they have comparative advantage, but it also entails that the vulnerability of the national economy in question is highly increased. According to Taleb, the main deficiency of the Ricardian Theory, which still serves today as the basis of trade liberalisation and, thus, the global order, is that it does not take account of the swift and dramatic changes of market conditions; however, a society and a national economy should be prepared for these low-probability but high-impact events.

3 ECB's Financial Stability Review (ECB, 2017) also calls attention to this fact. The tightening of international monetary conditions, especially if it is accompanied by the strengthening of the dollar, can put emerging economies with internal and external imbalances into a difficult situation.

4 Of course, several elements of the system have changed (exchange rate mechanisms, the impact of the Chinese monetary policy, the euro area, international stability and investment institutions of the EU/Asia, etc.); however, we regard the current international monetary order as the continuation of the Bretton Woods system due to its influential institutions and the dominance of the dollar in it.

5 See https://www.imf.org/external/pubs/ft/aa/index.htm.

6 See, for example, Article I: "The purposes of the International Monetary Fund are… to facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economy policy."

7 See, for example, one of the first such proposals, made as a response to the 1981 crisis, to set up a formal legal framework: Oechsli, 1981.

8 For a detailed classification of sovereign bankruptcies, see the article of Vidovics-Dancs, 2014.

9 For details, see the article of Kolozsi et al., 2017, which describes the causal link between the provisions on public finances in the Constitution of Hungary and economic policy events after 2010.

10 See https://europa.eu/efc/collective-action-clauses-euro-area_en. As most of the Greek debt was issued according to national law, the Greek Parliament, supported by the troika, passed a law on the retrospective use of the above-mentioned clause, so the clause was attached to all debts issued according to the local law, which made it easier for the troika to replace private creditors.

11 For example, EFSF and ESM cannot be obliged to make public any documents related to their operation. During the 2010 sovereign crisis, the troika (ECB, Commission, IMF) and, supposedly, the ESM as well had the restructuring programmes and the necessary financial audits devised by large international consultant firms (e.g. Oliver Wyman, BlackRock, Roland Berger, Pimco), giving them substantial business advantage, see CEO, 2014.

12 Before 2008, private financial institutions of the core countries effectively channelled savings towards Mediterranean and CEE countries, indirectly financing their national, municipality, corporate and retail credit debts.

13 On this issue see, for example, Galgóczi, 2013.

14 For the historical background of the two instruments, see https://www.esm.europa.eu/about-us/history.

15 See http://www.unctad.info/en/Debt-Portal/News-Archive/Our-News/Debt-Workout-Mechanism-First-Working-Group-meeting–Toward-an-Incremental-Approach-2072013-/.

16 A/RES/69/247 Modalities for the implementation of resolution 68/304, entitled "Towards the establishment of a multilateral legal framework for sovereign debt restructuring processes".

17 http://unctad.org/en/Pages/GDS/Sovereign-Debt-Portal/Sovereign-Debt-Portal.aspx.

18 A good example for the weak influence of national banks' reports on the market is foreign currency lending in Hungary. The 2004 MNB stability report already indicated the problem, and in 2005 a special study on the subject was published by MNB. However, the real upswing in foreign lending in Hungary started only following this (Bethlendi et al., 2005).

19 Another debate is going on about to what extent could have Greece's coerced exit from the euro area and from the EU (the Grexit) been feasible on procedural grounds and in economic terms.

20 The issue of retail foreign currency debt see e.g. Bethlendi, 2011.

21 See for details of the above mentioned continuous downgraded process at: Matolcsy, 2008; Baksay and Palotai, 2017.

22 The Hungarian financial system was owned predominantly foreign, primarily Western European financial groups. The significant sectoral tax introduced resulted in serious conflicts of interest.

23 The most important elements of the successful economic policy mix were the following: 1) Introduction of specific sectoral taxes (mainly in finance), which has a rapid fiscal balancing effect. 2) Already in the short term, a significant budgetary impact was made by the abolishment of the second pillar (the mandatory private pension) of the pension system. In 1998 the pay-as-you-go system was partially replaced by the mandatory private pension, therefore a part of the current contributions was payed to the private pension funds instead of the pay-as-you-go system. The resulting deficit of the pay-as-you-go system had to be financed by the budget, which kept the budget under pressure. Members of private pension funds

were reverted to the state system, so this current deficit disappeared, and the assets of the funds were also transferred to the state (nearly EUR 9 billion in value) improving the state's financial balance. 3) Strengthening the tools for whitening the economy (connecting retailers' cash registers to the tax authority online, tightening tax inspections, etc.), which raised the revenue of the budget without raising taxes. 4) Reducing work-related taxes, introducing labour market reforms and public employment: the government tried to build up the base of economic growth by maintaining and gradually increasing the level of employment. 5) At the same time, a spending reduction programme has been announced (basically affecting the public sector, some social costs and education). 6) Local government debts were consolidated by the state and the phasing out of household foreign currency loans has begun. 7) The financing role of EU funds has been strengthened.

[24] Templeton is not the only one adventurous investor. Less known ones who implement similar investment strategies are: Greylock Capital, Carlyle Group, LNG Capital, etc.

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András Kecskés

Investing Safely and Lucratively: What is New in Hungarian Investment Law?[1]

Summary
The aim of the article is to give an overview of the development of laws on investments in Hungary. The paper aims to establish the concept of investment in Hungarian law. A key finding is that there is no general, all-encompassing investor concept in Hungarian law, as the definition may vary depending on the act reviewed. The paper outlines the changing role of the central bank in Hungary. As hedge funds have an important role in the financial sector, a brief overview is given of the regulatory changes relating to them. The conclusion of the paper is that the Hungarian trends in investments follows the general worldwide trends.

Journal of Economic Literature (JEL) codes: K2, K12, G30, G33
Keywords: investment, investor, sovereign fund, hedge fund, Hungary

Introduction

The past few years can be considered quite turbulent in Hungarian legislation. A new Civil Code came into force in 2014[2] and required numerous changes in investment-related Hungarian regulations. One such development was the incorporation of company law provisions in the code. However, changes in the European Union's regulatory framework also necessitated revisions in other statutes related to investments, such as the Capital Markets Act. Another interesting trend in the field of Hungarian

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investments was the new role of the National Bank of Hungary. Due to the success of the applied monetary policies, the central bank amassed considerable reserves, which were then used for investment. This behaviour of the bank is reminiscent of sovereign fund management, and it is even more interesting if we remember that there is no definite legal or institutional framework.

This paper gives an overview of the recent trends. The first part showcases definitions of investment in different Hungarian statutes. The second part explores the different definitions of investors in Hungarian laws and regulations. Creditors and creditor protection are concepts so intertwined with investment that their overview is of the utmost importance. The third part briefly describes interrelationships with investments, investment and creditor protection according to Act XLIX of 1991 on Bankruptcy Proceedings and Liquidation Proceedings. Once the conceptual framework has been established, the fourth and fifth parts tackle the new investment trends. The quasi-sovereign fund operation of the central bank, and the new Hungarian hedge fund regulations suggest changes in the investment landscape.

Developments in the theoretical background

The investor in Hungarian law

The concept of an "investor" is defined in Section 5 (1) 20 of Act CXX of 2001 on the Capital Market as follows: "investor shall mean any person who has entered into a contract with an investment fund management company or another investor to invest and risk his own money and/or other assets, or that of others, for the purpose of making a profit subject to developments in the financial market, regulated market or the stock exchange". This definition is confined within a narrow compass. The relevant commentaries, however, extend it to persons who undertake capital market risks based on contracts concluded with the issuer of securities or with investment firms (Farkas et. al., 2014; p. 43).

In addition to the *investor*, the Capital Market Act also defines the concept of an *institutional investor* as a credit institution, investment enterprise, investment fund, investment fund manager, venture capital company, venture capital fund, insurance institution, a voluntary mutual insurance fund, a private pension fund, the National Health Insurance Fund *(Nemzeti Egészségbiztosítási Alapkezelő)*, or the Central Administration of National Pension Insurance *(Országos nyugdíjbiztosítási Főigazgatóság)*.

Other Hungarian regulations defining the term "investor" include Act XVI of 2014 on Collective Investment Trusts and Their Managers, and on the Amendment of Financial Regulations, which stipulates in Section 4 (1) 24 that an investor is the holder of collective investment instruments.

A comparison of the above concepts with the definition of the term in economics reveals no overlap between the legal and the economic concepts in an economical sense. This means that no general concept exists for the term "investor" in Hungarian law, each regulation only defines it according to its respective legal policy.

"Investment" in Hungarian law

Although the term "investment" is frequently used in commentaries and legal regulations, there is no definition for its general concept in Hungarian law. Investment is only defined for the purposes of specific legal regulations. It is defined, for example, in Section 3 (4) 7 of Act C of 2000 on Accounting as the purchase, establishment and production of tangible assets within the scope of business activity and the commissioning of purchased tangible assets or activities conducted before the commencement of the designated use. Transportation, customs clearance, intermediation, groundworks and other activities are listed here, as they are related to the purchase of tangible assets, including the design, preparation, performance, borrowing and insurance. Moreover, activities resulting in the expansion, change of designated use, transformation, direct increase in the efficiency and duration of the already existing tangible assets should also be mentioned here.

There is an interesting discrepancy between the Hungarian and the English versions of the Accounting Act. The common English term "equity securities" is used in the Hungarian text as "*tulajdoni részesedést jelentő befektetés*" (investment representing ownership interest). The act otherwise uses a standard definition for equity shares, stipulating that all printed or dematerialized securities, or instruments deemed as securities by law, carry certain rights and represent the issuer's acknowledgement that a certain amount of money, or non-financial assets with a value determined in monetary terms, has been placed at its disposal and its commitment to transfer predetermined financial and other rights to the holder of such securities. The Accounting Act lists in particular, stocks, partnership shares, shares in cooperatives, share notes, other partnership shares, investment units issued by unlimited term investment funds, venture capital notes and venture capital shares. Another interesting inconsistency is that Section 3:11 of the Civil Code prohibits, except for private and public companies limited by shares, the issue of securities for membership rights.

Interrelationship between creditors and investors

As the concept of investor has features similar to that of a "creditor", it is also worth examining the latter. The term "creditor" has numerous definitions in law. In the generally accepted meaning, a "creditor" is an entity entitled to demand services from a "debtor". Creditors have the right to enforce the service in the case of non-performance, or, if performance is impossible, to receive damages. However, this general concept of creditor does not bring us closer to understanding investor and creditor protection.

In business law, however, the concept of creditor is considerably narrower. The Hungarian Civil Code, for example, applies this term to one of the parties of a loan agreement. In this case, the creditor is obliged to pay a specified amount of money (or substitute), and the debtor is obliged to repay this amount (or assets of the same type, quantity and quality as the lent assets) and any interest accrued.[3] In the case of credit agreements, the creditor is obliged to make the specified credit facility available, and to conclude a loan, suretyship, guarantee or other agreement for the performance of the credit transaction. In return, apart from claiming the principal amount, it is entitled to demand the payment of interest.[4]

In Hungarian business law, the term "creditor" is given a different definition in Act XLIX of 1991 on Bankruptcy Proceedings and Liquidation Proceedings. For the purpose of this act, the concept of "creditor" has four different interpretations:

1) in bankruptcy and liquidation proceedings, up to the time of the opening of liquidation, a creditor is a person an overdue claim, whether in money or in kind expressed in monetary terms, against the debtor based on a final and executable court ruling, administrative decision or other enforcement order that is uncontested or recognized;

2) in bankruptcy proceedings, in addition to what is contained in the paragraph cited above, a creditor is a person who has a claim, whether in money or in kind expressed in monetary terms, falling due during the bankruptcy proceedings, and registered by the administrator;

3) in bankruptcy proceedings, in addition to what is contained in the paragraphs cited above, a creditor is a person who has a claim, whether in money or in kind expressed in monetary terms, with a future due date, lawfully arising from various supply, work, service and other contracts related to the supply of products and services, the sale of debt securities and equity securities, lending arrangements or advance payments, which have already been performed by the creditor and have been registered by the administrator;

4) based on the provisions of the Bankruptcy Act, after the time of the opening of liquidation proceedings, any person who has a claim, whether in money or in kind expressed in monetary terms, against the debtor is treated as a creditor, if such a claim has been registered by the liquidator.

Thus, the definition of a creditor clearly varies according to the act using the term. Nevertheless, in practice it does not cause any confusion, as in each separate field the concept of creditor is well-understood. It also needs to be pointed out that in many cases a creditor may be synonymous with the generally understood concept of an "investor", as in many cases its position is established by investing resources in a given business venture.

Recent developments in the field of investments in Hungary

New regulatory framework for hedge funds in Hungary and Europe

Europe chose a different path in the regulation of hedge funds than the United States. In 2010, the legislators of the European Union realized that controlling the growing number of hedge funds is an impossible mission, and the only way to successfully regulate their functioning is through the implementation of certain rules applied to fund managers. For this purpose, Directive 2011/61/EU on Alternative Investment Fund Managers (AIFM Directive) was adopted. The AIFM Directive also contains certain exemptions: alternative investment funds[5] managing a capital below EUR 100 million and funds managing unleveraged capital below EUR 500 million and not granting redemption rights to investors for 5 years are exempted from certain provisions of the AIFM Directive. Fund managers may choose either of two different methods of functioning: the traditional one described in Directive 2009/65/EC on Undertakings for the Collective Investment in Transferable Securities (UCITS), or the one compliant with the AIFM Directive.

In March 2009 the AIFM Directive set forth certain targets with respect to the alternative investment fund industry (EC, 2012, p. 8). The first and most important is the management of macroprudential risks. In the context of alternative investment funds, macroprudential risks are systemic risks requiring the coordinated collection of macroprudential data in accordance with the legislator's intent, with data processed in a cross-border framework of prudential authorities.[6]

Furthermore, the management of microprudential risks is among the targets of the AIFM Directive. Microprudential risks are risks which appear in the context of specific services and service providers. The management of microprudential risks proved to be important for the European Union, since previously there were no appropriate methods for the supervision of the risk management practices of alternative investment funds. Weak risk management practices endanger investors (Zéman, 2016, p. 364), contractual partners and the market as a whole, while consistent regulation mitigates that risk, and cross-border regulations can reduce the possibility of supervisory authorities engaging in regulatory arbitrage.[7]

The 2007-2009 financial crisis repeatedly confirmed the need for intervention to protect investors (Lentner and Zéman, 2017, p. 8). Even though the clients of alternative investment funds are usually professional investors, they require reliable and comprehensive information. Previously, legislations in the Member States applied a different approach than the EU with respect to corporate governance and disclosure obligations, and thus they were unable to provide a consistent legal basis for the reliable functioning of alternative investment funds.

In the context of alternative investment fund management, the standardization of market rules can increase financial stability and the integrity and efficiency of the markets, irrespective of their location.

The Hungarian legislation transposed the AIFM Directive by Act XVI of 2014 and with Government Decree No. 78/2014. (III.14.).[8] In addition, the Hungarian regulatory regime applies the framework conditions of the AIFM Directive, has also adopted concepts such as a prime dealer[9] and determines feeder funds and master funds. The act uses the term "feeder fund" for funds investing in other funds, while funds being the subject of investments are determined as "master funds" (a type of umbrella funds).

Similarly to the AIFM Directive, Act XVI of 2014 grants exemption from certain obligations to funds which manage a capital below EUR 100 million and funds which manage an unleveraged capital below EUR 500 million and do not grant redemption rights to investors for 5 years.[10]

Contrary to the EU's regulatory framework, the Hungarian legislation applies to funds with the above-mentioned characteristics, but exempts them in four different areas: remuneration, risk and liquidity management, redemption policy and consistency between the latter two systems.[11]

The Hungarian regulation implements the policy of variable remuneration, including deferred portions, as minimum 40% of the performance-based remuneration must be deferred over a period of 3 to 5 years.[12]

Despite the differences in the approach to hedge funds in the legislation of the EU and the United States, it seems that the Hungarian regulatory framework gives them a wider room to manoeuvre. Section 23 (2) of Government Decree 78/2014 exempts hedge funds from certain stricter rules by including the term "derivative investment fund" in their name, and requiring them to meet one of two criteria: firstly, the initial investment made by an investor in the fund must be at least HUF 10 million, secondly, the shares of the fund can only be marketed to professional investors. In case the conditions mentioned above are fulfilled, the overall risk exposure rate of certain positions in derivatives transactions can be specifically determined. Through this method an alternative fund may be established which incorporates two basic characteristics of hedge funds, i.e. large-scale investors and high leverage. Performance-based remuneration is partly deferred. The fund manager and the investors may only make and manage investments in the same fund with the involvement of a third person.

Quasi-sovereign fund operation by the central bank

To date there have been no sovereign funds in Hungary or any piece of legislation which regulates the establishment or internal functioning of an organisation operated as a sovereign fund. Nonetheless, in practice new asset management forms have emerged which, in spite of all the differences, show similarities to sovereign wealth funds.

In Hungary it is difficult to properly outline the interrelationships between the central bank, the state and the government merely on the basis of legal provisions. The National Bank of Hungary is a stock corporation with shares owned by the state, as stipulated by Act CXXXIX of 2013, Section 5 (1), and thus the state exercises its right as a shareholder. According to Section 1 (1) of this act, the government and other bodies are not given power to interfere with the activities of the National Bank of Hungary. Nevertheless, the state as the owner is represented by the minister responsible for the budget, who happens to be a member of the government. Thus, the government, albeit indirectly, exerts a significant influence over the central bank. Regardless of this, certain bodies of the National Bank of Hungary cannot be instructed directly. Under Section 6 (1) of the mentioned act, significant decisions, such as ones relating to the alteration of articles of association, or other important matters, may be made in the name of the shareholders. Additionally, the governor of the National

Bank of Hungary is nominated by the Prime Minister, as stipulated by Section 10 (1) of the act.

The governor of the National Bank of Hungary reports both orally and in writing to the National Assembly, pursuant to Act CXXXIX of 2013, Section 2 and Section 131 (1-2), while Section 9 (4) c assigns the appointment of members to the Monetary Council to the competence of the National Assembly.

It is particularly interesting that, unlike in many other countries, sovereign wealth funds are not regulated in Hungary. Thus, Hungarian sovereign wealth funds to be founded in the future may only operate within the bounds of public law and capital markets regulations on fund management, but there is no specific legislation for their special legal status or other legal criteria of their activities.

Additionally, attempts were made in Hungary at clarifying whether the state ownership of sovereign wealth funds can be attuned to their institutional investor role, if the different interests of the individual nation states, in relation to both investors and the target countries, can be harmonised, and if yes, which instrument is best to use.

These attempts included the setting up of organisations for privatising state owned assets in the 1990s (e.g. *Állami Vagyonügynökség, ÁVÜ* [Hungarian State Holding Agency]*; Állami Privatizációs és Vagyonkezelő Rt., ÁPV Rt.* [Hungarian Privatisation and State Holding Company]*)*, investment funds (e.g. OTP EMDA Derivative Fund and the OTP Supra Derivative Funds), alternative investment fund manager companies (e.g. Plotinus Nyrt.), and companies specialised in fiduciary asset management (e.g. Concorde Zrt.). In the aforementioned institutions one may find the characteristics of sovereign funds.

Act LIV of 1992 on the Sale, Utilization and Protection of Assets Temporarily owned by the State contained provisions on the sale, utilisation and maintenance of assets in the temporary ownership of the state. The main aim of the act was to regulate the sale of state assets. For this purpose, the act established the State Holding Agency.[13] The Agency, as a financial body, exercised the ownership right of the state.[14] The actual asset management activities of the Agency were outlined by the State Holding Policy,[15] in the framework of a National Assembly Resolution adopted in 1992 in Section 18 (1) of Act LIV of 1992. Interestingly, pursuant to Section 3.2 of the Policy, the Agency was allowed to assign the assets[16] in temporary state ownership to investment funds or portfolio packages, however, such activity was only allowed in the case of privatisation. Although only assets in temporary state ownership were subject to asset management activities, an example was set for an asset management through financial bodies. This activity was linked to the annual budget via further regulations, and this served as a reason for the joint discussion of both matters.

Act XXXIX of 1995 on the Sale of State-Owned Business Assets did not only cover assets in temporary state ownership.[17] This act established the Hungarian Privatisation and State Holding Company, which exercised the state's ownership rights during the sale of assets in temporary state ownership and during the management of assets in permanent state ownership. [18]

Act CVI of 2007 on State Assets is interesting for two reasons. On the one hand, the act put an end to institutional privatisation,[19] and thus the main goal was to regulate the management of permanently owned assets. That served as the reason for redefining national assets, which limited the scope of the act to assets in permanent state management. On the other hand, the act also established another asset management corporation, the Hungarian National Asset Management Ltd *(Magyar Nemzeti Vagyonkezelő Zrt.)*.[20]

This act was aimed at establishing a new, contemporary framework for managing state-owned assets. Within this framework, the act defined the Hungarian National Asset Management Ltd as a private limited company wholly owned by the state[21] and it stipulated detailed organisational and operational regulations. While technically the act prescribed the management of state-owned assets, and specified shares as concrete financial instruments in the ownership of the state,[22] judging by the content of the act's provision, they were more about operating state-owned assets rather than management in the narrow sense of the word.[23]

A novelty of Act CXCVI of 2011 on National Assets was the stated purpose of "providing for the needs of future generations". The act specifies numerous asset management organisations.[24] However, almost without an exception previously they had been managing state-owned assets, as the list included state- or council-owned companies, financial bodies or companies wholly owned by either of them. The only exception to that rule was the new asset management form established by the newly defined asset manager. As pursuant to Section 3 (1) 19 *ag)* of the act allows the individual appointment of an asset managing legal person by authorisation of a statute, the opportunity is given for mandating a partially state-owned or privately-owned company for managing state assets. This in turn allows the practice of sovereign funds, namely by mandating higher independence to asset managers. The management and utilisation of state-owned assets emphasises the operation and preservation once again, however, the act makes no mention of financial instruments. Section 16 of the act specifies the utilisation and management of special assets governed by other acts for the benefit of future generations.

Further legal analysis of the activities of central banks and asset managers reveals even more opportunities. Section 4 (2) 53 of Act CXXXVIII of 2007 on Investment Firms and Commodity Dealers, and on Regulations Governing their Activities defines portfolio management with no regard to the type of client. Section 48 (3) specifies the National Bank of Hungary among the professional clients as a high-priority institution. Thus, the person authorised to manage portfolios can be instructed by the central bank pursuant to the provisions of this Act. On the other hand, it gives rise to a conflict of interest between the two institutions, as pursuant to Section 4 (9) of Act CXXXIX of 2013 the central bank also serves as the monitoring agency of financial intermediaries, which in turn results in paradoxical situation of not only being the principal financial institution, but also supervising the others as an authority. Act CXXXVIII of 2007 provides an example for the legislature by enabling the central bank to act as an authority for reorganisation[25] under the provisions of another act.

The overview of statutes on the management of state-owned assets clearly demonstrates that, although in a rather disorganised way, there is an opportunity for establishing sovereign wealth funds as legal entities for managing the financial instruments of the state. However, to improve consistency, the current statutes need to be systematically expanded and amended. While it is less of a pressing issue in terms of launching sovereign wealth funds, it becomes increasingly urgent when it comes to their activities, as the aforementioned clearly demonstrates the current state of the Hungarian legal system, leaving a lot to desire in this respect as most of the deficiencies arise in these matters.

The most important conclusion is that the aforementioned legal forms may be suitable, but they would in no way be ideal for serving as a framework for the activities of sovereign funds. In this respect it would be more appropriate to create a dedicated legal form. In these special issues, particular legal provisions would also be suitable even if the sovereign wealth fund was to be operated as company fully owned by the state. This solution would be an exception, in contrast to the practices of other countries, as it would be considerably more difficult to articulate the interests of the state, both in terms of control and monitoring.

Conclusion

Clearly, the Hungarian framework for investments has been greatly influenced by the recent events. It must be emphasised that the lack of an all-encompassing definition for investment may be detrimental, however, in practice none of the problems associated with a "vague" terminology has arisen yet. The reason is that each respective statute and regulation defines investment within its respective scopes of application, thus making the issue more of a theoretical one. Regardless of this fact, Hungarian jurisprudence could benefit from a scientifically sound investment definition. A similar question may arise in relation to the concept of creditor, but such issues are not of practical importance, as the meaning of these words are well-understood within their scopes of application.

The activities of the central bank seem to follow the international trend that certain institutions in a state earmark funds from more prosperous times in order to ensure the prosperity of future generations (Lentner et al., 2017, p. 64). It would be more beneficial if this quasi-sovereign fund activity of the central bank would be performed by genuine sovereign funds instead. However, it would require the establishment of a legal framework for such an institution, as the current statutes and regulations are insufficient.

The Hungarian investment legal landscape has also been greatly influenced by the regulatory trends in the European Union. The new hedge fund regulation was adopted within the confines of Hungarian investment law, with numerous provisions transposed in the Capital Markets Act, or the new Act on Collective Investment Funds.

Overall, the Hungarian regulatory framework for investments is on par with the European requirements, and a new, worldwide phenomenon can be identified in investor activities.

Notes

[1] With support from the New National Excellence Programme 17-4-IV of the Ministry of Human Resources.

[2] Act V of 2013 on the Civil Code.

[3] Hungarian Civil Code, 6:383.

[4] Hungarian Civil Code, 6:382.

[5] Alternative investment funds are different capital-raising organisations, thus they fall outside the scope of regulations applicable to traditional investment funds. Alternative investment funds do not emphasize the establishment of diversified portfolios, they rather apply large-scale leverage and engage in derivatives transactions.

[6] Prudential regulatory authorities are the capital market authorities.

[7] In the course of a regulatory arbitrage, as a place of their operations certain service providers select the country which is more favourable or less strict with regards to regulations. This decision may incur additional costs, however, the main goal is to reduce the burdens of functioning.

[8] Government Decree 78/2014. (III. 14.) on the Rules of Collective Investment Forms and Borrowing

[9] A prime dealer is a financial service provider that undertakes not only account management but also financing services. In the United States this role is usually played by investment banks, while in Europe commercial banks are more likely to act as prime dealers.

[10] Section 2 (2) of Act XVI of 2014.

[11] Act XVI of 2014 gives exemption from the provisions of Section 33, 35 (1), (3), (5) and Section 36.

[12] Annex 13 of Act XVI of 2014.

[13] Act LIV of 1992, Chapter II.

[14] Act LIV of 1992, Section 5.

[15] National Assembly Resolution 71 of 1992. (XI. 6.) on Asset Management Directives of 1992

[16] Such instruments are state-owned shares in companies.

[17] Act XXXIX of 1995, Section 7.

[18] Act XXXIX of 1995, Section 1 (3).

[19] Institutional privatisation took place in a large volume and at a planned pace, contrary to spontaneous privatisation, between 1989 and 1992, in an ad hoc manner, exploiting the loopholes in the contemporary regulatory framework.

[20] Act CVI of 2007, Chapter III.

[21] Act CVI of 2007, Section 18.

[22] Act CVI of 2007, Section 1 (2) c and e.

[23] The difference between operating and managing assets is significant. While both activities are carried out in a portfolio viewpoint, the former implies passive management, and the latter entails active participation, which includes the sale and purchase or swapping of certain elements of the asset with a tight deadline either as a sale or on other legal grounds.

[24] Act CXCVI of 2011 Section 3 (1) 19.

[25] An authority of reorganisation is a financial institution which disposes of appointing liquidators to companies of special importance for a national economy and decides on certain issues regarding the liquidation proceeding.

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Bálint Teleki

The Role of Agencification in the Post-2010 Financial Stabilization in Hungary

Summary
Agencification has had a major role in the institutional development and handling of the financial crisis in the European Union. In this article it is examined whether this institutional trend, along with the institutionalist approach of Rodrik, has played a similar role in post-2010 financial stabilization in Hungary, and if so, exactly how it affected the process. The focus is on public administration, which was renewed on the Fundamental Law enacted in 2011, and providing a basis for the new legal and institutional framework for the regulation and supervision of the financial markets.

Journal of Economic Literature (JEL) codes: E02, E52, E58, G28, H63
Keywords: agencification, economic policy, European Union, financial supervision, Hungary, institutionalism, monetary policy

Introduction

Purpose

The trend called "agencification" is a well-known, few-decades old phenomenon in the organisational development of the regulatory and supervisory institutional system of the European Union and in its Member States and other countries like the USA or Latin-American countries.

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The purpose of this article is to examine the correlations and interactions between this trend and actions taken by the Hungarian government after 2010 in the interest of economic, especially financial stabilization. Following a general overview of the legal and institutional framework of financial regulation and supervision, and of monetary policy in the new public service system described in the new constitution (Fundamental Law, approved on 25 April 2011 and effective from 1 January 2012). Then the government policies and measures taken to consolidate state debt are discussed. General and Hungary-specific information is given on the doctrine of agencification in a separate chapter.

As a synthesis, the exact institutional pattern of financial regulation and supervision and monetary policy in Hungary are outlined and examined from the perspective of agencification, and from the perspective of the institutionalist doctrines of Rodrik.

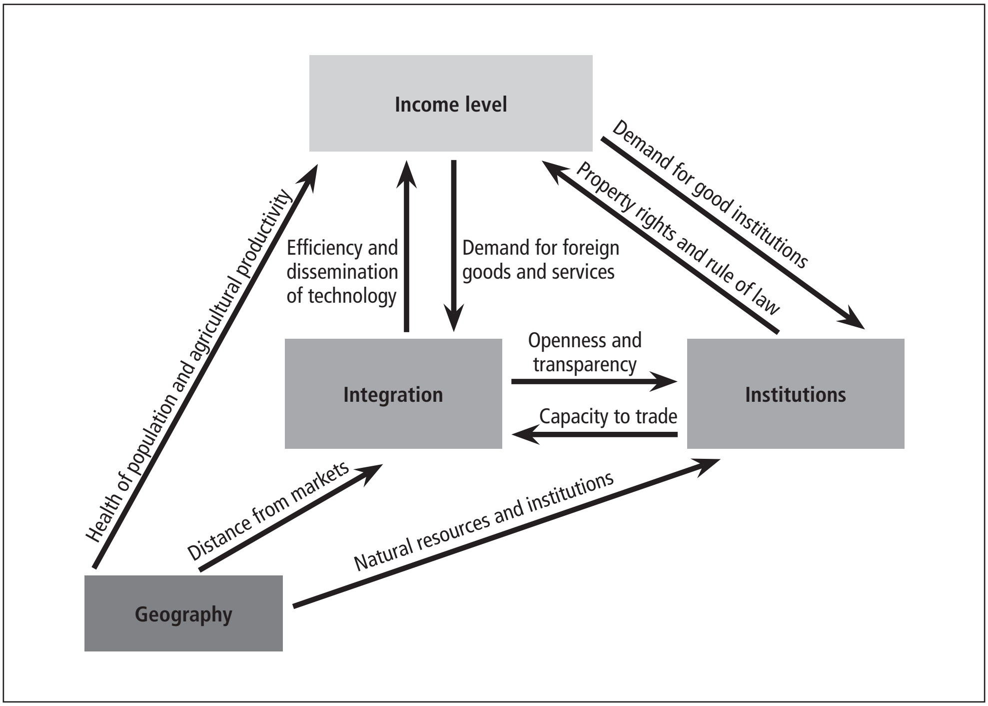
Methodology: Rodrik's institutionalist approach

The post-2010 Hungarian government has intended to stabilize the economy of Hungary with measures resulting in systemic changes, by creating a new and consistent system of institutions and economic structures, instead of renewing a set of obsolete economic structures. These measures were rather unconventional from the viewpoint of the neoliberal economic dogmatics, and are therefore declared as "unorthodoxies" (Lentner, 2013, pp. 296-303). In this article the institutional changes of this process are to be examined, which requires a qualitative analysis (e.g. the analysis of the legal framework) rather than a quantitative analysis, apart from mentioning some simple and relevant figures. Hereunder is justified why exactly the approach of Rodrik is the best way to examine institutions. Further below, the examination from the aspect of the role of agencies and the trend of agencification will be presented as another institutionalist approach fitting very well into the paradigm of Rodrik.

In their research Dani Rodrik and Arvind Subramanian identified three "deep determinants" of income: geography, integration and institutions (see Figure 1) and found that the "quality of institutions overrides everything else" (Rodrik and Subramanian, 2003, p. 31). Institution is defined as by Lin and Nugent, quoted by Rodrik: "It is useful to think of institutions broadly as a set of humanly devised behavioural rules that govern and shape the interactions of human beings, in part by helping them to form expectations of what other people will do" (Lin and Nugent, 1995, pp. 2306-2307; Rodrik, 2000, p. 4). Rodrik adds: "All well-functioning market economies are 'embedded' in a set of non-market institutions, without which markets cannot perform adequately" (Rodrik, 2000, p. 4).

Rodrik distinguishes four types of institutions: 1) *market creating institutions* which protect property rights and ensure that contracts are enforced, 2) *market regulating institutions* which deal with externalities, economics of scale, and imperfect information, 3) *market stabilizing institutions* which ensure low inflation, minimize macroeconomic volatility, and avert financial crisis, and 4) *market legitimizing institutions* which provide social protection and insurance, involve redistribution and manage conflict (Rodrik and Subramanian, 2003, p. 32; Lentner, 2013, pp. 28-29; Lentner, 2015, p. 24).

Figure 1: The three "deep determinants" of income by Rodrik



Source: Rodrik and Subramanian, 2003

There is an array of choices for all institutional functions. They include questions about the character of the legal regime, the balance between regulation and competition, the size of the public sector, etc. As a mere economic analysis cannot give answer to these questions, such country-specific factors as geography, history, political economy and other initial conditions influence the choice of forms. Rodrik emphasizes that "successful developing countries have almost always combined unorthodox elements with orthodox policies" (Rodrik and Subramanian, 2003, p. 33).

This is why Rodrik's institutionalist model is ideal for analysing the post-2010 economic policy and institutions of financial supervision in Hungary. Although Hungary is not a developing but a developed economy, its economic policy since 2010 has openly been declared (also in its self-definition) unorthodox and contrary to the neoliberal doctrines (Lentner, 2013, pp. 296-303), just as the paradigm of Rodrik, which was first declared unorthodox by the author himself, approximately a decade earlier than the April 2010 elections in Hungary (Rodrik, 2000, p. 3, 14).

The financial stabilization of Hungary after 2010

The political context of financial stabilization

The April 2010 (and then April 2014) parliamentary elections resulted in an overwhelming victory for the Fidesz-KDNP coalition, with a majority exceeding 2/3 of the parliamentary seats, and this has enabled the coalition to change fundamental elements of the public and legal system, including the constitution. The previous constitution (Act XX of 1949) was affected by a communist heritage, since after the fall of the communist regime in 1989, no new constitution was adopted, only amendments were made in order to make the constitution comply with a capitalist democracy.

Numerous other elements of the legal system, in a number of legal fields from criminal to financial law, and especially in the field of administrative had been overamended over the decades, and therefore needed renewal or replacement. Other acts were enacted to fulfil the purposes of the economic policy of the government.

Another serious encumbrance was the heritage of the economic and financial crisis of 2007-2008. Besides the malfunctioning markets, the government had to struggle with the sovereign debt inherited from its predecessors, since the left-wing liberal coalition governing between 2002 and 2010 had acted according to the neoliberal idea that the state must be financed from international credits (IMF, World Bank and ECB) (see Lentner, 2013, pp. 317-322).

The crisis brought about a nearly global paradigm change. The neoliberal economic policy, and its administrative counterpart, the New Public Management (NPM) proved to be insufficient (Lőrincz, 2010, pp. 50-51). NPM, focusing on competition and profit to measure the efficiency of administration in a given state, was replaced by the neo-Weberian State (NWS) (Lynn, 2008), a combination of "Weberian" and "neo" elements, in other words, a reorganisation of the Weberian elements without neglecting the achievements of the previous paradigms. Above all, this means "the reaffirmation of the state as the main facilitator of solutions to the new problems of globalization", the reaffirmation of representative democracy as legitimating element, the reaffirmation the role of administrative law in regard of the principles of state-citizen relationship, and "the preservation of the idea of a public service with distinctive status, culture, and terms and conditions" (Lynn, 2008, p. 27). The "neo" elements include e.g. the external orientation of the administration (i.e. towards citizens), the professionalization of public services, a redesign of the management of resources in order to focus on virtual achievements rather than simply following protocols, etc. (Lynn, 2008, p. 27).

The government policies adopted in 2010 closely follow these principles and apply economic unorthodoxy in order to fulfil the functions of the good state and good governance for the satisfaction of the citizens. Although in their study Domokos et al. mention that during the renewal of governance, the experiences gained in corporate management should be used, an intensive use of tools like the controls and reports by the State Audit Office of Hungary are inevitable for the good governance (Domokos et al., 2016).

Legal framework for financial supervision

Besides the Fundamental Law, the most important legislative acts were those which redefined the administrative system in Hungary, including the institutional design and functional role of the organisations in charge of financial regulation and supervision.

The most comprehensive act regulating the institutional structure which second to the Fundamental Law in the hierarchy is Act XLIII of 2010 on central state administrative organisations and on the legal status of government members and state secretaries (Ksztv.). The *Ksztv.* defines the status and, in some cases, the competences of the certain types of administrative organisations. This categorization of the administrative organisations is crucial for our topic, since agencies, except for some, are certain types of organisations in this typology. (However, just as in most legal systems, under Hungarian law, "agency" is not defined in legal texts or not in the meaning or context it is used here. It has an administrative definition adjusted to legal requirements.)

The role of the Hungarian Financial Supervisory Authority *(Pénzügyi Szervezetek Állami Felügyelete, PSZÁF)* was re-regulated in Act CLVIII of 2010, in effect until the adoption of Act CXXXIX of 2013 on the National Bank of Hungary *(Magyar Nemzeti Bank, MNB)*, which merged PSZÁF into the MNB. Financial institutions were also re-regulated by the Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises and Act LXXXIII of 2014 on Business of Insurance.

Although fiscal legislation is beyond the scope of this article, two important acts have to be mentioned: Act CXCIV on the Economic Stability of Hungary and the Act LXVI of 2011 on the State Audit Office of Hungary, which, along with the relevant provisions of the Fundamental Law (mainly the chapter on Public Finances, i.e. Articles 36-44) unquestionably provide a restrictive safeguard against credit borrowings which would be contrary to the reasonable management of the state.

Main achievements of the new economic policy of the Government of Hungary

Below is a short overview on the structure of measures taken by the government to financially stabilize Hungary. The four main areas of the consolidation were: (1) the central state budget, (2) the social security system, (3) indebted municipalities, and (4) debtors indebted in foreign currency and the bank sector (Lentner, 2013).

The most serious problems of the central sub-system of the national budget included the growing budget deficit and sovereign debt. By extension of the scope of taxpayers, re-integration of private pension funds to the budget and launching programmes to reduce the unemployment rate and boost economic growth (such as the National Development Plan) the government managed to remedy the situation. As a result of the replacement of IMF loans by market-based ones, financial independence and Hungary's room to manoeuvre increased and exposure to IMF policies decreased (Lentner, 2013, pp. 322-323). The "supporting monetary policy" adopted by the MNB was a great assistance to the government. It is suffice to share two indices reflecting the achievements: the base interest rate of MNB fell from 7% (in December 2011) to

2.1% (in September 2014), and since 2014 the inflation rate is around zero (Lentner, 2015, pp. 19-20).

The main point in the consolidation of the social security system included the re-integration of private pension funds. Indebted municipalities were consolidated in 2012 through both regulatory and bail-out measures. In order to assist people seriously indebted in foreign currency loans, regulatory measures were also introduced, such as the prohibition of unilateral contract amendments by banks, the fixed-rate consolidation of the loan amount into Hungarian currency, or the strengthened competences of the National Bank of Hungary and the then still existing Hungarian Financial Supervisory Authority (Lentner, 2013, pp. 324-329).

Agencies with special focus on financial supervision

The nature of agencies

There is no universal definition for the term "agency" and scholars cannot agree on a universal definition even in a single country (e.g. Hungary). The key elements include the *non-departmental character* and the *relative independence of the central government.* According to one of the most permissive definitions, agencies are *non-departmental bodies*, and in this approach, non-profit companies can also be agencies, provided that they have the required government background (since the definition says that an agency is an organisational unit created by *acta iure imperii* with a national competence under government control) with a considerably greater autonomy than ministerial departments, and a non-commercial purpose. Consequently, this definition only excludes for-profit companies (Hajnal, 2011, pp. 57-59).

According to another definition, in a functionalist approach, three activities must be performed by an organisation to qualify as an agency: 1) adoption of decisions as an authority, and give guidance to other participants in the given market, 2) functioning as a quasi-court, with a board making decisions in adversarial procedures and 3) functioning as a quasi-legislator, creating mostly soft laws (Fazekas, 2013, pp. 111-112). The latter definition, especially the first condition, emphasizes another important characteristic of agencies, namely that they are *almost always bound to a special type of market, sector or policy.*

In addition, the latter definition clearly shows that, irrespective of their specific sector, agencies meet the conditions of *market creating institutions* since they enforce certain rights. They also meet the conditions of *market legitimizing institutions,* as for instance manage and resolve conflicts.

The phenomenon called *agencification* has a double meaning in the relevant literature. On the one hand, it means the quantitative proliferation of agencies under a certain legal regime, and on the other, it represents qualitative changes: agencies are assigned an increasing number of tasks, and consequently, new competences to perform these tasks. This trend is closely related to the paradigm of new statism discussed above.

The agencies of the European Union

The EU agencies in general

Although the history of agencies is considered to begin in the Pan-American continent at around the middle of the 20th century (Kálmán, 2013, p. 1), the European Union has a long history of agencies, with an increasingly intense trend of agencification in approximately the last three decades.

The EU-specific agency-definition, accepted in this study due to its consistency, is as follows: “A ‘European agency’ is a public administration body established by a legal act of the European Union, has a legal personality and a relatively independent organisation, and participates in the regulation of a certain line on a European level and/or in the implementation of a EU-policy” (Kálmán, 2013, p. 3).

The above definition reflects the most controversial features of agencies, namely, their relative independence and non-departmental character. By nature, EU agencies are non-treaty based, which means that they do not have an explicit legal basis in the primary law of the EU (Szegedi, 2012, p. 349). They are only implicitly acknowledged in the Founding Treaties, and Art. 263 (1) and (5) of the Treaty on the Functioning of European Union (TFEU) provides a legal remedy against the decisions of agencies, when it talks about “bodies, offices and agencies” of the European Union as objects of legal control of the Court of Justice of the European Union (CJEU).

To understand the exact place and role of the agencies in the EU, the structure of the European administration need to be considered briefly. Danwitz distinguishes the EU’s own administrative law *(Eigenverwaltungsrecht)*, enforced by the organisations of the EU, the common administrative law *(Gemeinschaftsverwaltungsrecht)*, enforced by the authorities of the Member States, and cooperative administrative law *(Kooperations- oder Verbundverwaltungsrecht)*, enforced in cooperation (Danwitz, 2008, pp. 312-314). Since agencies are subject to the EU’s own administrative law (Danwitz, 2008, p. 319), as a result of agencification, the enforcement of the EU law shifts towards direct enforcement, which means that the positions of EU organisations are strengthening in comparison to the authorities of Member States.

In this article Comte’s functional categorization is adopted with five types of EU agencies: 1) decision-making agencies (e.g. the European Union Intellectual Property Office, which is the successor of the former Office for Harmonisation in the Internal Market), 2) agencies providing direct assistance to the Commission and, where necessary, to the Member States, in the form of technical or scientific advice and/or inspection reports (e.g. European Maritime Safety Agency), 3) agencies in charge of operation activities (e.g. EUROPOL), 4) information agencies (e.g. European Centre for the Development of Vocational Training) and 5) agencies providing services to other agencies and institutions (e.g. Translation Centre for the Bodies of the European Union) (Comte, 2010, pp. 84-86).

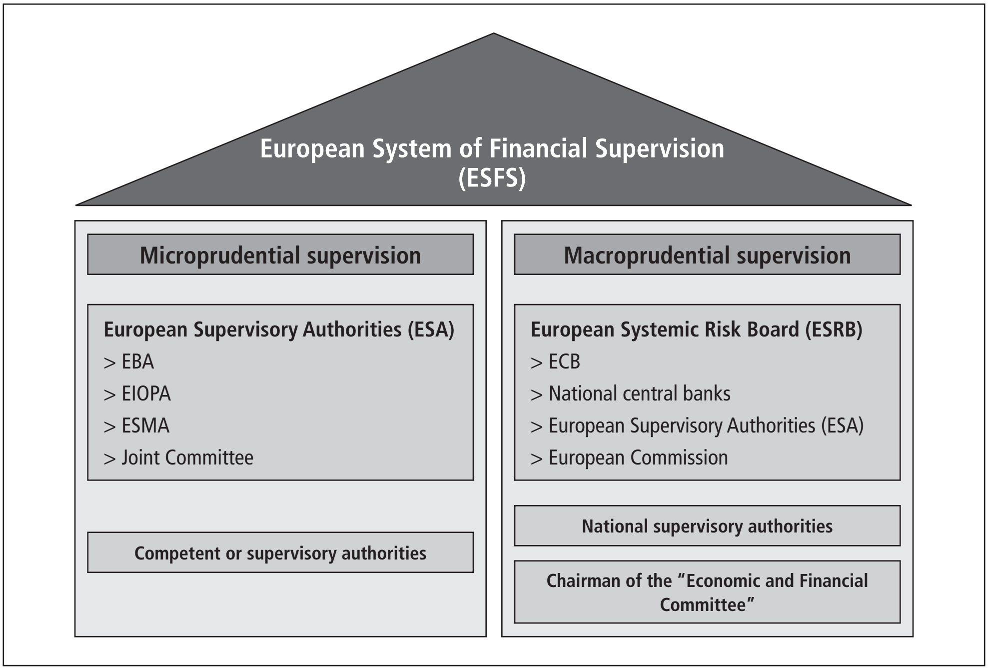
Chronologically, three generations are distinguished: 1) first-generation agencies, established before 1975, 2) second-generation agencies, established between 1975 and the 2003 framework regulation and 3) third-generation agencies, including executive agencies set up in accordance with the framework regulation (Council Regulation (EC) No 58/2003 of 19 December 2002 laying down the statute for executive agencies to be entrusted with certain tasks in the management of Community programmes) and the regulatory agencies created after 2003 (Danwitz, 2008, pp. 319-320).

This leads us to the third important categorization including a difference between executive and regulatory agencies. According to the relevant communication of the Commission, executive agencies were created in accordance with and on the basis of the abovementioned framework regulation (European Commission, 2008, p. 3). The regulatory agencies have their own separate legal bases, which are generally separate regulations for each of them.

The European Supervisory Authority

The three financial supervisory authorities, namely, the European Banking Authority (EBA), the European Securities and Markets Authority (EMSA) and the European Insurance and Occupational Pensions Authority (EIOPA), collectively referred to as European Supervisory Authorities (ESA) are third-generation decision-making

Figure 2: The European Supervisory Authorities in the European System of Financial Supervision



Source: Commission de Surveillance du Secteur Financier, Luxembourg, www.cssf.lu/en/eu-international/eu-authorities/

regulatory agencies. These three agencies were established after several unsuccessful efforts made by the decision-makers of the EU to handle the 2007-2008 crisis, when they realized that more powerful organisations are needed to regulate and supervise the three sub-sectors of the financial market. On the one hand, this decision is a welcome acknowledgment of the failure of the concept of the neoliberal self-regulatory market, and on the other, the extensive competences of these authorities may seem to be an overkill or a legal risk for the participants of the market.

Given that these agencies are beyond the focus of this article, only the highest risk is mentioned here: Art. 8 (2) f) of each of the three statutes (1092/2013/EU, 1094/2010/EU and 1095/2010/EU regulations establishing the European Supervisory Authorities), which enables the agencies to make individual decisions addressed to financial institutions in specific cases, practically bypassing Competent National Authorities.

Although the three ESAs have a common Board of Appeal to provide legal remedy against such decisions, and clients can also appeal to the CJEU against the decision of the Board of Appeal, as Cleynenbreugel points out, several questions still remain: e.g. it is not clear whether the Competent National Authorities and the respective Member States can take a different stance in the case, and what types of decisions the client can appeal (for further details see Cleynenbreugel, 2012, pp. 242-249).

Agencies in Hungary in after 2010

Agencies cannot be mentioned in Hungary before the 1989-1990 end of the communist regime, because the term cannot be interpreted in an authoritarian regime. This article only focuses on Hungarian public service agencies set up by Parliament elected in April 2010 (and the Government in office after June 2010).

In the new public service system of Hungary, in the opinion of the author of this article, "autonomous regulatory organisations" (as defined in Art. 23 of the Fundamental Law, and Art. 1 (6) Ksztv.) qualify primarily as agencies. This is decided, however, by the science of administration rather than legal acts, since the Hungarian legal system, similarly to other legal systems in Europe does not use the term "agency".

According to the Fundamental Law: "Parliament may establish autonomous regulatory organs by a cardinal Act for the performance of certain tasks and the exercise of certain competences belonging to the executive branch" (Art. 23 (1) Fundamental Law) and "The head of an autonomous regulatory organ shall be appointed by the Prime Minister or, on the proposal of the Prime Minister, by the President of the Republic for the term specified in a cardinal Act. The head of an autonomous regulatory organ shall appoint his or her deputy or deputies" (Art. 23 (2) of the Fundamental Law). "The head of an autonomous regulatory organ shall report annually to Parliament on the activities of the autonomous regulatory organ" (Art. 23 (3) of the Fundamental Law). "Acting on the basis of authorisation by an Act and within his or her functions laid down in a cardinal Act, the head of an autonomous regulatory organisation shall issue decrees; no such decree shall conflict with any Act, government decree, decree of the Prime Minister, decree of a Minister or decree of the Governor of the National Bank of Hungary. In issuing decrees, the head of an autonomous regulatory organisation may be deputized by the deputy appointed in a decree" (Art. 23 (4) of the Fundamental Law).

The above quoted provisions of the Fundamental Law clearly show that autonomous regulatory organisations have a distinct position in the public administration of Hungary in comparison to other organisation types listed in the Ksztv. First of all, the other types are not regulated in a separate article, or a special regulation in the Fundamental Law, which means that the legislator does not deem it necessary to regulate them on constitutional level, and consequently, their function does not require constitutional guarantees to balance the power of executive organisations. Moreover, as revealed in Art. 23 (4), the decree issued by the head of an autonomous regulatory organisation is a normative act, as it is included in the hierarchy of normative legal acts. It follows from this that autonomous regulatory organisations are not only quasi-legislators, but in the executive branch it is authorised to regulate by normative acts.

According to Art. 1 (6) of the Ksztv., only two organisations qualify as autonomous regulatory organisations: the Hungarian National Media and Infocommunications Authority (*Nemzeti Média- és Hírközlési Hatóság, NMHH)* and the Hungarian Energy and Public Utility Regulatory Authority (*Magyar Energetikai és Közmű-szabályozási Hivatal, MEKH).* Before its merger into the National Bank of Hungary (MNB) on 1 October 2013, the third one was the Hungarian Financial Supervisory Authority.

The acts establishing and defining the duties of NMHH and MEKH assign them the competences of an authority and the powers of a quasi-court. (In the case of NMHH, these acts include Act CLXXXV of 2010 on the Media and Act C of 2003 on Electronic Communications, while MEKH is subject to Act XXII of 2013 on the Hungarian Energy and Public Utility Regulatory Authority). For example, Art. 165 (1) of the Media Act allows clients to appeal against NMHH's decisions adopted as an authority to its supervisory organ, the Media Council. These organisations also issue soft-law documents.

In conclusion it can be said that both NMHH and MEKH fit in the above definition given by Fazekas, since they function as authorities, quasi-courts and quasi-legislators. In the author's opinion, there is no other organisation type which would meet all these criteria in general. The National Bank of Hungary, which is not regulated by the Ksztv. but by a separate act, the already mentioned MNB Act, can be considered as an agency, in the next chapter this statement will be justified.

The new Hungarian system of financial supervision

Transitional period between the Act on PSZÁF (2010) and the new MNB Act (2013)

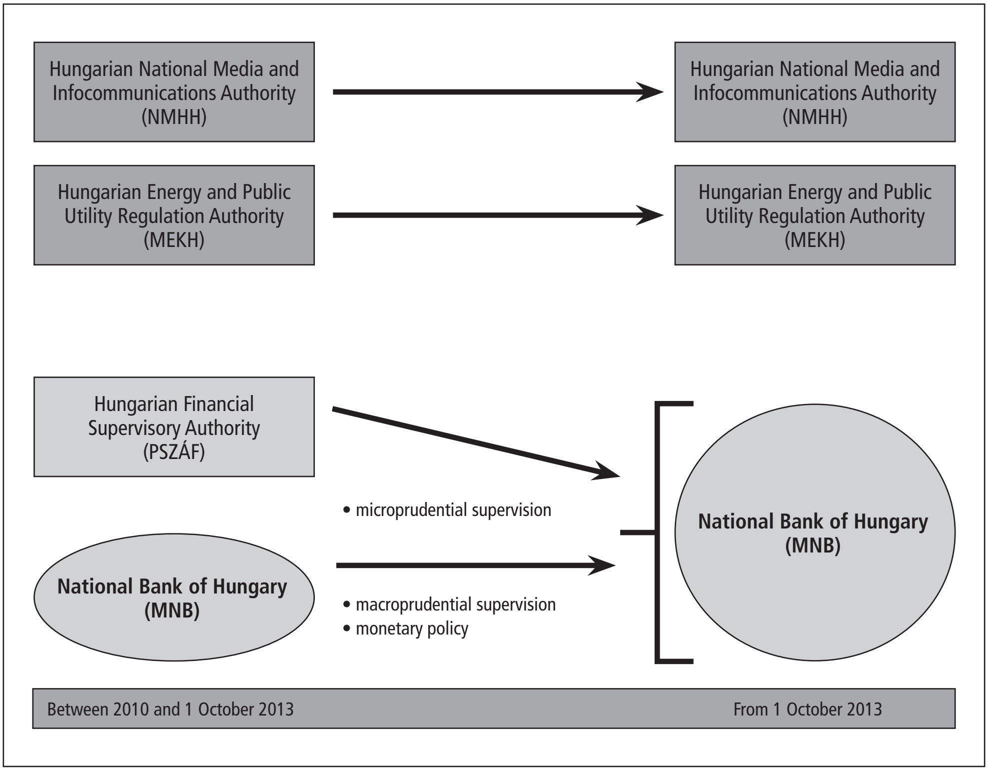
General ideas about the system

In this period, there was a joint financial supervision depending on the institutional cooperation between PSZÁF, the MNB, the Hungarian Competition Authority *(Gazdasági Versenyhivatal, GVH*), the three European Supervisory Authorities established in the meantime, and other specific (or sometimes general, e.g. European Commission) organisations on both a EU and a national level (Seregdi, 2013; Sudár, 2013). The MNB (which was at that time regulated by the short-lived Act CCVIII of 2011) was primarily responsible for monetary policy and the macroprudential supervision of financial markets, while PSZÁF was responsible for microprudential supervision.

As Art. 41 (1) of the Fundamental Law stipulates: "The National Bank of Hungary shall be the central bank of Hungary. The National Bank of Hungary shall be responsible for monetary policy as laid down in a cardinal Act." As Art. 3 of the MNB Act provides: "The primary objective of the MNB shall be to achieve and maintain price stability. Without prejudice to the primary objective, the MNB shall support the maintenance of the stability of the system of financial intermediation, the enhancement of its resilience, its sustainable contribution to economic growth; furthermore, the MNB shall support the economic policy of the government using the instruments at its disposal."

The above provisions stipulate that the primary objective of the MNB is to ensure price stability: "The MNB shall define and implement monetary policy" (Art. 4 (1) of the MNB Act), and in addition, it is required to support the stability of the financial market and the fiscal policy of the government.

Figure 3: The Hungarian agencies in after 2010; the development of the financial supervision



Source: Edited by the author

The interval discussed here followed the first regulatory responses of the European Union to the financial-economic crisis of 2007-2008, and consequently, the European Supervisory Authorities established by the European Systemic Risk Board (ESRB) already had a key role in prevention of system risks. The three ESAs, the ESRB and other minor organisations jointly constitute the European System of Financial Supervision (ESFS), with the national central banks acting as Member State-level macroprudential supervisors (Szombati, 2013, pp. 139-143).

Support to the government's fiscal policy is tantamount to promoting the maintenance of price stability, i.e. efforts to cut inflation. It is implemented using instruments such as the Funding for Growth Scheme *(Növekedési Hitelprogram, NHP)*, launched in the in the spring of 2013 and intended to assist SMEs in their credit strategies by granting credits for investments and through current asset financing (Pillar I), credit management (Pillar II), both under favourable conditions; while Pillar III of the NHP is a special foreign currency interest rate swap aimed at providing euro-liquidity, also under favourable conditions (Lentner, 2013, pp. 202-208).

As mentioned above, up to the merger on 1 November 2013, PSZÁF was required to focus on the microprudential supervision of the financial market and institutions. Its competences fall into seven categories: 1) *licensing:* the operation or mergers of financial and credit institutions, 2) *supervision:* the classic duty with strong investigative powers, 3) *law enforcement:* taking individual measures in specific cases, 4) *regulation:* active cooperation with the legislator in the development of the regulatory environment, 5) *consumer protection:* strong licences and innovative solutions (see below), 6) *acting as a market authority:* protecting the market mainly by prohibitions and, in criminal cases, by reports to the relevant authorities and 7) the *publication of recommendations:* communication to all market participants regarding expectations, supervisory experiences etc. in the form of soft-law documents (Seregdi, 2013, pp. 409-414).

Regarding consumer protection, it should be emphasized that perhaps the most important actor in Hungarian financial consumer protection, the Financial Arbitration Board *(Pénzügyi Békéltető Testület, PBT)* started operation on 1 January 2011. It is engaged in conflict management and mediation and is a key element in consumer protection in Hungary (Czajlik et al., 2013, pp. 444-445).

System assessment – in terms of agencification

Before 2010, PSZÁF had various organisational forms, changed within almost every three years, was definitely an autonomous regulatory organisation under Art. 1 (6) b) of the Ksztv. Taking into consideration the statements made in the relevant chapter, it qualifies as an agency. Against the conditions set up by Fazekas, PSZÁF: 1) was definitely and, by definition, an authority, 2) functioned as a quasi-court (e.g. the PBT) and 3) functioned as a quasi-legislator, since in addition to issuing soft-law documents for the market it supervised, it also acted as an autonomous regulatory organisation with authorisation based on the Fundamental Law to issue decrees included in the regular hierarchy of normative acts.

The MNB, in the author's opinion, did not qualify as an agency in that period. First of all, regarding its form, the MNB has never belonged to any type of organisations listed in the effective Ksztv. or other statutory regulations other than the MNB Act, which provides that it is "a legal person functioning in the form of company limited by shares", with shares in the Hungarian state's exclusive ownership (Art. 5 of the MNB Act). As it is definitely not a non-profit company, but deals with profits and losses, and according to the definition of Hajnal, it should be excluded from the category of agencies. According to the definition given by Fazekas, it also fails the test, because although it functioned as an authority and as a quasi-legislator in terms of its macroprudential competences, it is definitely not a quasi-court.

System assessment in Rodrik's institutionalist approach

Both PSZÁF and the MNB contributed a great deal to the stability of the financial system of Hungary. In the author's opinion, both embody all four institutional categories described by Rodrik.

Their enforcement functions regarding the financial market and its participants make them *market creating* institutions. On account of their objectives and competences they clearly qualify as *market regulating* institutions. The fact that both were established with the purpose of protecting market stability (PSZÁF on a microprudential and the MNB on a macroprudential level) makes them *market stabilizing* institutions. Finally, as the MNB is involved in re-distribution (see NHP) and PSZÁF was engaged in conflict management (see PBT), both of them are *market legitimizing* institutions.

The financial supervisory system after 1 October, 2013

In accordance with the provisions of the new MNB Act, PSZÁF ceased to exist as an independent organisation and merged into the MNB with effect from 1 October, 2013. The MNB has taken over the objectives and competences of PSZÁF with immediate effect upon the merger. For our purposes this means that according to Fazekas's definition of "agency", the MNB qualifies as an agency. In terms of the institutional model, the MNB embodies all four institutional categories.

Conclusions

The role of institutions in sustaining a well-functioning market economy is unquestionable. Long before the latest financial-economic crisis of 2007-08, at around the millennium, Rodrik and Subramanian designed a model of institutions whose presence is a prerequisite to the successful functioning of such an economy. In parallel, another institutional trend called agencification is gaining increasing significance in the European Union. These two institutionalist approaches are unavoidable in the examination of the responses given by a government of any Member State of the European Union, in this case Hungary.

In conclusion, it can be established that after 2010, the government of Hungary has definitely managed to keep pace with the above-mentioned institutional trends and make the administrative system comply with the expectations of the European Union.

Regarding economic policies, however, the government of Hungary decided to take a different path than expected of us by the EU, which, up to now, has proved to be a great success, and hopefully will continue to do so. The Hungarian government decided to give up the neoliberal ideas, the New Public Management, and the debt management relying on credits from the IMF and the World Bank.

Unorthodox measures were introduced instead, and the role of the state and administration in the regulation and supervision of the economy was replaced by a neo-Weberian one. The IMF-credit was paid off and the financial exposure of the country was radically decreased. Economy boosting programmes were launched and the MNB supports the fiscal steps of the government by monetary policy instruments.

The financial market, perhaps the most seriously hit by the crisis, was gradually brought under a strong and responsive regime of regulation and supervision, which seems to function correctly. Disregarding the fact that the financial environment changes rapidly, the MNB became a powerful key stakeholder that qualifies as an agency, represents all four ideal institution types set out by Rodrik, and successfully manages both monetary policy and the macro- and microprudential supervision of the financial markets and its participants.

To sum it up: agencification has definitely played a major role in, and had a substantial effect on, the development of post-2010 financial stabilization in Hungary.

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Investing in the Future[1]

Summary

The purpose of this study is to investigate empirically the role of innovation activity in 16+1 cooperation, within the Central and Eastern Europe (CEE). We also identified those internal and external factors, which might cause improvements in innovation performance of CEE companies. Our main focus was on technology-based research and innovations. We applied qualitative research methods. Our findings demonstrate that CEE companies have significant contribution to performance. We found that key success factors of these organisations are based on four elements: knowledge management, access to financial resources, managing formal and informal networks, as well as achieving synergies between technological and non-technological innovations. The preparation of the analytical study was facilitated by being part of a Slovenian-Hungarian MASH European Grouping of Territorial Cooperation and thus, through our cross-border relations, we have more information, we are deeper into the functioning and / or non-functioning EU systems.

Journal of Economic (JEL) codes: B22, B27, C15, F02, O31, O32, 033, O57
Keywords: innovation management, R&D, technology, Central and Eastern Europe, OBOR, China

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The myth of the European paradox

We attempt to provide an overview on the questions raised by the current trends and changes in research and development, innovation and the approaches towards them. In Europe and in Hungary, the debate around research and development (R&D) mainly caused by the re-proposed targets of EU's Lisbon Strategy, which puts the education, the research and the innovation, as the "triangle of knowledge" to the focus as the vault of European competitiveness. The rhetoric of the "European dream" built around society is overshadowed by statistical data showing that position of the continent is deteriorating in the global competitiveness.

The permanent restructuring and shifting preferences of the R&D sector cannot be always explained by the traditional concepts of social sciences. Although the trend setting school of economics is still the neoclassic, the economics based innovation management started to focus on economic-evolution theory. The latter seems to be more applicable to the "new economy" deeply founded in society, as it has non-linear dynamics.

We would like to put your attention to those changes of R&D, which requires establishing new indicators. As the unintended alteration of paradigm resulted changes and the new types of technology-application based society innovation provided aesthetic developments and new cultural contents require new types of valuation methods.

Today's change diagnosing studies are not based on technology sectors, but rather on geo-political environment. We could clearly see the globalisation of R&D and the winners of its globalisation are China and India. Europe is loosing out contrary to the developing economies of Asia. The innovation output of the "old continent" is getting compared to the USA, which contrast out the lag of performance and demolish the myth of the "European Paradox". The essence of European Paradox is that number of scientific publications of Europe in par with the USA, what indicates that Europe has the upper hand and if it can exploit this, than Europe can overcome its disadvantage in competitiveness. However, we have to emphasise the misleading nature of such a conclusion. When we analyse the usage of these publications, we have to conclude that the USA has the real advantage.

When we narrow down the number of countries and create the "Visegrád Paradox", we see that Central and East Europe has an even worse application level of its scientific capacity and performance compare to the EU15. The 4 Visegrád countries have only one way to step forward by creating a European Research Area (ERA) by reconciling their innovation processes and systems.

Brussel tries to push these 4 countries to increase the efficiencies of their innovation systems. The Lisbon Strategy is targeting the R&D spending level at 2.5% of GDP at state level and the double of this at the private sector.

The question remains: what model Hungary should use to be able to have knowledge based economy. For example, the "Finnish Miracle" is not only a set of target oriented rules and legislations, but it required an appropriate social-cultural environment too. On the other hand, Singapore or the Silicon Valley are using completely different models for their flourishing innovation spray.

European Innovation Scoreboard

R&D and innovation (R&D+I) are elements of the economic development, which requires target oriented, long term planning without the possibility of instantaneous measurement most of its impact. The centre of innovation is the mind and thinking, but the successful innovation is also creating applications and products, which are practical, they are able to be used in real life. The costs of R&D become an investment only if the result will be used and than its application will become an achievement. To measure the successfulness of R&D and innovation we need to assess the inputs and outputs to see the appropriateness of money spent and quality of expedient. The expenditures of R&D and innovation could be measured by various ratios to provide information to fine-tune the eco-political targets with expectations.

The European Union, to measure the effectiveness of R&D and innovation, created a complex indicator system comprising 8 dimensions, within that 25 ratios and the summarized value of all provides an index number, which evaluates the results of R&D and innovation. To be consistent and comparable, it uses a unified, statistic based set of data specific to R&D and innovation activities. The content of each ratio (indicators) is clearly defined. The reliability is ensured by the use of data solely provided by the statistical offices of the Member States of the Union.

Our analysis for 2015 details out the major numbers of performance of R&D and innovation by the EU-indicator system and also provides a comparison of these figures for the period between 2008 and 2015. For specifically Hungary, we provide an overview of legal framework, organisation of support and the major targets, strategy and performance indicators from 2010 onward.

The most commonly used international ratio to express the costs spent on R&D and innovation is to state the total expenses as percentage of the GDP. From 2000 to 2015 the GDP based spending in the EU and in Hungary has increased, but fall a bit short of the original target number. Both the Lisbon Strategy and the later approved Europe 2020 strategy have the explicit target number for R&D and innovation spending level at 3% of the GDP for the EU Member States. In 2010, Hungary had a target figure of 1.8% for 2020 and achieved the level of 1.38% in 2015.

The European Innovation Scoreboard (EIS) shows the relevant data for the given year per country by the combined innovation index and puts the Member States into four different performance category:

1) Leading innovator: states significantly succeeding the EU average innovation performance;

2) Strong innovator: those countries which have at or above innovation performance compare to the EU average;

3) Moderate innovator: the performance is slightly below the EU average innovation performance;

4) Lagging innovator: the ones with considerably lower performance compared to the EU average.

In 2008 Hungary had lower performance than the EU average in innovation, but remained as a moderate innovator and continued as moderate innovator for the period 2008-2015. Hungary, on the basis of 2015 data, achieved 68% of the EU average innovation performance with a slightly decreasing tendency. Reviewing the details of Hungarian data for 2015, we could see the country has underperformed in all dimensions of the EU average. 20 out of the 25 ratios did not reach the EU average and in case of 5 ratios it exceeded it. In case of 11 ratios the performance of the country has improved in 2015 compare to previous years. Compare to EU countries, the Hungarian SMS sector's innovation performance is very weak. Within the Hungarian SMS sector, the companies carrying out innovation activities represents only 10.6% of the sector total, which is about the third of the EU average (28.7%) and only 12.8% of them introduced new products or innovative process into their activities. The R&D and innovation activities are concentrated at the large enterprises in Hungary.

The GDP-based R&D and innovation expenditures were under or about at 1% in Hungary for the past 2 decades. Such stagnation did not motivated research and development at all. Since 2008 we could see a change of course by an above 1% level of spending in the sector.

The analysis of the EU indicator system shows that those countries at the top of the innovation performance are delivering average exceeding results at almost all dimensions. This fact is also supporting that the innovation as such is a very complex phenomenon and its success requires appropriate contribution form a number of factors parallel. That is why there was no fast pace or significant change in the hierarchy of positions amongst the countries between 2008 and 2015. However, some of the countries managed to improve their performance year by year, hence achieved a considerable result over the period.

We have reviewed the 8 dimensions used for comparison to identify those with the strongest link to innovation performance. On the basis of 2015 data, the strongest correlation is between the overall index and "enterprises and relations". There is also a very strong correlation between overall index and "research systems". The enterprises and relations dimension measures the innovation at small and medium-sized (SMS) enterprises and the innovative-cooperation amongst them. These are the ratios where Hungary lags behind within the EU. These are also show that the very modest level of R&D and innovation at the SMS sector drags back the overall performance of Hungary. Also, there is a very limited number of small enterprises founded for innovation and related activities.

The Lisbon Strategy and the Europe 2020 strategy and furthermore the Horizont 2020 programme are dedicated to set goals and objectives supporting the economic growth, job-creation, R&D and innovation to enhance the competitiveness of the European Union. These targets have to be applied at the Member States' budgets, eco-policies and strategies to support a sustainable and inclusive expansion priority.

In Hungary, these strategies were the basis of support to R&D and innovation both domestic and international point of view. During the period 2007-2013 the "New Hungary Development Plan", the "Science, Technology and Innovation Policy", the

"National Action Programme" and the "New Széchenyi Plan" were those strategic initiatives. For the period 2014-2020 these initiatives are the "Investment into the Future – National Research, Development and Innovation Strategy", the "White Books for Research, Development and Innovation", the "National Smart Specialisation Strategy" and the "Széchenyi 2020" are the approved operative programmes of the Hungarian government on the fields of R&D and innovation.

The framework of the Hungarian R&D and innovation activities are set on the basis of the EU's budget cycles, relevant policies, performance formatives and strategy framework.

For the period 2007-2013, the strategy of the science, technology and innovation policy set the goals of the expansion of research and development activities at enterprise level, creation of research universities, establishment of internationally recognised R&D and innovation centres, strengthening of knowledge based social competitiveness, and capacity expansion of regional R&D and innovation. The "Investment into the Future" as the national R&D+I strategy now includes the Science-, Technology- and Innovation Policy Strategy. All of these strategies put emphasis on improvement of R&D and innovation at enterprise level to increase the competitiveness of the knowledge-based society, the creation of knowledge base, encouraging cooperation between enterprises and research institutions and regional development incorporated in the complex national R&D strategy.

The Hungarian strategies and programmes for R&D and innovation comprise performance indicators (with set numbers and ratios). The achievement of those targets, however, cannot be measured by publicly available data.

After 2010 in Hungary the required changes of legislation, supporting organisations and systems are initiated and at some areas are even completed to backing R&D and innovation. The National Research, Development and Innovation Office (NRDI Office) have been established at 1 January 2015. This office replaced all other R&D-oriented sub-organisations and stipulates both horizontal and vertical cooperation and coordination amongst the participants. Such reorganisation of the supporting environment caused some delays in the realisation of R&D strategies.

With the creation of NRDI Office the Hungarian Government intended to set a framework to a more effective coordination of public financing. The increase in available funds require a more advanced level of coordination not only at a national level, but at the level of the Union, which, amongst others, includes supporting programmes, standardised patent and copyright protection, involvement of venture capital, joint programmes of different organisations and different countries in accordance with the best practices of EU Member States.

There are two main questions to be answered with regards to the evaluation and assessment of R&D+I performance of activities:

1) The evaluation of performance of the EU Member States indicates that the leading and strong innovators are having a balanced and generally high performance in all dimensions. This means that those countries are able to deliver strong performance where all the parameters and conditions of successful innovation are present.

What could be the conclusion to those who prepare and execute the Hungarian innovation strategy?

2) The analysis of correlation between the dimensions and the aggregated innovation index show that the most comprehensive relation is between the innovation index and the "enterprises and relations" dimension (0.923). This dimension measures the innovation level of small and medium-sized (SMS) businesses and the cooperation/interactions amongst them. The same time, these are the ratios where Hungary lags behind within the EU. How and with what could we increase the innovation performance of small and medium-sized businesses?

Conclusion or "rolling dollars"

How could we get to the conclusion even before we have the analysis done? It is really simple! We have already indicated that how many national and EU organisation; office and institutions are busy with the management of R&D+I. Some estimates (these are really just estimates) the number of entities involved in R&D within the European Union is about 100, and the Member States have couple of thousands of additional organisations. One could conclude, in reflection to these numbers, the less would be more!

Now, if 16 other countries hold the mirror to the current structure, than we could say "it is even worse" because in those countries where (compared to GDP or innovation level) the R&D+I level is more successful, the number of supervisory or managing entity is inversely proportional. More developed and more successful R&D in a country means fewer supporting and/or supervising entity. This is not due to centralisation, but the recognition of that R&D and innovation could not be effective with too many layers of autocracy.

In certain developed countries the decentralized, over simplified control and management structure could also lead to troubles, like in Germany, where the large car manufacturers under the cover of R&D instead of real innovation just falsified the emission data for their diesel engines.

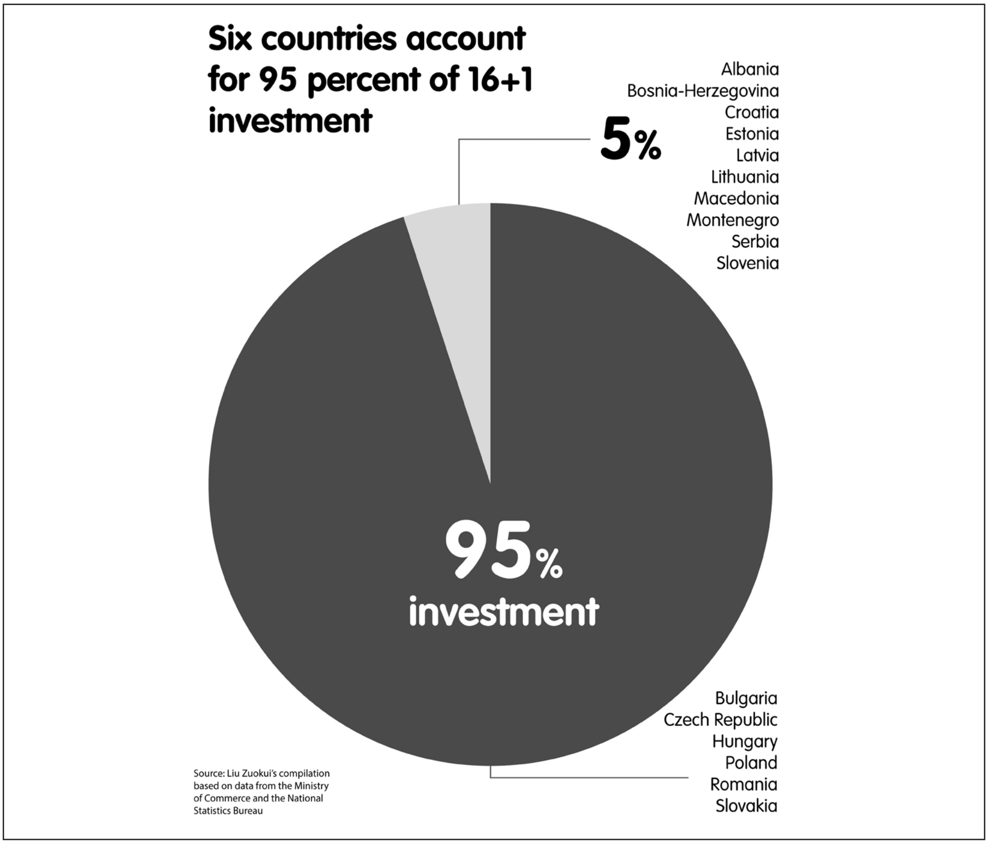
Naturally, attempts to cheat the system is always be there, but it does not invalidate the original conclusion, namely, the level of economic development is reversely proportional to the size of autocracy, the water-head of public services.

Back to the mirror-example, now 16+1 country holds the mirror, because of China. As you could see China made 95 % of its investments in 6 countries with developed economy. The Table 1 shows the relevant numbers and ratios of these investments.

As mathematician and researcher of physics and quantum computing, someone really effected by R&D and innovation, we were puzzled and disturbed. What has happened here? Hungary received 36.79% of the total Chinese investment in the region and what has happened with it? Where is it? In which sectors? And this sum is about the total of investment made in Poland and Czech Republic.

It is not our task to identify responsibility, but we could see that something does not happened the way how it should have been. We are sure it is partly due to the

Figure 1: Six countries account for 95 percent of 16+1 investment



Source: Liu Zuokui's compilation based on data from the Ministry of Commerce and the National Statistics Bureau

overwhelming number of supervisory and management organisations with highly unproductive processes. The invested amount of USD millions should have had direct, measurable effect on the increase of GDP.

We could simply state that, on the basis of our experience and gathered data, but also by a rough estimation that Hungary, including the other 2 developed countries from the 16, did not utilize the economic growth potential provided by the Chinese investments.

But if the +1 country really want to make all its efforts to properly invest the millions and billions of investments outlined in the 16+1 model, the One Belt One Road theory, the expectations of the New Silk Road project, than these resources should be the financial basis of a new dawn of development and not rolling dollars programmes. We know the 16+1, the OBOR is at an early stage of development, but this is the time, together with our Chinese scientist colleagues to create a “professors’ committee” (which has to be acknowledged by the 16+1) and this committee would have the responsibility to prepare and oversee the most effective programme of research, development and innovation to be able to use the financial resources invested in future scientific work in that most efficient way. Naturally the results and achievements would be shared amongst the 16+1 countries.

Similarly, as described above as "professors' committee" for R&D and innovation, we have to set up some other, equally important committee, like for traffic and transportation, energy policy, etc. Obviously, these committees are forced to cooperate, as there is no clear cut amongst the fields/areas, like the self-driving cars or smart cities programmes. Evidently, as we think about it, the 16+1 countries, or China itself should set up a sort of "Office of Planning" where these committees could work, cooperate and coordinate their work, this could be the "China-CEEC Planning Board".

Table 1: Chinese investment in 16 CEE countries in 2009 and 2014 (stock/USD m)

	2009	2010	2011	2012	2013	2014	2009–2014 growth	Share of total Chinese investment in CEE (2014)
Hungary	97.41	465.70	475.35	507.41	532.35	556.35	471.14%	32.79%
Poland	120.30	140.31	201.26	208.11	257.04	329.35	173.77%	19.41%
Czech Republic	49.34	52.33	66.83	202.45	204.68	242.69	391.87%	14.31%
Romania	93.34	124.95	125.83	161.09	145.13	191.37	105.02%	11.28%
Bulgaria	2.31	18.60	72.56	126.74	149.85	170.27	7271.00%	10.04%
Slovakia	9.36	9.82	25.78	86.01	82.77	127.79	1265.28%	7.53%
Serbia	2.68	4.84	5.05	6.57	18.54	29.71	1008.58%	1.75%
Lithuania	3.93	3.93	3.93	6.97	12.48	12.48	217.56%	0.74%
Croatia	8.10	8.13	8.18	8.63	8.31	11.87	46.54%	0.70%
Albania	4.35	4.43	4.43	4.43	7.03	7.03	61.61%	0.41%
Bosnia-Herzegovina	5.92	5.98	6.01	6.07	6.13	6.13	3.55%	0.36%
Slovenia	5.00	5.00	5.00	5.00	5.00	5.00	0.00%	0.29%
Estonia	7.50	7.50	7.50	3.50	3.50	3.50	-53.33%	0.21%
Macedonia	0.20	0.20	0.20	0.26	2.09	2.11	955.00%	0.12%
Latvia	0.54	0.54	0.54	0.54	0.54	0.54	0.00%	0.03%
Montenegro	0.32	0.32	0.32	0.32	0.32	0.32	0.00%	0.02%
Total	**410.60**	**852.58**	**1008.77**	**1334.00**	**1435.76**	**1696.51**	**3.13**	**100,00%**

Source: Liu Zuokui's compilation based on data from the Ministry of Commerce and the National Statistics Bureau

In such a case it would not happen a case like the Belgrád-Budapest railway line with spending hundreds of USD millions and at the end to discover that the project could not get the necessary authority approval from the EU. Please review the possibility of such option; otherwise the 16+1 or OBOR could end up like the hundred-legs EU, with many legs and he goes slow.

Measuring the results of R&D activities

The R&D and Innovation are result oriented improvements of economie, requiring long term planning and determination, but some or most of the elements of success are not measurable immediately. There are certain factors playing role on the return or recovery of expenses born by R&D. Innovation and R&D activities are overlapping and strongly related to each other. Their relation is based on the innovation chain (basic research, applied research, pivotal development, technological application, mass production, consumption). When the areas of interrelations are successful, the elements create the innovation chain and due to the complexity of the flows and reactions, the elements are not separable. Please note that not all initiatives reach the level to become an innovation chain to be a product or a sale-ready service.

The center of Innovation is the thinking, however, the successful innovation also needs demand from the user, beneficial side. The expenses occurred could become investment only when the result becomes product or service sold, thus make the innovation quantifiable. The success of research, development and innovation are gauged differently. In research, the level of success is measured by the scientific level of the research. Development is assessed by the application of technology or process to achieve the relevant goal of economy or society. In case of Innovation, the gauge is the result achived by the application of the outcome of research and/or development.

The R&D+I activities are getting more and more determining factor of economic progress, hence there is relevant legislation in place to ensure the proper use of resources for such activities in Hungary. The Act of 2014 on Scientific Research, Development and Innovation provides the framework of all and any activity enhancing the competitiveness and income generating capabilities of the society to conclude a sustainable economic growth and job creation.

To be able to gauge the performance of R&D+I activities, we need to evaluate the effectiveness of money spent by reviewing the expenses paid. In practice it means the introduction of a permanent monitoring system of spending, including the constantly updated calculation of various ratios to ensure that we get an early warning in case of significant deviation from the original target, hence providing the possibility of adjustment. Such a permanent analysis of research results deliver substatial information to judge whether there is a need of fine-tuning of current activities to be able to meet prior targets set by eco-political directives.

The European Innovation result table

The European Union has created a complex indication system using a calculated sum of individual ratios and dimensions generating one index-value which assess the successfulness and effects of R&D+I activities. To be able to use such calculation method, it is important to have unified statistical data structure providing the relevant and comparable values for assessment. Comparability is achieved by the pre-defined calculation method of the required ratios (indicators) and the reliability and availability ensured by the Statistical Bureau/Offices of the Members States (Eurostat is one of the Central Directorate of the EU created to provide central statistical figures to the institutions of the EU and to harmonize the applied statistical methodologies by the Member States, the EFTA countries and EU member applicants.

The European innovation performance result summary table, which earlier called “Innovative Union result summary table”, is a structured set of data about the innovation performance of EU Member States comparing it to non-EU member states and to regional neighbours’ performances.

The current layout of the table is made since 2010 (prior to 2010 it was a different table with similar data content, e.g. in 2009, it was called European Innovation Progress Report), therefore it allows the comparison of years and provides the possibility to draw up tendencies. Furthermore, it enables us to set up grading of the countries and to analyse the performance changes of the countries. It also provides the relevant breakdown of indicators of the R&D+I by country and per sectors with identical data content. The ratios are calculated regardless to specific circumstances of various countries, but fulfilling the indicator function via data-reduction to minimize the need of special, area or circumstance related information. The indicators are able to exhibite the current status, but cannot display the reasons, which requires further analysis and collection of additional information.

The performance result summary table of the Union indicates the relative strenghts and weaknesses of the national innovation structures and helps to determine the areas requiring improvements per country. In recent years, there were slight modifications to the sources of information and the definitions of methodologies to the indicators. Any content type change to the ratios are listed next to the result summary table and to enable the comparability of country-performances it also includes the innovation values calculated in line with the previous definitions, e.g. the data relating to scientific cooperations is derived from the Centre for Science and Technology Studies (CWTS) web Science, but the figures for 2015 has been calculated on the basis of Scopus data. The differences are in e.g. the definition of capital investment (currently we use industry-sector statistics instead of Industrial statistic figures) the latter providing the figure for total capital investment from a country, but the previous one providing the figure of capital investment in the country; the two do not necesserely overlap.

The ranking list of innovation performance of the countries is calculated in a very complex manner called the Summary Innovation Index, which accumulates the R&D+I performances measured by 25 different ratios. The values in the ranking list represent the average value of those ratios, however, if you take the ratios individually, there might be sometimes significant deviation in ranking of a given country per different ratios.

These 25 ratios which examining the varous factors and effects of innovative activities could be categorized into 3 main groups:

1) Elements necessary to innovation activities, such as human resources, research system, financing and financial support;

2) Indexes measuring the innovation activity level of enterprises in the EU, such as ratios on assets, intellectual properties, inter-company transactions and trading activities;

3) Indicators of factors influencing the economy as whole, like economic environment, etc.

To have a more detailed groupping of the 25 ratios of the indicator system, they are splitted into 8 dimensional main category. Within the dimensions the ratios dedicated to certain areas, such as 5 ratio for measuring the economic environment, 4 ratio assessing the intellectual properties and products, furthermore 2-3 ratio to evaluate the performance of other areas.

Every ratio is a proportional value, which relates an R&D+I activity to an other value, e.g. GDP, size of population, etc. to partially filter out the deviative effect of absolute values. The assessment of innovation activities made by both of the complex indicator system as an overall evaluation and by the dimensional ratios, as individual parameters. We have summarised the dimensions, types and categories of the ratios in Table 2, the definition of indicator types provided in the glossary.

Table 2: Dimensions of the EU Innovation Scoreboard

	Name of dimension	Indicator type	Number of indicator
1	Human resources	Positional/impact	3
2	Research Systems	Positional/impact	3
3	Finance and subsidies	Positional/impact	2
4	R & D & I activities company, investments	Result	2
5	Connections and businesses	Result	3
6	Intellectual property, instrument	Result	4
7	Innovators	Output/output	3
8	Economic environment	Output/output	5

Source: Edited by the State Audit Office of Hungary

Evaluation of the indicators only possible via comparison, as in most of the cases there are no generally accepted value levels. The direction and level of connection amongst the ratios could be examined by correlation coefficients. The correlation is measurable to prove or disprove the paralel movement of certain ratios. In case of analysis, we could disregard the top and lowest values (top and lower decile). The statistically significant changes could be determined, also the tendencies, the averages are measurable, the deviations from the averages are quantifiable. However, the indexes do not filter out the effect of lower innovation level of countries recently joined the EU, therefore these figures are distorting the overall and average values.

The actuality of figures for 2015 (published in 2016) is improved compare to previous years. To push the publishing date somewhat later allowed to have the most recent figures included in the report. The sources of information have also changed, like the copyright and patent data has been provided by EUIPO (European Union Intellectual Property Office), venture capital investments' data are from Invest Europe (Eurostat has only indirect sources about it).

EU country ranking 2015

In 2016, the *European Innovation Scoreboard* summary has been published on the basis of 2015 results and evaluated the innovation accomplishments by the combined innovation index (as in previous years) and listed 4 performance group of the Member States.

1) Denmark, Finland, Germany, The Netherlands and Sweden are the leading innovators with their innovation index substantially exceeding the EU average (innovation leaders).

2) Belgium, France, Ireland, Luxemburg, Slovenia and the UK are strong performers, having innovation index values around the average value (strong innovators).

3) Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia and Spain are having index values somewhat below the EU average and considered as moderate performers (moderate innovators).

4) Bulgaria and Romania have innovation index values significantly under the EU average, hence are seen as lagging behind performers (modest innovators).

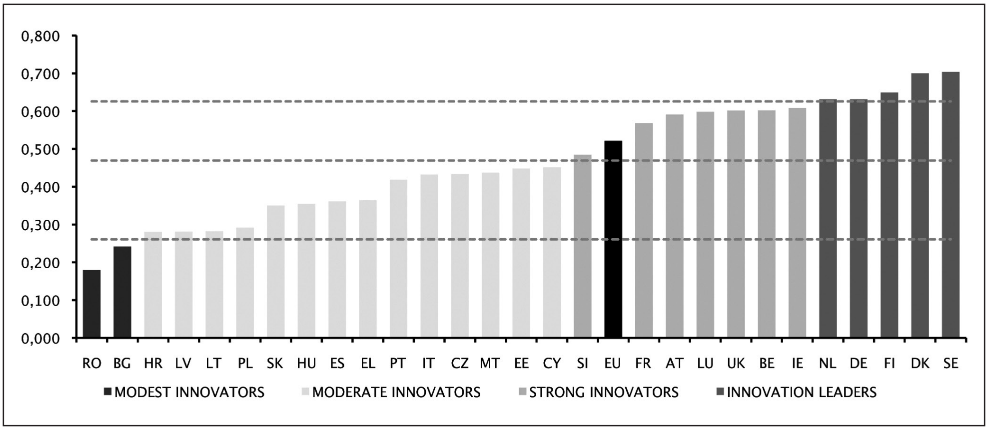
The summary table show the ranking in accordance with an average innovation performance, but the detailed calculation show a far more fragmented picture with significant deviations in various ratios. The summary table provides a fair ranking, however, it could be used only partially to evaluate efficiency. To spend a higher % of GDP on R&D, or having an elevated ratio of people with higher education of the population, or the increase of the number of small and medium-sized business in the economy do not mean the increase of innovation performance, but there are other factors to be taken into consideration (e.g. number of researchers, renumeration and other incentives, etc.).

The general innovation performance and the country ranking based on the overall innovation indexes are similar to previous years, there are no significant deviation between the years. The good performers had good performance in every year. Measurable deviations had happened, but they are not tendentious.

In 2015, there were two significant change within the performance groups, Latvia became moderate performer (prevously it was lagging behind performer) and the Netherlands stepped up to leading innovator from strong performer.

Hungary has been a moderate performer in 2015, leaving most of its Central European neighbours behind, such as Slovakia, Poland, Latvia, Lithuania, Croatia and also the lagging behind performer Bulgaria and Romania. The Czech Republic and Estonia had better performance, while Slovenia is amongst the strong performers due to its balanced and over the EU average results. In the EU28 ranking, Hungary has the 20th place based on its overall innovation index, which was 0.355 (the EU average is 0.521) in 2015. The ranking is shown in Figure 2, giving different colors to the different performance groups and to the EU average.

Figure 2: Innovation performance of EU Member States based on the aggregate index for 2015



Source: EC, 2016; edited by the State Audit Office of Hungary

Innovation performance per dimension in the EU in 2015

Table 3 details the overall and the dimensional average index values for the EU countries and Turkey, the values of the top deciles are dark and lower deciles are light (the description/specification of the dimensions contained in Table 2).

Table 3 shows that the leading innovators (countries in row 1 to 5) are in the top deciles in most of the dimensions, in other words, they show an evenly high performance. Similarly, the countries at the end of the list have results at the lower deciles and some countries have higher performances in certain dimensions, like Lithuania, compare to its category. Even in case of leading innovators, in some dimension, there could be areas where they have a lower value level, like Finland, Germany or Ireland and even some countries have performance level at the lower deciles, in case of the Netherlands and the UK.

From an overall point of view, the highly balanced level of performance in all eight dimensions supports the interpretation of that innovation is a very complex phenomenon influenced by the joint effects of many parameters together. Some of the countries have outstanding results in some of the dimensions, however, they cannot be leading innovators, because the under-performance of the other dimensions weight out the lead.

Out of the 8 dimensions, Hungary is amongst the lower 10 countries in 6 dimensions, 1 dimension's performance is in the middle and an other one in the top 10 countries category.

In 2015, the joint index of enterprises operating in R&D+I activities in Hungary reached the 86.1% of the EU level, however, it is still a significant improvement compare to 2014 (almost 16% increase year on year). Regardless to the improvement, this

Table 3: The combined innovation index of EU countries and Turkey and the average index of dimensions in 2015

Place-ment 2015	Country	Average Index Dimensions								
		SII	1.	2.	3.	4.	5.	6.	7.	8.
1.	Sweden	0.704	0.831	0.814	0.710	0.619	0.689	0.728	0.640	0.622
2.	Denmark	0.700	0.703	0.765	0.654	0.495	0.767	0.789	0.624	0.709
3.	Finland	0.649	0.783	0.625	0.765	0.500	0.676	0.716	0.595	0.561
4.	Germany	0.632	0.573	0.443	0.563	0.753	0.624	0.701	0.761	0.630
5.	Netherlands	0.631	0.653	0.774	0.663	0.237	0.727	0.624	0.542	0.681
6.	Ireland	0.609	0.816	0.582	0.363	0.300	0.593	0.426	0.773	0.777
7.	Belgium	0.602	0.622	0.768	0.502	0.492	0.814	0.487	0.565	0.561
8.	UK	0.602	0.786	0.795	0.506	0.270	0.591	0.502	0.519	0.681
9.	Luxembourg	0.589	0.431	0.771	0.372	0.136	0.544	0.720	0.704	0.742
10.	Austria	0.591	0.650	0.561	0.538	0.517	0.629	0.707	0.647	0.475
11.	France	0.568	0.657	0.678	0.566	0.363	0.505	0.488	0.663	0.578
12.	Slovenia	0.485	0.829	0.386	0.241	0.472	0.576	0.484	0.420	0.424
13.	Cyprus	0.451	0.662	0.392	0.278	0.153	0.454	0.403	0.621	0.425
14.	Estonia	0.448	0.554	0.340	0.727	0.555	0.456	0.426	0.422	0.323
15.	Malta	0.437	0.274	0.258	0.100	0.423	0.276	0.645	0.624	0.602
16.	Czech Republic	0.434	0.561	0.300	0.446	0.404	0.422	0.336	0.473	0.505
17.	Italy	0.432	0.407	0.398	0.279	0277	0.418	0.505	0.577	0.456
18.	Portugal	0.419	0.591	0.453	0.471	0.260	0.378	0.385	0.513	0.332
19.	Greece	0.364	0.562	0.408	0.224	0.281	0.412	0.243	0.471	0.322
20.	Spain	0.361	0448	0.413	0.357	0.185	0.236	0.437	0.250	0.432
21.	**Hungary**	0.355	0.462	0.218	0.272	0.367	0.206	0.281	0.319	0.570
22.	Slovakia	0.350	0.642	0.166	0.255	0.267	0.209	0.239	0.415	0.490
23.	Poland	0.292	0.556	0.125	0.274	0.361	0.094	0.391	0.210	0.301
24.	Lithuania	0.282	0.726	0.134	0.538	0.352	0.167	0.256	0.109	0.168
25.	Latvia	0.281	0.534	0.168	0.424	0.426	0.105	0.326	0.113	0.255
26.	Croatia	0.280	0.606	0.160	0.287	0.324	0.271	0.218	0.190	0.247
27.	Turkey	0.267	0.093	0.124	0.374	0.590	0.194	0.169	0.375	0.389
28.	Bulgaria	0.242	0.498	0.087	0.104	0.212	0.071	0.500	0.186	0.176
29.	Romania	0.180	0.392	0.111	0.070	0.084	0.045	0.149	0.193	0.273

Source: EC, 2016; edited by the State Audit Office of Hungary

value puts Hungary to the lower deciles, but you will also find strong performers in the category, like the Netherlands, the UK and Luxemburg. With favourable resource index, we find, amongst the top 10 countries, Lithuania (0.726), Slovenia (0.829) and the Czech Republic (0.561) from the Central European Region.

The financial and supporting indicators worsened in Hungary in 2015. They have fallen to 55.58% of the EU average and also considerably declined (about 4.4% weakening) compare to 2014. Interestingly, Ireland, Belgium and Luxemburg who are amongst the strong performers, have lower than EU average indicator value.

In 2015, in the research systems evaluating dimension Hungary has the lowest value (0.218). It is 0.248 lower than the EU average and has about 6% decline compare to the previous year. Generally this index has very high value at innovation leader countries, the only exception is Germany (0.443) who is below the EU average in this category.

The Hungarian performance is the worst in small and medium-sized businesses category, the index is continously and considerably under the EU average, which significantly influences the overall innovation performance of the country.

Change of innovation performance from 2008 to 2015

The Table 4 shows the 2015 ranking of the 28 EU countries on the basis of their overall index values and also provides the index values of previous years (from 2008). This shows the tendencies of the 8 years in accordance with the innovation performance indexes per country. The values of the indexes are presented in appendix 1, the table shows the indication of tendencies only.

Having look at the table, it is clearly identifiable the advantage of Luxemburg in 2008 has been diminished, however, they are still in the group of top performers. On the other hand, the relative poor performance of the UK in 2008 improved so much it got close to the top performes in 2015. Within the moderate performers group, Malta had a declining trend until 2011, but they have managed to turn it around and got up to the average of the group by 2015. Croatia have done the contrary, it had a mixed but continous decline from 2008 to 2015. Meanwhile Hungary has a somewhat stagnating performance over this period.

Few tendencies

Table 5 shows a summary of the changes in the overall indexes of the EU Member States and level of change between 2008 and 2015. The top deciles is highlighted by dark color and the lower deciles is light. The table renders proper observation of changes over the 8-year period. There are 2 countries to be mentioned, the UK was able to manage to rise from the middle to the top deciles and Malta from the lower deciles to the midfield. On the other hand, taking a look of the dynamics of improvement, we find strong and leading performers (Denmark, the Netherlands, UK, Belgium and Slovenia) and moderate performer (Malta, Italy, Latvia, Lithuania

Table 4: Summary Innovation Index (SII) time series

Qualification 2015	Country	Summary Innovation Index (SII)							
		2015	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**
Leading	Sweden	0.831	0.814	0.710	0.619	0.689	0.728	0.640	0.622
Leading	Denmark	0.703	0.765	0.654	0.495	0.767	0.789	0.624	0.709
Leading	Finland	0.783	0.625	0.765	0.500	0.676	0.716	0.595	0.561
Leading	Germany	0.573	0.443	0.563	0.753	0.624	0.701	0.761	0.630
Leading	Netherlands	0.653	0.774	0.663	0.237	0.727	0.624	0.542	0.681
Strong	Ireland	0.816	0.582	0.363	0.300	0.593	0.426	0.773	0.777
Strong	Belgium	0.622	0.768	0.502	0.492	0.814	0.487	0.565	0.561
Strong	UK	0.786	0.795	0.506	0.270	0.591	0.502	0.519	0.681
Strong	Luxembourg	0.431	0.771	0.372	0.136	0.544	0.720	0.704	0.742
Strong	Austria	0.650	0.561	0.538	0.517	0.629	0.707	0.647	0.475
Strong	France	0.657	0.678	0.566	0.363	0.505	0.488	0.663	0.578
Strong	Slovenia	0.829	0.386	0.241	0.472	0.576	0.484	0.420	0.424
Moderate	Cyprus	0.662	0.392	0.278	0.153	0.454	0.403	0.621	0.425
Moderate	Estonia	0.554	0.340	0.727	0.555	0.456	0.426	0.422	0.323
Moderate	Malta	0.274	0.258	0.100	0.423	0.276	0.645	0.624	0.602
Moderate	Czech Republic	0.561	0.300	0.446	0.404	0.422	0.336	0.473	0.505
Moderate	Italy	0.407	0.398	0.279	0277	0.418	0.505	0.577	0.456
Moderate	Portugal	0.591	0.453	0.471	0.260	0.378	0.385	0.513	0.332
Moderate	Greece	0.562	0.408	0.224	0.281	0.412	0.243	0.471	0.322
Moderate	Spain	0448	0.413	0.357	0.185	0.236	0.437	0.250	0.432
Moderate	**Hungary**	**0.462**	**0.218**	**0.272**	**0.367**	**0.206**	**0.281**	**0.319**	**0.570**
Moderate	Slovakia	0.642	0.166	0.255	0.267	0.209	0.239	0.415	0.490
Moderate	Poland	0.556	0.125	0.274	0.361	0.094	0.391	0.210	0.301
Moderate	Lithuania	0.726	0.134	0.538	0.352	0.167	0.256	0.109	0.168
Moderate	Latvia	0.534	0.168	0.424	0.426	0.105	0.326	0.113	0.255
Moderate	Croatia	0.606	0.160	0.287	0.324	0.271	0.218	0.190	0.247
Moderate	Turkey	0.093	0.124	0.374	0.590	0.194	0.169	0.375	0.389
Straggler	Bulgaria	0.498	0.087	0.104	0.212	0.071	0.500	0.186	0.176
Straggler	Romania	0.392	0.111	0.070	0.084	0.045	0.149	0.193	0.273

Source: EC, 2016; edited by the State Audit Office of Hungary

and Turkey) amongst them. Even the among the top performers you find countries with minimal improvement (Sweden, Germany) or decline (Finland). Despite these movements, the performance differences amongst the EU member countries did not change significantly. Exceptionally large progress is highlighted by light color and significant regressions with dark color. From 2012 onward the number of countries with worsening overall index values has increased.

Table 5: The aggregate index of innovations per country between 2008 and 2015

Placement 2015	Country	SII value		SII change of value							
		2015	2008	2008–2015	2015–2014	2014–2013	2013–2012	2012–2011	2011–2010	2010–2009	2009–2008
1	Sweden	0.704	0.697	0.007	–0.015	–0.002	0.005	0.002	–0.004	0.010	0.012
2	Denmark	0.700	0.624	0.077	0.025	–0.017	–0.001	0.016	0.039	0.010	0.007
3	Finland	0.649	0.663	–0.013	–0.008	0.016	–0.009	0.000	–0.02	0.009	0.005
4	Germany	0.632	0.624	0.008	–0.023	–0.006	–0.006	0.012	0.002	0.003	0.012
5	Netherlands	0.631	0.549	0.083	–0.008	0.009	0.045	0.006	0.007	0.017	0.014
6	Ireland	0.609	0.584	0.024	0.002	0.006	–0.026	0.008	0.003	0.010	0.012
7	Belgium	0.602	0.564	0.038	–0.005	0.011	0.004	0.004	0.010	0.021	0.012
8	UK	0.602	0.525	0.077	0.021	0.011	0.003	0.006	0.018	0.002	0.005
9	Luxembourg	0.598	0.632	–0.034	–0.028	–0.02	0.023	0.005	–0.013	0.013	0.014
10	Austria	0.591	0.583	0.009	–0.008	–0.005	0.023	0.004	–0.031	–0.014	0.016
11	France	0.568	0.539	0.029	0.013	–0.004	–0.006	0.005	0.002	0.010	0.011
12	Slovenia	0.485	0.446	0.038	–0.013	0.022	–0.015	0.012	0.015	0.009	0.007
13	Cyprus	0.451	0.470	–0.018	–0.036	0.007	–0.011	0.002	0.012	0.011	0.004
14	Estonia	0.448	0.416	0.032	–0.031	–0.011	–0.015	0.037	–0.001	0.002	0.025
15	Malta	0.437	0.342	0.095	0.066	–0.008	0.045	0.008	–0.025	0.028	0.012
16	Czech Rep.	0.434	0.413	0.021	0.000	0.012	–0.021	0.003	0.018	–0.004	0.000
17	Italy	0.432	0.389	0.044	–0.001	0.008	0.009	–0.002	0.011	0.009	0.011
18	Portugal	0.419	0.393	0.026	0.000	0.017	–0.004	0.001	0.003	0.007	0.010
19	Greece	0.364	0.370	–0.005	–0.035	0.013	0.010	0.004	0.003	–0.002	–0.006
20	Spain	0.361	0.381	–0.020	–0.025	–0.008	0.007	0.002	–0.003	0.004	0.005
21	**Hungary**	0.355	0.345	0.009	–0.009	0.009	–0.008	0.005	0.004	0.003	–0.002
22	Slovakia	0.350	0.318	0.032	–0.004	0.008	0.032	–0.012	–0.013	0.011	0.011
23	Poland	0.292	0.290	0.002	0.000	0.005	–0.011	0.006	–0.008	0.010	0.008
24	Lithuania	0.282	0.239	0.043	–0.006	0.013	0.008	0.012	0.004	0.001	–0.001
25	Latvia	0.281	0.214	0.067	0.048	0.018	–0.032	0.013	0.010	0.014	0.003
26	Croatia	0.280	0.299	–0.019	–0.012	–0.006	–0.006	0.002	0.011	0.007	–0.006
27	Turkey	0.267	0.188	0.079	0.062	0.005	–0.003	0.003	0.007	–0.003	0.001
28	Bulgaria	0.242	0.219	0.022	0.003	0.028	–0.029	0.001	0.009	0.002	–0.010
29	Romania	0.180	0.246	–0.066	–0.044	–0.004	–0.033	–0.003	–0.001	0.020	0.009

Source: EC, 2016; edited by the State Audit Office of Hungary

Hungary have been a very moderate innovator throughout the period between 2008 and 2015 (the performance increased only by 0.009).

Over the 8-year period, 21 of the EU Member States could improve its innovation index, however, Hungary has one of the smallest level of growth. The highest rise is made by Malta (0.095) and the Netherlands (0.083). Significant imrovements were made by some of the strong innovators, such as Denmark (0.077), UK (0.077), Belgium (0.038) and by the moderate ones, such as Slovenia (0.038) and Italy (0.044). It is very remarkable that 2 countries from the moderate innovators were able to jump to the top 10 performers, they are Lithuania (0.043) and Latvia (0.067). In case of 7 countries there were long term deterioration of performance, among those Romania had the biggest drop (–0.066) and it was a significant decline in case of Luxemburg (–0.034) who otherwise is considered a strong innovator. From the top countries, the leading Sweden had a minimal progress (0.007), while Finland had decline (–0.0013).

In the last period of 2014-2015 there were 18 member states with negative combined innovation index compare to the previous period, which indicates the exhaustion of reserves for the permanent growth. The negative change also reached the strong and top performers (Sweden, Finland, Germany, the Netherlands, Belgium, Luxemburg, Austria, Slovenia) and obviously the midfield players (Cyprus, Estonia, Italy, Greece, Spain, Hungary, Slovakia, Lithuania, Croatia).

Performance of Hungary compare to the EU average within the dimensions for the period between 2008 and 2015

The joint index is a calculated average of the separate indexes of the dimensions. Table 6 presents the ration (in %) of the joint and the 8 dimensional indexes of Hungary compare to the EU average. In 2015, on the basis of that year's data (EU average index value considered as 100%) Hungary has delivered 68% of the EU overall average. Hungary's performance had its highest level (72% of the EU overall average) in 2008. It is thanked to the fact one of the dimension had an average exceeding level of performance and an other one delivered at about the average (human resources dimension 101.9%, R&D+I enterprices and investments dimension 100%). Throughout the period, these dimensions had mixed performance, while the rest of the dimensions had very little change.

In Table 6, the dark color indicates the areas where the Hungarian results are under 50% of the EU average over the 8-year period. These cells of the table in most part of the 8-year period clearly show that the performance of Hungary in R&D+I activities are under the EU average in the following categories: Research systems; Finance and subsidies; Connections and businesses.

The Connections and businesses dimension measures the innovation at small and medium-sized enterprices and the cooperation of such enterprises, where Hungary has a significant deficiency within the EU. In all the years the index was at or below the 50% of the EU average value.

Table 6: Changes in Hungary's innovation performance by dimension between 2008 and 2015 as % of EU average values

Dimension/Year	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**
Concentrated index	**67.99**	**69.51**	**68.12**	**68.35**	**69.56**	**69.18**	**68.23**	**71.62**
Human resources	80.30	80.36	80.72	88.58	79.33	81.74	74.63	101.91
Research systems	46.81	52.75	49.59	51.02	51.84	46.98	49.24	53.76
Finance and subsidies	55.58	61.00	58.16	55.75	42.34	45.41	49.18	51.94
R & D & I company, investment	86.10	70.21	63.47	58.52	78.61	81.30	75.74	99.97
Connections and businesses	43.48	45.82	44.89	42.14	50.32	50.69	50.11	44.28
Knowledge value, instrument	50.63	51.78	52.74	52.96	51.95	54.30	49.63	50.84
Innovators	60.66	56.22	52.97	54.34	52.46	56.28	56.28	55.11
Economic environments	99.43	107.62	108.10	108.58	115.66	109.06	111.38	106.39

Source: EC, 2016; edited by the State Audit Office of Hungary

Finance and subsidies dimension show the GDP rated level of expenditures on research and development in the public sector, where Hungary has about 50% of the EU average value.

In Research systems Hungary has an unfavourable tendency as the number of non-EU MA-s compare to total MA-s has a low ratio.

Hungary has its best performing dimension the Economic environment, where the figures are close or around the EU average. This dimension measures the employment rate in the knowledge-intensive areas, the export of high-tech products, level of export in knowledge intensive services, sales of new innovation, licences and intellectual properties.

Human resources dimension was the area where Hungary could constantly deliver an EU average adjacent performance. It was the highest in 2008 (101.91% of the EU average), but it slowly started to decline since 2012. Despite the favourable figures, Hungary is amongst the lower 10 countries in the ranks. The decline has clear correlation to the reducing number of students in the higher education, number of degrees and MA-s from the universities and even falling numbers of pupils graduating from secondary schools.

The index of enterprises with R&D+I companies and investments was 86.1% of the EU average level in Hungary for 2015. After the drop in 2012, the index slowly, but constantly risen. In 2014 it had a substantial gain (almost 16%), however, the 2008 level remained the highest. Hungary is in the lower deciles with these values. The index represents those expenses paid by the business sector for R&D and the ratio of non-R&D innovation expenses compare to turnover generated. It clearly shows that this index could be improved only via change of ratios in financing.

From an overall point of view, the parameters measuring the innovators had a 60.66% level for Hungary compare to the EU average. This index had its highest level in 2013, in spite of this, Hungary was still in the group of the lowest 10 performers.

The Finance and subsidies dimension's indicators declined in 2015, they were at 55.58% of the EU average (it is a 4.4% decrease compare to the previous period).

The index had a mixed performance throughout the period, after the lowest point in 2011, it had rose for 2 years, than droped again (to 0.272).

The intellectual properties and non-tangible assets index had maintained its about the EU average level (50.63%) during the entire period.

The research systems index had larger scale of movements amongst the years. In 2015 had its most unfavourable level in Hungary, it was 0.248 below the EU average and it was about 6% decline compare to the previous year (currently at 0.218).

This index has high value in case of typically leader and strong innovators, except Germany (0.443), they were the only one from the top countries with such a low figure.

The Hungarian performance in Connections and businesses category shows the worst result. Since 2012, this index is continously and significantly underperforms, hence influencing Hungary's overall performance negatively.

Innovation performance of Hungary on the basis of individual indexes in 2015

In 2015, Hungary had underperformance in all dimensions and indexes relative to the EU average, however, almost at half of the indexes the values were improving compare to prior years (see Table 7). From the 25 indexes, in case of 20 it did not reach the EU average level, the other 5 were around or above the average values.

Table 7 indicates clearly that in 2015, Hungary had only one index where it outperformed the EU average (the licence and patent rights income from outside of Hungary in the percentage of the GDP). Compare to 2014, there was a minimal increase, therefore it was not a one-time result.

Furthermore, there are 4 indexes with close EU average values:

1) Middle and high-tech products export participation from the total export;

2) The ratio of completed/graduated from secondary school compare to the total population in the age group of 20-24 years old;

3) Non-R&D innovation expenses (percentage of the GDP);

4) Employment rate in the fast-growing and innovative sectors compare to the total number of employed.

In case of the other 20 index, Hungary is under the statistical EU average.

By assessing the indicators of Hungary, the best performance was made by the Economic environment index, which had an outstanding level at 277. On the other hand, the largest level of drop is in the case of patent registration (7.2%), followed by the sales of new innovation on the market (4.1%) and the small and medium-sized businesses innovation process implementation (3.8%).

The Research systems indexes typical value is very low compare to the EU average, especially in case of non-EU MA graduates level compare to the total number of MA graduates, its value is 22%. Infavorable shortage is also present in case of relations and enterprises dimension due to the innovation level of small and medium-sized enterprises, which is very low (only at 37%) compare to EU average. The index barely exceeded the half of the EU average in 2015.

Table 7: Hungary's R&D performance by 8 dimensions and 25 indicators as a percentage of the EU average in 2015 and the rate of change between 2014 and 2015 percentage point

		EU 28 =100%	Change 2015–2014 %-pont
	COMPREHENSIVE innovation index	**68**	**–1.5**
	Human Resources Dimension	80	3.3
1	Number of doctoral degrees per thousand inhabitants within the age of 25–34	49	3.6
2	Higher education studies are in 30–34 years old age population	91	6.3
3	Performs at least high school studies, % of population between 20 and 24 years of age	102	0.1
	Research Systems Dimension	**47**	**2.6**
4	International scientific joint publications per million people	90	5.6
5	The world's top citations are top 10% of the number of scientific publications in % for all the scientific publications in the country	62	–2.2
6	Doctoral students from outside of the EU are all doctoral degree	22	4.6
	Finance and Aid Dimension	**56**	**1.2**
7	R & D expenditure in the public sector (% of GDP)	53	–2.7
8	Venture Capital Fund (% of GDP)	87	5.3
	R & D & I company, investment dimension	**86**	**5**
9	R & D expenditures in the business sector (% of GDP)	75	10
10	Non R & D innovation expenditure (% of GDP)	102	–0.5
	Growth and business dimension	**43**	**1.3**
11	Innovation of Small and Medium Enterprises	37	–1.4
12	Innovative small and medium sized businesses cooprate with others	54	–1.5
13	Private and public sector publications per million inhabitants	68	1.3
	Knowledge value, instrument	**51**	**–1.4**
14	PCT patent appications to GDP	34	–1.5
15	PCT patent appications in the societal challenges as measured by GDP	28	–7.2
16	Number of community trademarks in relation to GDP	48	8.1
17	Number of community designs measured for GDP	20	–4.3
	Innovators dimension	**61**	**–1.2**
18	Introduction of product and process innovations for small and medium-sized enterprises	42	–3.8
19	Introduction of businesses marketing or organisational innovations for small and medium-sized enterprises	70	–0.6
20	Employment for fast-growing businesses is innovative	102	0.8
	Economic environment dimensio	**99**	**–0.8**
21	Employment in knowledge-intensive activities	88	–0.6
22	The contribution of exports of medium and high-tech products to the foreign trade balance	124	–0.1
23	% of the value of exports of knowledge-intensive services compared to the export of all services	61	0
24	The new for the market and the company is selling new innovations revenue in %	79	–4.1
25	License and patent revenues from abroad as % of GDP	277	0.7

Source: EC, 2016; edited by the State Audit Office of Hungary

R&D+I expenditures compare to the GDP

The most common measure of R&D+I expenditures and R&D activities is to express its % level compare to the GDP. In 2015 the EU countries in total spent about EUR 300 billion on R&D+I. It intensity (its percentage of the GDP) has been 2.03% for 2015 (it was 1.74% in 2005).

The Lisbon Agreement and later the Europe 2020 strategy incorporates the R&D as primary target and the expenses spent on it should reach 3% of the GDP by 2020.

In Europe, the R&D spending lack behind compare to its global competitors, the USA (2.73%), Japan (3.59%), and significantly short relative to South Korea (4.29%). At the same time, Europe has a level similar to China (2.05%) and much higher than Russia (1.13%). In nominal value only the USA spend higher amount on R&D, than Europe. In Hungary, the level of increase compare to GDP is significant, about 80% expansion over the 10-year period between 2005 and 2015 (the EU had 47.8% increas on average for the same period, see Table 8).

Table 8: R&D expenditure as a percentage of GDP in 2005 and 2015

Country	R+D expenditure as % of GDP		R+D expenditure (EUR million)		Change %
	2005	**2015**	**2005**	**2015**	
EU	1.7	2.03	202,129	298,811	147.8
Hungary	0.9	1.38	838	1511	180.3
China	1.3	2.05	24,03	159,004	661.7
Japan	3.3	3.59	121,831	124,531	102.2
Russia	1	1.13	61	13,437	204.9
South Korea (2014 year)	2.6	4.29	18,966	45,585	240.4
USA (2013 year)	2.5	2.73	263,747	344,083	130.5

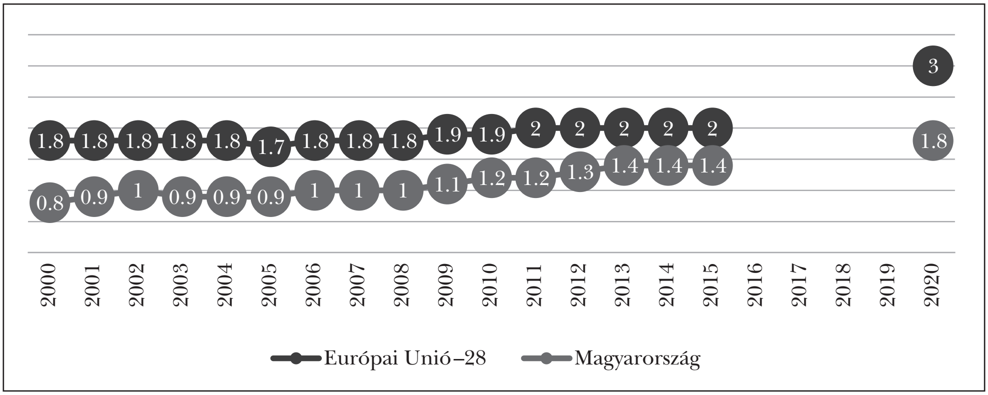
Source: EC, 2016; edited by the State Audit Office of Hungary

The GDP proportional research and development expenses in Hungary were at or below 1% until 2008. In 2008, there was a slight improvement and since than it is above 1%. In spite of this, the years of stagnation has its effect on long term improvement, as R&D needs relatively long term to bring its benefits. In 2015, Hungary spend about HUF 468 billion on R&D, which is a 6.2% increase from the previous year. The deviation from the EU average have not changed during the whole period. Regardless to the increase in monetary terms, the R&D spending was 0.6% less than the EU average for 2015.

The Innovative Union is integral part of the Europe 2020 strategy with the target of 3% (of the GDP) spending on R&D activities and related investments by the public and the business sectors. In this respect, the target for Hungary is 1.8%. The total such spending at the EU level was about 2.03% in 2015, Hungary had 1.38% respectively.

In accordance with a linear projection, there is a need of very serious efforts to achieve the original R&D+I targets for both Hungary and the EU. In Hungary, the increase is thanked to the dynamic expansion of the business sector. The higher education had/has very limited resources (represents only 0.2%) which is the 25th place in the ranking of EU countries. The research activity is considerably influenced by the lack of research institutions and researchers, which show a strongly declining tendency. There were 1400 places in 2015, which is 300 less than in previous years.

Figure 3: Research and development expenditure as the % of GDP (2000–2015)



Source: Hungarian Statistical Office, edited by the State Audit Office of Hungary

Some highlights of the Hungarian innovation performance

In 2015, from the total spending on research and development, more than half of it was spent on experimental research, about 26.4% was spent on applied research and about 18.7% has been spent on base research. The business sector primarily paid those researches, which has direct effect on business activities, hence able to generate income within short notice, therefore the applied and base research had to be paid by the state (public spending).

From the 2015 R&D spending 39.4% has been paid on industrial and technological research, 20.4% on healthcare, 13.6% on traffic, telecommunication and other infrastructure and the remaining about 25% on all other (about 10) research areas.

The number of MA graduated is also a very low figure in Hungary (the persons potentially doing R&D+I activities). The Hungarian figure is 0.9% (over 1000 person), the Czech has 1.7%, Slovakia has 2.4%, Poland has 0.6% and the EU average is 1.8%. As a positive tendency Hungary had a growth for the age group of 30-34, where the number of graduates is 31.9%, which is getting closer to the EU average of 36.9%.

In 2015, 98% of the researchers were graduate, 43% of them are at research institutions, 41% of them are at research places in the higher education, the remaing part is at business related research places and other governmental organisations. The Hungarian Academy of Sciences (MTA) tries to create the next generation of researchers by various programmes for post doctorals and young researchers to create employment possibilities. The number of members of the MTA and researchers with scientific titles has increased by 2.5% in 2015 (in total 16,203 people).

The number of published scientific articles has increased only in the electronic media in 2015. In other medias (like printed journals, etc.) there is a constant decline. Hungary traditionally is active in scientific publishing, however, the past years show a stagnating tendency. In the Nature Index database display the split of publications where the author (at least one of the authors) is working at the institution where it is published (called Article Count), which for Hungary is about one third (34%) of the publications are in geography, earth and environmental subjects and about the half of them (47%) on physics, generally 56% of the publications born by academic-research institutions. The publication activity and the number of articles uploaded into international databases (like Web of Science, Scopus) and to the Hungarian Scientific Publications database show mix tendency, where there was a rise in 2011 and 2014 and a slight set back in 2015 (see Table 9).

Table 9: Data of research and development in Hungary at 2015

Description	Public sector	Higher Education sector	Entrepreneurship sector	Total
Payments, HUF million	62,241	56,742	343,984	462,967
Actual number of researchers, chief	6290	15,643	16,485	38,418
Per hundred researchers scientific paper, in Hungarian language; piece	61	139	3	203
Per hundred researchers scientific paper, in foreign language; piece	95	175	3	273

Source: Hungarian Central Statistical Office, Statistical Mirror, Research and Development 2015

Notes

[1] The article was in the form of a lecture: B&R and China-CEEC Forum for International Cooperation, Shanghai, China, 11. November 2017. Source of the values of the indicators, data, relationships, tables and figures, etc.: China's investment in influence: The future of 16+1 cooperation, The European Council on Foreign Relations (ECFR), December 2016; A new dawn: Reigniting growth in Central and Eastern Europe, McKinsey Global Institute, December 2013; ESA's Technology Transfer Programme Office (TTPO) mission is to inspire and facilitate the use of space technology, systems and know-how for non-space applications. European Space Agency – ESTEC.

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Tibor Pintér

The Integration of Hungary into the European Union – Economic Aspects

Summary
Hungary became a member of the European Union on 1 May 2004, together with nine other, predominantly Central and Eastern European countries. The establishment and tightening up of institutional relations with the European Union started in the period before this date. In the course of the accession negotiations, Hungary had to fulfil a large number of criteria included in accession chapters; and the political deals and legislative harmonization laid the basis for Hungary to be able to succeed as an EU Member State. There is a wide range of approaches to integration, of course: in addition to the political and social dimensions, economic integration is also a legitimate, scientifically used and discussed concept. The statistical data examined in this study show that the Hungarian economy's state of integration is controversial. On the basis of the foreign trade orientation, we can state that Hungary had been strongly integrated into the EU's economy already before the accession. Other, partial indicators of integration also suggest that Hungary has moved towards a more intensive integration. Convergence to the level of economic development of the first, predominantly Western European, EU Member States, and the performance compared to countries with similar capabilities can also be a fundamental indicator of integration performance – these are a kind of non-partial convergence data. The procedure of catching-up with the development of the richer Western European countries has been slight and with several hiccups, while in comparison to the level of development of the countries in the region, Hungary has fallen back over the past nearly one and a half

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decades. I would like to point out that the situation of our country's relative prosperity fell following our accession to the EU, and improvement started only after 2010.

Journal of Economic Literature (JEL) codes: F15, H60, P16
Keywords: integration, relative positions, foreign trade expansion, globalization

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The most important steps in Hungary's integration into the EU

The primary meaning of the term "integration" includes unification, conformity, and the merger of parts into a whole. Additionally, it involves assimilation and attachment, which in the case of the given organisation, namely, the European Union and its predecessors, may mean the inclusion of new Member States as integral parts in the community of Member States.

Integration theories in the classical sense sought to identify the rules behind the political and scientific forces wishing to re-unify Europe (Bóka, 2001). In these theories, a key role was assigned to the trends based on neoclassical economics, emphasizing the importance of effective distribution and dispersion of economic resources and assuming that improvement in the combined economic performance of the Member States, applicable to each country included, can also bring about convergence of social structures and the mutual recognition of cultural values (Bache et al., 2011).

These ideas are closely related to the schools that gained greater publicity and pragmatic expression opportunities in the early stage of integration. They say that there was a need for a kind of a political unity in the post-World War II period of the continent's history. As a first step, they tried to ease the opposition between Germany and France, the great powers of the continent, through joint control over the iron and steel industry, an important sector in terms of defence (Sey, 2008). Subsequently, other theories emphasizing the enforcement of economic and national interests were also adopted to explain reality, and one of their predominant groups can perhaps be termed as "intergovernmental approaches" (Pogátsa, 2009).

Although in this study, the emphasis is on the economic aspects of the European integration, the development of the European Union can also be considered as a procedure driven by political decisions and political ideologies. Therefore, when discussing certain issues and formulating summaries, in addition to economic ideas in the narrow sense, political and social scientific categories have also been included in the study.

Hungary's path to membership in the European Union was characterized by the fact that the most important goals to be achieved and tasks to be accomplished predominantly included the establishment of political sovereignty, the economic policy interventions and the institutional system of a market economy. Hungary, and Poland, entered into institutionalized relations with the EEC, the predecessor institution of the EU, already during the late 1980s (Losoncz, 2011).

The four countries in the group, currently called the Visegrád Group (V4), joined the EU at the same time, on 1 May 2004, even though they started the accession procedure and negotiations on different dates and with different prospects. Following the transformation of the political system, Hungary and Poland were the closest to accession. After Czechoslovakia was split up, the Czech Republic and Slovakia also submitted their formal applications for accession. During the 'Eastern enlargement', the candidate countries were initially divided into two groups, however, a decision was made in 2004 to include eight former socialist countries (Poland, Czech Republic, Slovakia, Hungary, Slovenia, Latvia, Lithuania and Estonia), and two island countries, Cyprus and Malta, in the European Union. Bulgaria and Romania, treated as candidate countries for a time in the procedure, could only join the EU in 2007.

Already at that time, the accession procedure had a well-established legislative and policy background. In this framework, the EU established the system of relations between the Communities and Central and Eastern European countries, including Hungary, by providing trade policy preferences, concluding and implementing association agreements, and granting financial assistance through pre-accession funds (Balázs, 2003).

The EU gave up using safeguarding measures in trade against the former socialist Comecon countries, and offered asymmetric preferences to them. This meant that the Community had broken down the customs barriers to candidate countries (Losoncz, 2011).

The "second-generation" association agreements, also called new-type association agreements, provided the legal basis for the Eastern enlargement, and contained only a very few country-specific features in various documents of an identical structure.

In those days pre-accession funds had not yet been integrated into a single programmes, the CARDS and IPA systems were implemented only at a later stage for the Western Balkan, rather a number of funding channels were provided and ten maintained during actual EU membership.

It is important to point out that the Copenhagen criteria were formulated in this period, and in addition to setting economic, social and political prerequisites for the countries aspiring to join the EU, they also marked directions for the entire EU's development. They have remained validly applicable to any country wishing to accede to the EU ever since (Pintér, 2016).

The accession negotiations started in 1998 between Hungary, several Central and Eastern European countries (not all that acceded in 2004) and the EU. The parties had to negotiate 31 accession chapters, and the discussions were bilateral. It is important to point out that the key issue for Hungary was the situation of agriculture, and I wish to note that the good bilateral relations with Germany and nation-state interests clashed at some points during the negotiations (Hettyey, 2017).

The negotiated chapters were very similar to the 35 chapters used today, and in the procedure of accession the negotiations heavily tasked the Hungarian government to harmonize Hungarian laws. It can be said that Hungary became an integral part of the EU already in 2004, or at the latest by the turn of the millennium, at least in terms of the economic relations and the economic and financial legal system, and so regarding these areas, 2004 was only an administrative time limit (Lentner, 2005).

The above introduction of the Eastern enlargement in a nutshell also reveals that a kind of credibility deficit characterized the relationship between Hungary and the EU during the accession negotiations. The Community did not appreciate the fact that our country had built much more intensive relations with the EU considerably earlier than most other Central and Eastern European states. Therefore, by the end of the accession negotiations, the nexus between Hungary and the EU had become stern, and this can also be evaluated as a forerunner of the major conflicts experienced as a Member State since 2010.

As however, economic integration is easier to measure and analyse than the above-mentioned problems, this is the subject matter of the next chapter. Since in most the trends in the integration of the Visegrád countries or, more broadly, the Central and Eastern European states, are taken for a reference or for a basis of comparison, the investigation period begins after 1993, when Czech Republic and Slovakia became independent, and the end of the reviewed period varies between 2012 and 2017, depending on data accessibility.

Integration of the Hungarian economy into the European Union's single market

An evaluation of the Hungarian economy's integration is both easy and difficult. Easy, because according to a significant part of the literature on integration, the nature of foreign trade relations between a given country and the countries that comprise the economic integration or for a presumed internal market of the integrated unit is pivotal (Palánkai et al., 2011). However, evaluation is also difficult because complex indicators have been elaborated for measuring economic integration, and they may show different trends in integration, as indicators may in many cases show a shift not because of professional, but normative and ideological reasons.

On the other hand, it must be pointed out that a high degree of integration is suggested by the strong economic convergence (strong real convergence) or by the internal economic developments pointing towards balance. Moreover, we can still embark on a new dimension of economic integration if mutual approximation and harmonization efforts are seen between the acceding party and the host in economic policy, including fiscal policy. However, Hungary's relative position in relation to the countries that acceded the EU simultaneously or that are on a similar level of development is also highly relevant.

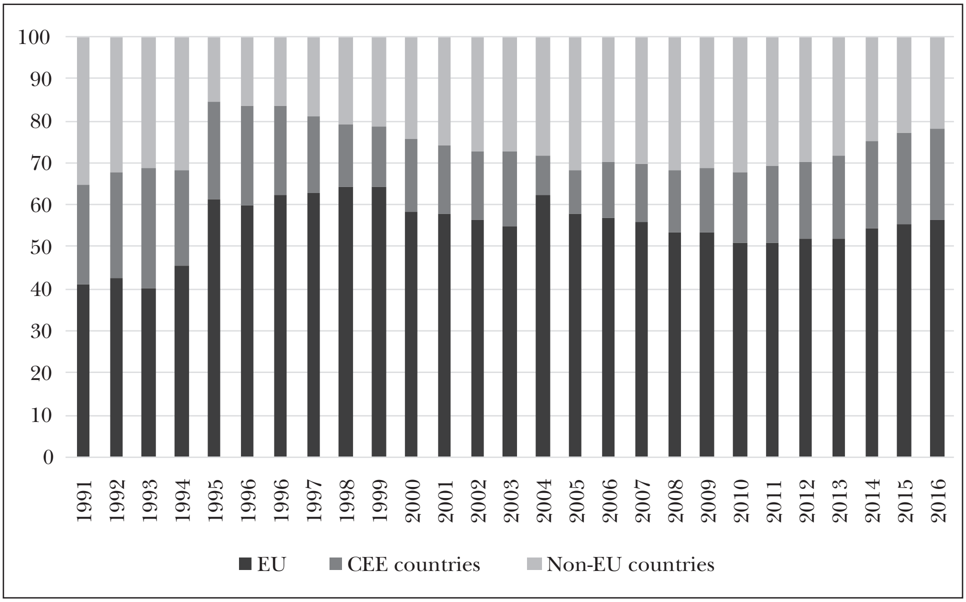
Foreign trade

In the diagrams illustrating trends in foreign trade, trade relations with the old and new EU Member States are distinguished, since before the accession, integration was realized through Hungary's relations with the 15 old Member States. However, it is also important to point out that the EU's requirement to also intensify trade with newly acceding countries was added as a criterion only subsequently (Losoncz, 2011).

The Figure 1 shows the division of goods and services exported to Hungary between the EU's old Member States, the countries of Central and Eastern Europe (wider category than V4) and the rest of the world after 1991. It is clear from the diagram that Western Europe has the largest share in Hungary's imports during almost the entire period, but the newly acceding EU Member States have also increased their respective shares.

It is methodologically important to note that after 2004, HCSO (Hungarian Central Statistical Office) compiled the export and import data by considering all the countries that had acceded after the EU15 as a single new unit within the EU, while in the previous years the term "Central and Eastern European countries" was used in the relevant statements. I treat these two expressions as synonyms, without filtering out any overlaps. This may explain the fact that, in 2004, a more significant decline is seen in trade with the regional countries. In the case of imports, the non-EU part never reaches 40 percent, and after 2004 the share of imports from the old and new EU Member States is clearly increasing, suggesting that the integration of Hungary's economy into the single market intensified along this trend.

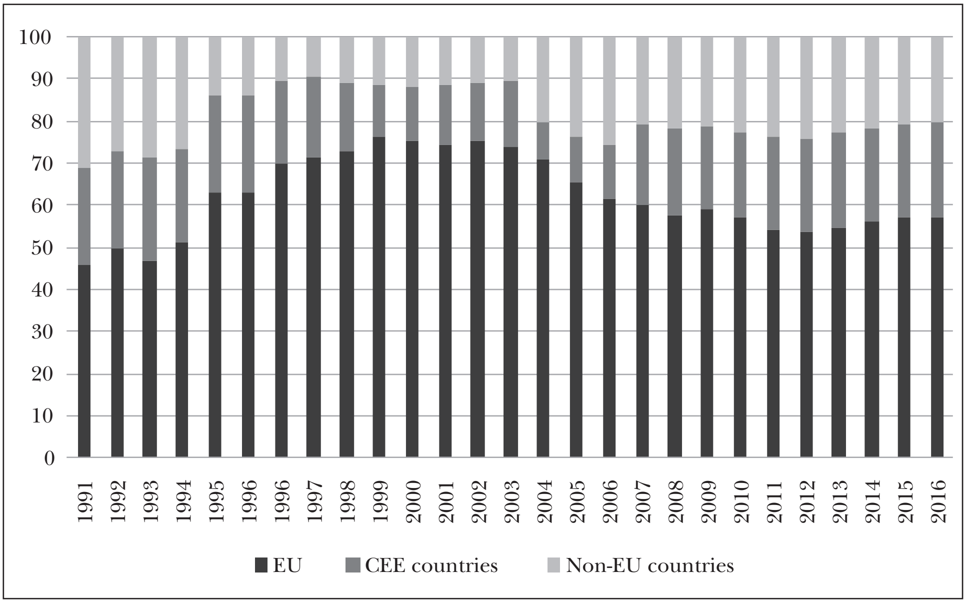
Figure 1: Percentage distribution of Hungary's imports from the old EU Member States, new EU Member States of Central and Eastern Europe and non-EU countries



Source: The author's calculation on the basis of HCSO data

If we take into account that integration theories determine thresholds and threshold percentages as a degree of integration, then we can be absolutely sure that since the middle of the 1990s, Hungary has clearly become an integral part of the EU's economy, considering imports. In his study Palánkai (2010) shows that an integration crosses the minimum dependency threshold if domestic trade exceeds 10 percent of aggregated GDP. In our analysis much higher percentages occur in other contexts, yet we can say that we are deeply integrated into the EU market and cross the threshold of dependence. This is only confirmed by the fact that Hungary is a very open economy in a global comparison, which means that in some years the volume of imports and exports altogether is more than 100 percent of Hungarian GDP, which represents a high degree of globalization and integration in the world, with its advantages and disadvantages.

Figure 2: Percentage distribution of Hungary's exports to the old EU Member States, new EU Member States of Central and Eastern Europe and non-EU countries



Source: The author's calculation on the basis of HCSO data

Naturally, the above conclusions are confirmed by an analysis of integration on the basis of exports. It is clearly shown that from the mid-1990s the target markets of the goods and services exported from Hungary were located in EU Member States. It is noteworthy that, for the above methodological reason, a kind of a censure was made in 2004, as a significant decline is seen in the share of the countries of the region, while no clear trend can be established for non-EU countries, as a cyclical fluctuation characterizes Hungary's export in this direction. The share of non-EU countries, in the range of 20 to 25 percentage points, highlights the fact that integration into the EU economy has been far too successful, as our economy cannot be characterized by a healthy diversification regarding foreign markets. Bearing in mind that right before and after the most recent major global economic crisis, the economies most seriously hit among the world's major regions were none other than Europe and the EU, we can state that there is a need for a greater diversification in Hungary's foreign trade relations. As economic and governmental interrelationships are becoming increasingly intensive, the more or less synchronized EU growth cycles (in certain years only one or two countries can achieve more than 2-3 percentage points of GDP growth compared to the EU average, and the difference is not always positive) predict that our pattern of foreign trade requires more proactive economic policy routines. Recently, the Hungarian government has been willing to adopt a proactive attitude; the professional reasons are illustrated in the figures above.

Trends of integration with regard to the FDI flow

The extent of Hungary's integration into the global flow of foreign direct investments can also be considered as an indicator of Hungary's integration into the EU.

The Table 1 summarizes data currently available at UNCTAD about Hungary. The data included in the bottom line make it clear that most of the FDI to Hungary flows from the EU, predominantly from older Member States. As a technical addition, we may note that amounts in excess of 100 percent and with negative sign are also included in the table. This is due for example to a significant negative balance in 2009, i.e. the withdrawal of capital from Hungary because of the crisis, while the EU's 100 percent share in some cases indicates that in 2008 inflows were "negative" from other regions of the world, while those from the EU remained positive. All these comments are also true for the following figures, as the other Visegrád countries experienced similar trends, although changes were less intensive and volatile.

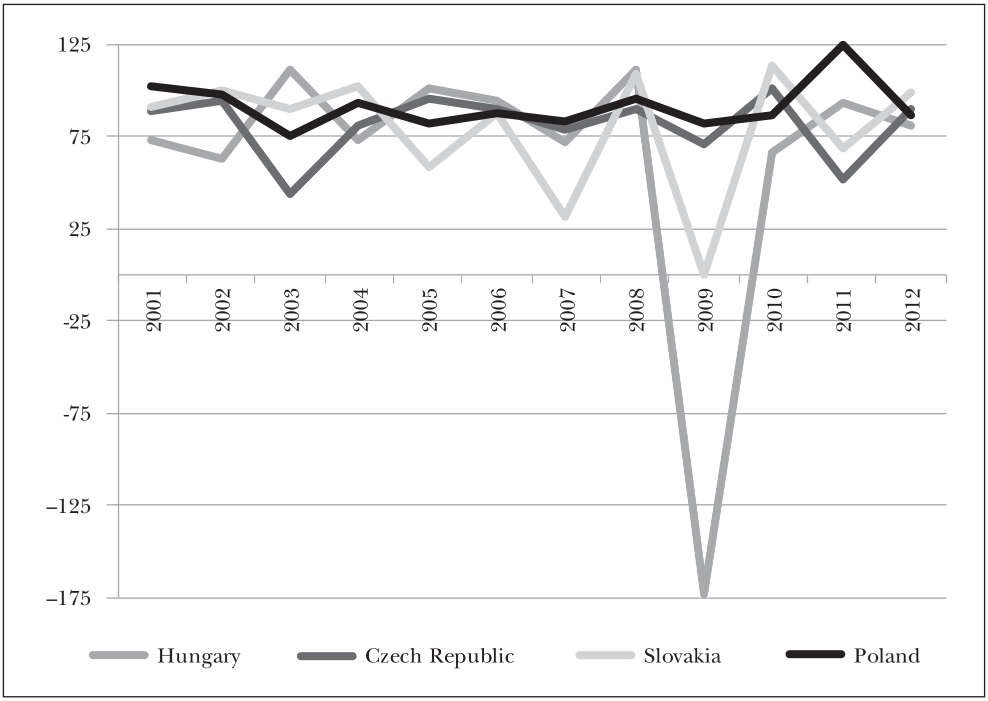
Table 1: The EU's share in FDI inflows to Hungary between 2001 and 2012

FDI inflow (million dollars)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total FDI inflow	3936	2994	2137	4266	7709	6818	3951	6325	1995	2202	5842	13 769
FDI inflow from the EU	2883	1882	2377	3102	7755	6398	2831	7008	–3440	1464	5465	11 140
EU proportion as a percentage	73	63	111	73	101	94	72	111	–172	66	94	81

Source: UNCTAD bilateral statistics, http://unctad.org/en/Pages/DIAE/FDI%20Statistics/FDI-Statistics-Bilateral.aspx (accessed 6 November 2017)

The FDI inflow rate of the Visegrád countries and the EU's share may be determined as follows. The Figure 3 clearly shows that for each country the EU is the largest FDI issuer and sender. It is remarkable though that the highest amount of capital was withdrawn by the EU from Hungary, in 2009, but it should also be noted that in percentage terms all these countries can be classified in roughly the same category, underlining that the Czech Republic is the most stable in this regard, without outliers.

Figure 3: FDI inflows from the EU to the Visegrád countries, as a percentage, between 2001 and 2012

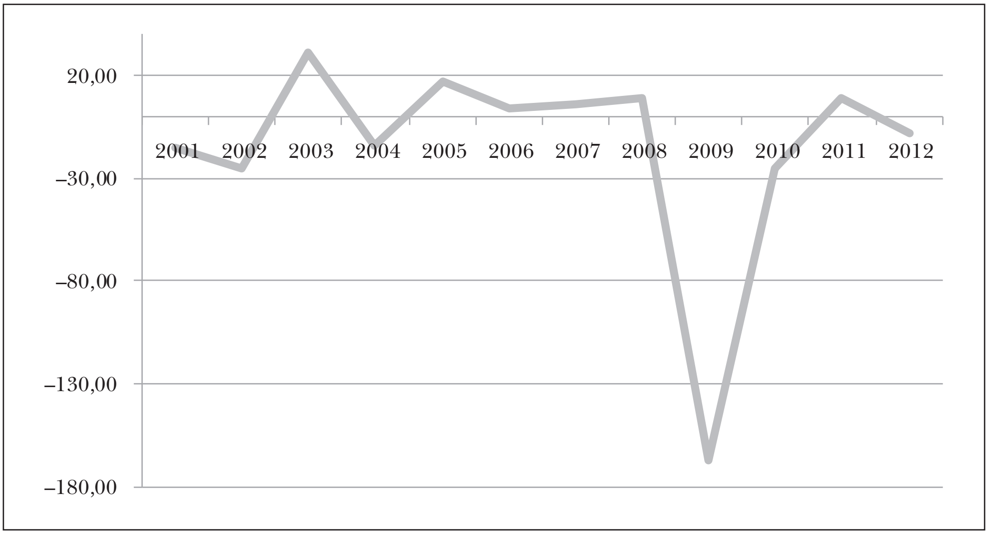


Source: The author's calculation on the basis of UNCTAD's bilateral statistics, http://unctad.org/en/Pages/DIAE/FDI%20Statistics/FDI-Statistics-Bilateral.aspx (accessed 6 November 2017)

Hungary's position relative to the other Visegrád countries is perhaps even better illustrated by the Figure 4, showing the deviation in Hungary compared to the EU's average regional share in FDI inflow. It is clear that in the majority of the period, the EU as an FDI investor contributed more FDI to Hungary than the regional average. This also caused the risk arising from Hungary's greater exposure convert into a loss as a major EU related capital flight occurred in Hungary between 2008 and 2011. Naturally, the latter cannot be detached from the economic crisis peaking at that time, and the unusual economic policy solutions that followed, and sectoral special taxes also triggered strong responses. In any case, we can conclude that Hungary is strongly linked to the European Union with regard to FDI inflows.

The identification of motives behind and the sectors affected by capital flows, and the assessment of the effects of corporate acquisitions may also be additional areas of research in integration (Kucséber, 2014). However, in the context of this study, it can be stated that in terms of capital inflows the integration of Hungary had been accomplished already prior to the accession, and the EU's capital contribution did not increase in the post-accession period. The latter is not a failure, because, as it was mentioned regarding foreign trade, diversification would be a desirable goal for Hungary,

Figure 4: Inflow to the Visegrád countries from the EU between 2001 and 2012



Source: The author's calculation on the basis of UNCTAD bilateral statistics, http://unctad.org/en/Pages/DIAE/FDI%20Statistics/FDI-Statistics-Bilateral.aspx (accessed 6 November 2017)

and would not represent a solidarity or integration deficit in the relationship between Hungary and the EU.

Integration on the basis of the KOF Globalization Index

Complex indicators have also been developed over the decades to measure the degree of integration. As membership in the EU is a political decision, research institutes also quantify the level of development and integration of political and social institutions. A large number of indicators can be used, such as the Open Government Index elaborated by the World Justice Project, the Worldwide Governance Indicator published by the World Bank, or the Bertelsmann Transformation Index mentioned in a Hungarian study (Ágh, 2012), the OECD's SGI indicators and the Economist Democracy Index. The simpler SNA indicators are not the only tools to quantify economic development, as the different competitiveness indices and the added value indicators of international trade may give a more subtle picture of the economic status of a country. However, we can measure economic performance with the SNA indicators in the first place, and the KOF globalization index seems to be the most suitable tool for the description of a country's integration.

The Swiss-based KOF *(Konjunkturforschungsstelle)* annually publishes the so-called KOF Globalization Index. The index shows the "degree of globalization" of a country on a scale of 0 to 100. The higher the value, the more globalized and integrated the country is. As the indicator is used to describe a country's openness to world economy, smaller countries are typically at the top of the ranking.

The indicator is built on three major pillars. One of them is the economic pillar in globalization, representing 36 percent in the final index. Foreign trade data, FDI flow, capital flow indicators, the height of customs walls and capital and import restrictions are included in this pillar.

The second pillar takes social aspects into account. This is the most controversial building block of the indicator, with a weight of 38 percent. The value is calculated on the basis of the frequency of Internet use, the size of foreign population, the number of newspapers and books read. For example, the number of McDonald's restaurants or IKEA stores in a country increases the value of the index. The list makes it clear why this pillar can be taken the least seriously.

The third pillar is called "political globalization," with a weight of 26 percent in the index. Membership in international organisations, participation in UNSC missions, the ratification of international conventions and the number of embassies in the country increase the value of the pillar.

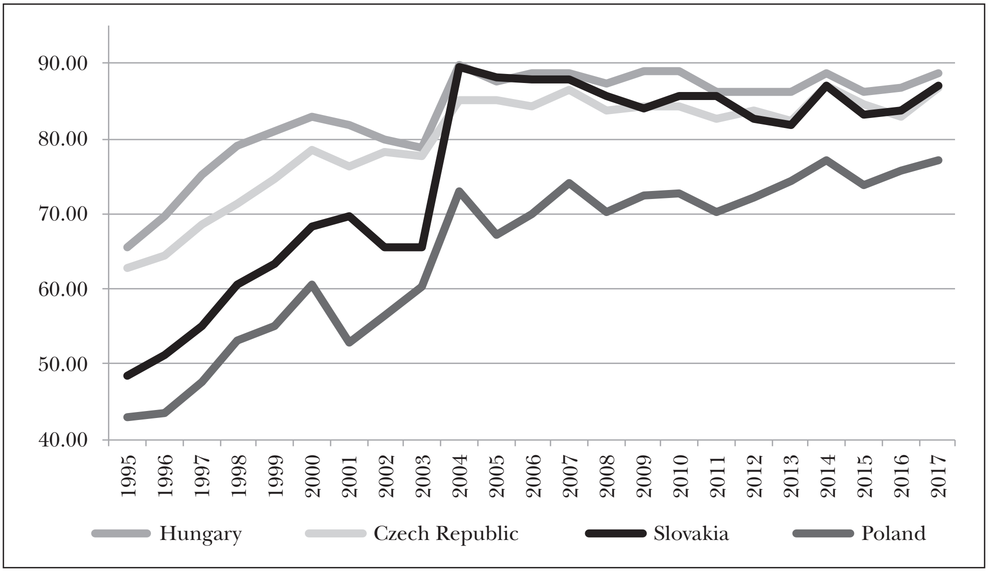
As shown in the Figure 5, Hungary is typically among the top 10 countries according to the aggregated KOF Globalization Index as well as the economic globalization index, preceding the other Visegrád countries. Since 1995, Hungary has always scored the highest, while Poland has always ranked last, due only to its size. In a realistic evaluation, in the period of the EU integration Hungary was at the forefront of economic opening and liberalisation, which may be a surprising in light of the mainstream scientific evaluation of Hungary. We had reached the level where we could be considered as an integral part of the EU and Western Europe already before 2004, notwithstanding the fact that Hungary undertook burdens beyond its means by opening its markets. It is sufficient to remember the study entitled "Tax Justice Network: The Price of Offshore," which makes it clear that Hungary was one of the most heavily exploited states at the times of the regime change, as since 1980s at least 2.5 times Hungary's GDP left the country illegally.

The Figure 6 clearly shows Hungary's integration performance and efforts. A comparison of the scores of Hungary and the average economic, social and political indicators of the Visegrád countries reveals that Hungary has performed above the average. Since 2004, Hungary has been approaching the Visegrád average in all respects, and remains below the average only in social factors. There has always been a perceptible lack of understanding and a confidence deficit between Hungary and the EU since the years right after the accession, and this resulted in a certain degree of turning against the integrator.

Real economic convergence and economic policy integration

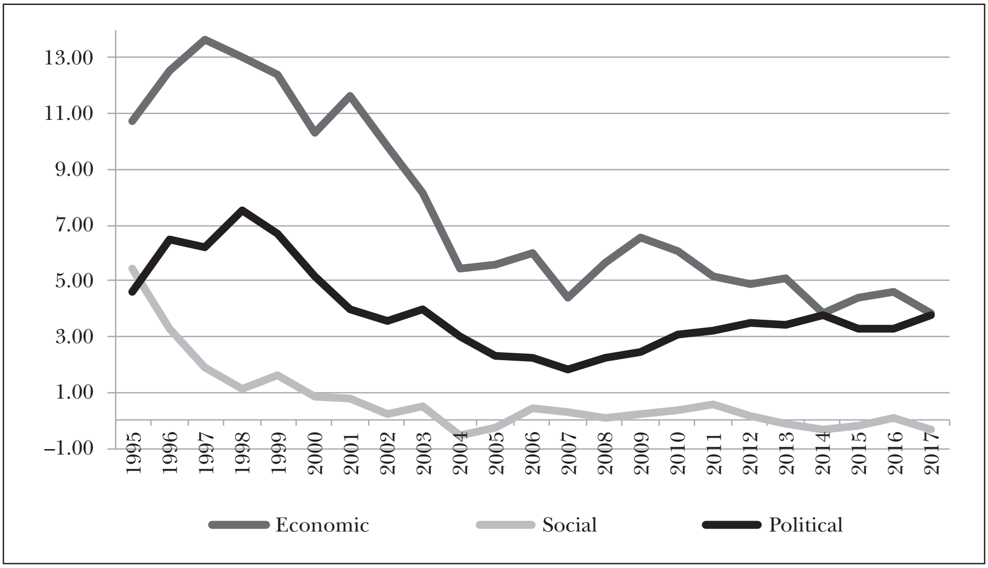
Real economic convergence can also be a measure of a country's economic integration. In this case Hungary's convergence to the welfare enjoyed in the EU or perhaps the euro area need to be analysed. However, it is also worth mentioning how Hungary has performed in relation to the average living standard of the countries in the region with approximately the same level of development in the reviewed period.

Figure 5: KOF's economic globalization index for the Visegrád countries between 1995 and 2017



Source: The author's calculation on the basis of the official site of the KOF, http://globalization.kof.ethz.ch/ (accessed 9 November 2017)

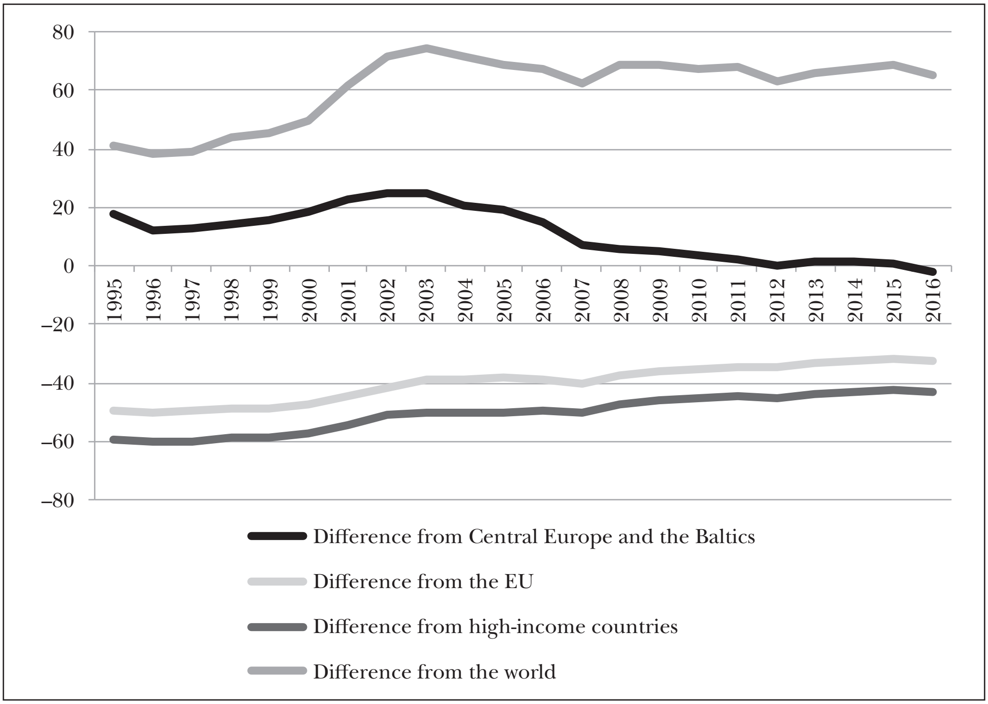
Figure 6: Hungary's deviation from the average of the Visegrád countries, calculated with the three pillars of KOF, expressed in index points



Source: The author's calculation on the basis of the official site of the KOF, http://globalization.kof.ethz.ch/ (accessed 9 November 2017)

The Figure 7 shows that in Hungary the living standard exceeds the world average, and in the post-2009 period, as a realistic goal, a certain level of convergence to the EU average and to the high-income countries has also been achieved. However, it is important to note, that Hungary's position has been weakened compared to Central European and Baltic states with similar attributes, especially after 2003-2004, its accession to the EU, when Hungary fell from a regional leader to the average in welfare. Hungarian per capita GDP remains nearly 40 percent below the level of high-income countries, and about 30 percent below the EU average.

Figure 7: Percentage difference in welfare in Hungary and in country groups specified by the World Bank, based on GDP per capita on purchasing power parity

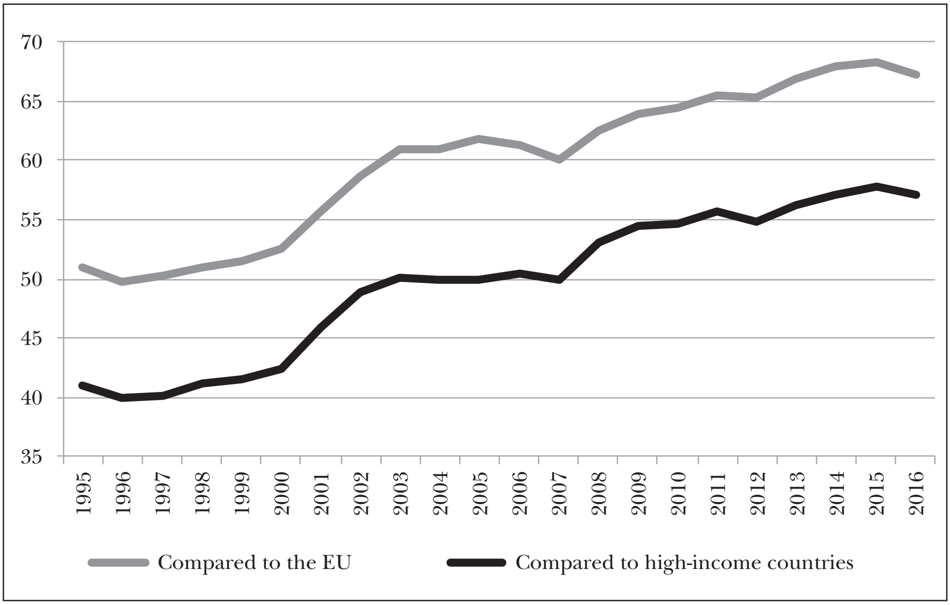


Source: The author's calculation on the basis of World Bank data

For the Hungarian society and the economic policy the EU and high-income countries represent a kind of a goal to be achieved. Convergence was the fastest in Hungary between 1998 and 2003, and a similar development was witnessed after 2011. However, stagnation, or even decline compared to the EU, followed the accession, as illustrated in the Figure 8.

It is also conspicuous in the next figures that in 2003 and 2004 there was a turnaround in Hungary's economic development that eroded its previous outstanding position. This caused frustration and disillusionment with the EU and with globalization in the Hungarian people and society.

Figure 8: Welfare in Hungary on the basis of GDP per capita, based on purchasing power parity, relative to the average of the EU and to high-income countries



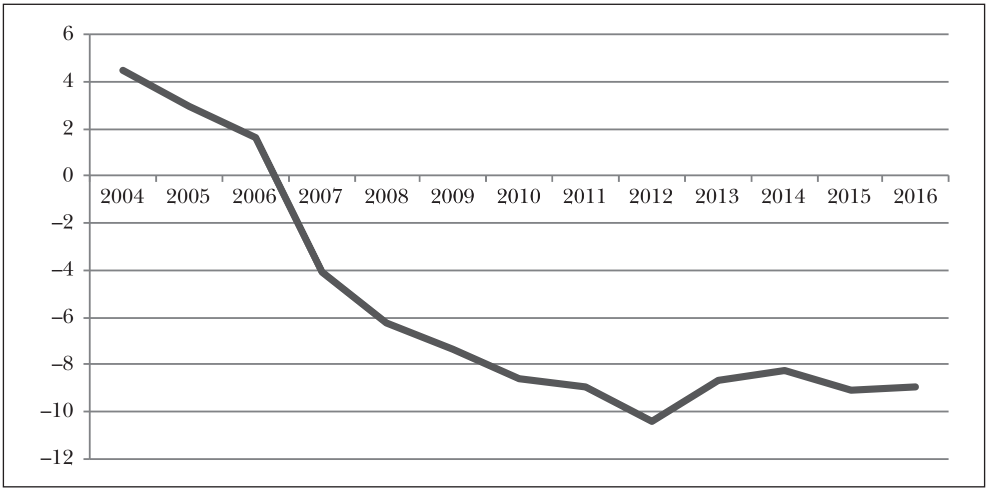
Source: The author's calculation on the basis of World Bank data

As the World Bank does not have an average indicator for the Visegrád countries, so I calculated the average GNI per capita indicator of these four countries, and the deviation is shown by Figure 9. Since GNI was not available for Slovakia prior to 2004, the analysis starts in that year. Compared to its direct competitors and partners, Hungary clear fell behind after 2005, and this trend lasted up to 2012, but Hungary remained unable to catch up with the Visegrád countries in terms of income adjusted with the primary income stream.

In the case of fiscal policy integration, the area characterised by the following trends: the degree of deviation from the Maastricht convergence criteria in the given indicators; a comparison of Hungary's fiscal policy performance before and after the accession; a comparison with countries in the region and with countries of similar inherited development policies.

Compliance with the Maastricht criteria remains important despite the fact that none of the countries that have adopted the euro by bilateral agreements right in 2004 have managed to do so. However, it is important to note that Hungary and other countries in the eastern enlargement have legally agreed not to use derogation, opt-out and other means to keep them out of monetary and economic policy integration, i.e. these countries have a direct perspective of adopting the euro. Furthermore, the most recent major financial and economic crisis has shown that such reference values are considered as disciplinary, reliability and stabilization anchors even by the international market and political players.

Figure 9: Difference in GNI per capita, based on purchasing power parity, as a percentage, relative to the average GNI per capita of the Visegrád Group

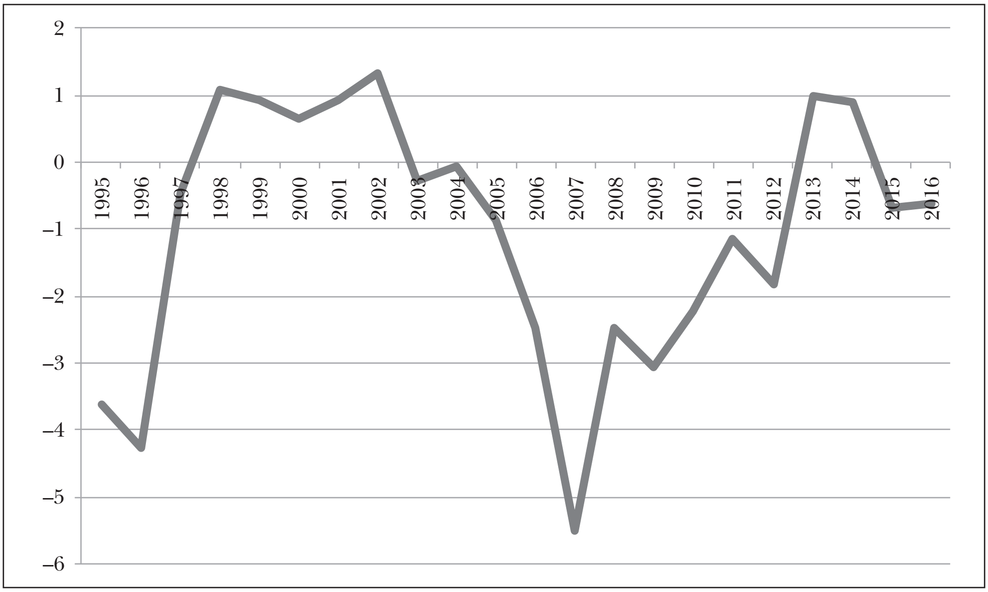


Source: The author's calculation on the basis of World Bank data

The Figure 10 shows the times when the growth rate of the Hungarian economy was above or below the average of the Visegrád countries. It is apparent that between 2005 and 2008, right after accession, Hungary fell behind the other countries in the region. However, it is also important to examine whether there was any relationship between budgetary discipline and the relative growth data on the side of fiscal policy in the given periods. The relationship between economic performance and the country's foreign market position is also a priority area to examine.

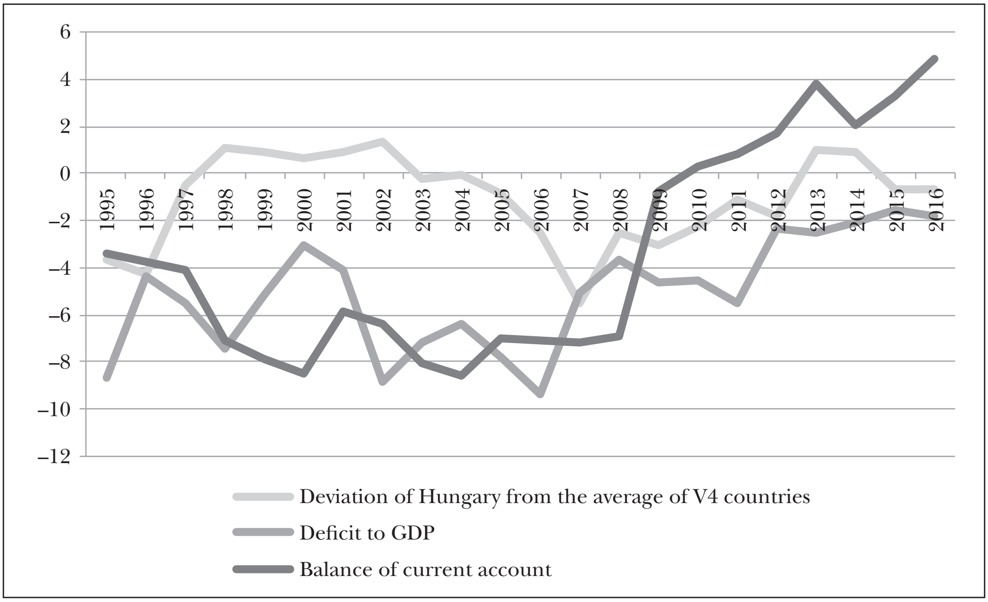
The Figure 11 points to a paradoxical situation. There was a very high deficit-to-GDP ratio in Hungary just in the period of low growth compared to the Visegrád countries. An unquestioned evidence of the incumbent government's economic responsibility is that the economy was unable to utilize the growth-enhancing effects of the remitted budget in a regional comparison, that is to say, Hungary experienced a relative economic downturn, while the country could not keep budgetary discipline, either. Prior to the recent crisis, rapid economic growth characterised the world as a whole, including the newly acceded European countries, and thus countries could raise capital easily. After the crisis, Europe has never again recovered to a rapid growth, perhaps with the exception of Poland and Romania, in this chronological order. In absolute terms, after 2012, Hungary overperformed, even against lower growth rates, but in this period the achievement of overperformance demanded considerably more sacrifice, as the financial and capital markets only slowly regained confidence in the Hungarian economic policy under pressure. That said, the 2010 change of government and economic policy clearly had a positive impact on Hungary's development. Mainstream academic analyses do not even mention this fact, evidencing either ignorance or ideological rejection, both representing serious offenses with a view to the ethical criteria of scientific analyses.

Figure 10: Deviation of Hungary's annual real GDP growth rate from the average of the V4 countries



Source: The author's calculation on the basis of World Bank data

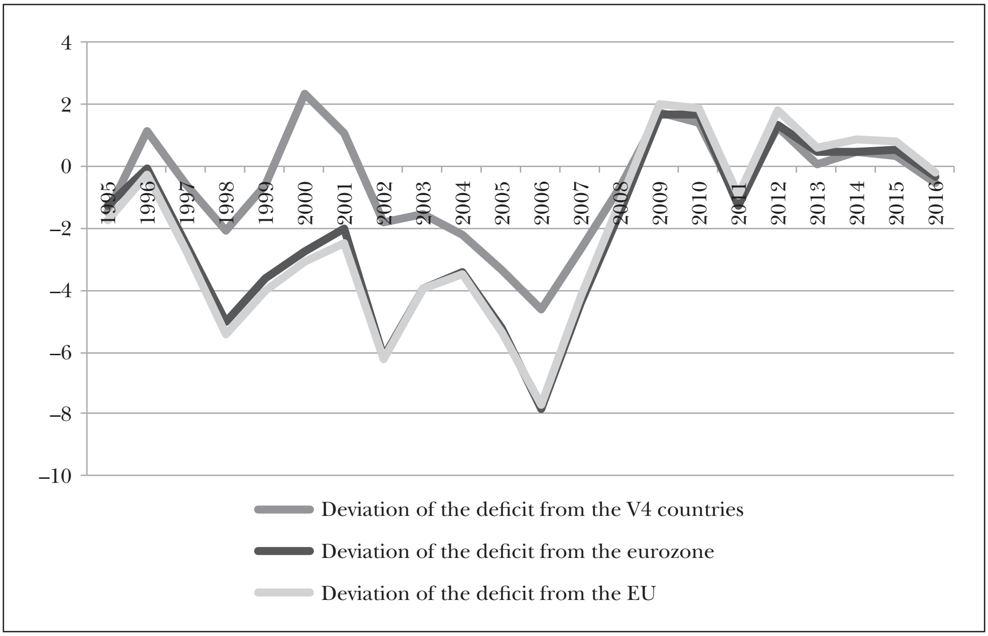
Figure 11: Deviation of Hungary's annual GDP growth rate from the average of the Visegrád countries, Hungarian budget deficit to GDP and current account balance to GDP



Source: The author's calculation on the basis of World Bank data

As a country cannot be isolated from the rest of the world, and this applies to Hungary exponentially, the current account needs to be analysed. As evidenced in the Figure 11, in the second half of the period, with an improvement of the country's relative position, the balance changed to a comfortable surplus, and this could facilitate favourable growth data. Hungary's membership in the EU could also play a role, but it is doubtful whether without a considerable devaluation of the forint the process could have taken place. Thus the existence of a domestic currency can be considered as a favourable asset in this period.

Figure 12: Deviation in Hungary's budget deficit to GDP from the average of the Visegrád countries, the euro area and the EU, percentage points

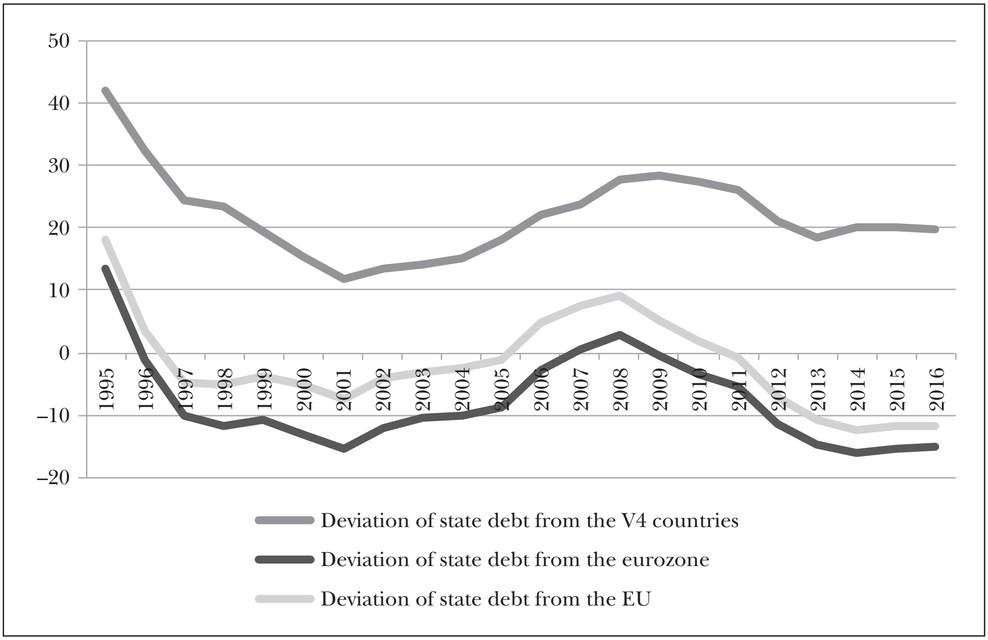


Source: The author's calculation on the basis of IMF WEO data issued in October 2017

The relative position of the Hungarian budget is presented in the Figure 12 against the average of the Visegrád countries, the average of the euro area and the average of the EU as benchmarks. Unfortunately, in the majority of the period, the budget deficit was higher than the references, with only one significant change after 2010, confirming the assumptions made above.

The Figure 13 of the relative position of the gross debt in the public sector relative to GDP reveals that Hungary has so far been on average 20 percentage points more indebted to its regional counterparts, but our position significantly improved compared to the euro area and the EU, since indebtedness is less typical today than in the mid-2000s, when the value of the indicator exceeded the other two averages.

Figure 13: Deviation of Hungary's sovereign debt relative to GDP from the average of the V4 countries, the euro area and the EU, percentage points



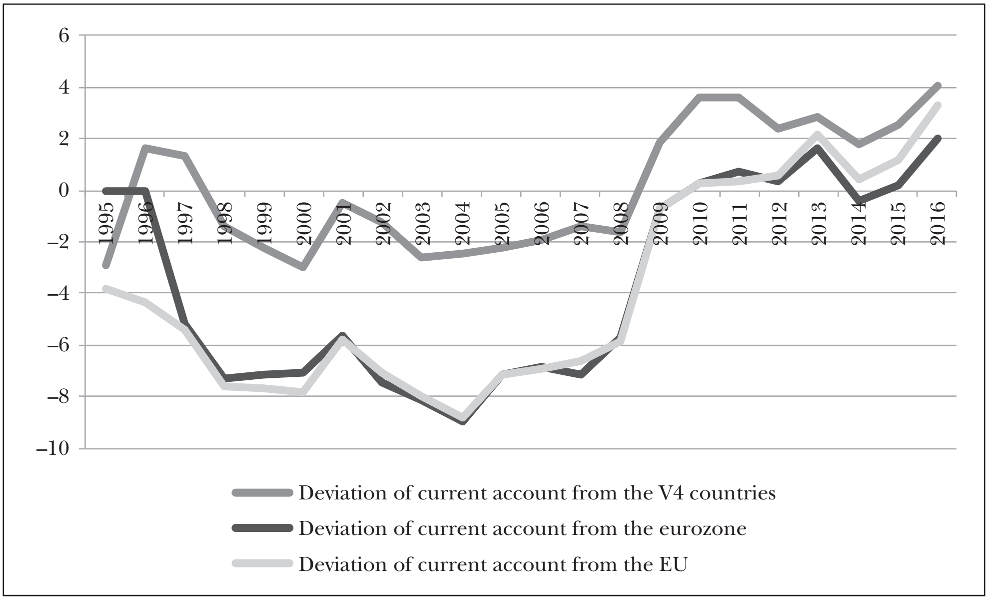
Source: The author's calculation on the basis of IMF WEO data issued in October 2017

The most important indicator of trade in goods and services with the rest of the world is the balance of current account relative to GDP. A comparison with all benchmarks suggests that the current period is the most favourable in terms of Hungary's position: in 2016, the current account position exceeded the corresponding figure of the euro area by at least two percentage points, and of the Visegrád countries by four percentage points. In this respect, membership in the EU could have a very positive impact on the trend, as it is Hungary's most important export market. Naturally, it is a question whether this performance is only temporary or the result of the weakening forint, and yet this has been the greatest macroeconomic achievement since the country's accession to the EU, and a success achieved especially in the years after 2010.

An analysis of the trends in the real economy, fiscal and economic policy sheds new light on the facts. One cannot go without saying that the new type of economic policy in Hungary has in fact brought about highly positive results. Unfortunately, after the accession to the EU, the Hungarian economic players and the Hungarian society found themselves in a situation where the country lost its regional leadership position. This resulted in distrust and disappointment with the EU, and in the mid-2000s a series of extremely unfavourable political decisions deteriorated the situation in Hungary.

A turn in fiscal policy integration and in the current account balance have improved the situation, although a significant reduction in debt and a permanent overperformance in a regional comparison are still awaited. The future prospects of Hungary

Figure 14: Deviation in the current account balance of Hungary relative to GDP from the average of the Visegrád countries, the euro area and the EU, percentage points



Source: The author's calculation on the basis of IMF WEO data issued in October 2017

and the continent can only be analysed on a considerably wider spectrum. In the 21st century the economy will certainly not grow at the pace seen in the 20th century. All this can result in a preference for comparisons based on relative positions rather than absolute terms, as presented above.

Summary and outlook

In addition to economic effects, Hungary's integration into the EU also has social and political concomitants. The simplest interpretation of the term 'integration' requires and analysis of the extent Hungary has become an organic part of the European Union, serving the integrity and development of the larger entity. The fact that the ratios determined in integration theories exceed the thresholds evidences that the EU has a significant role in Hungary's economy through foreign trade and capital flow.

The KOF index also points to the fact that Hungary is closely linked to the EU and to Western Europe as a result of a conscious country management strategy followed over a longer timeframe.

Hungary has been slowly catching up with the economically more advanced Western European countries of higher living standards, but mainly due to wrong economic policy decisions made in the past, precisely in the years following the accession, it fell behind the countries with similar endowments, and this was a negative collective experience. However, the more recent economic policy decisions have improved the fiscal policy discipline and real economic relations with the rest of the world. In this study the emphasis is on relative rather than absolute growth and convergence. The reason for this is that after the 2007-2008 crisis, the rapid and "easy" economic growth of the previous period does not seem to be available in the longer term. In such a situation, the current position of a country can be determined by comparison to the current performances of countries with similar attributes.

The increasingly sharp contrasts mentioned in this study and the difference between the development perspectives of the European Commission and the Hungarian government in economic, geopolitical and social policy suggest further possible conflicts to expect between the parties in the future. The current Brexit negotiations, as well as numerous disruption and confrontation processes, certainly raise the need for a theoretical analysis of disintegration.

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Judit Sági – István Engelberth

Regional Development and Well-Being of Regions in Hungary[1]

Summary
The purpose of this study is to formulate policy views from the perceived trends in regional development, as measured by the change in regional well-being indicators and urban prosperity factors. The theoretical foundations of these development policies are formulated by place-based regional strategies. Based on the OECD database on well-being indicators, ranking by the Global Urban Competitiveness Research Centre and the International Congress and Convention Association, the authors have found that despite regional disparities and the centrum-periphery gaps, well-being in Hungarian regions has improved. Moreover, Budapest has good potentials in strengthening connections and accelerating development, and may display its advantages in attracting global production factors.

Journal of Economic Literature (JEL) codes: R11, R12, R13, O47, O18
Keywords: regional development, regional well-being, Hungarian regions, centrum-periphery, regional governmental policy, urban prosperity

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Introduction

The main purpose of this study is to depict the trends of development and regional well-being of the Hungarian regions, and to formulate policy views, by reviewing innovative theories and countermeasures for regional strategies. During the past decades great concern have been shared among scholars about the sufficiency of regional place-based strategies which employ tailor-made recommendations to obtain a solution designed for the local particularities. Such particularities can be shared or differentiated in regional development (Storper, 2011, pp. 333-346).

The process of regional development is necessarily spatial, and requires an appreciation of the geographical concepts of space, territory, place and scale (Pike et al., 2007). The authors assume that regional well-being and urban prosperity are closely related, as they represent two complementary sides of sustainable development. On one hand, the material and quality well-being of regions (including to investment to physical infrastructure and human capital) lays the foundation of prosperity. On the other hand, more competitive cities attract skills and capital, thus creating a virtuous cycle of prosperity for all (Henderson, 2010, pp. 515-540).

This paper is structured as follows: The main theory about the relevance of place-based regional strategies is depicted in the next session. Then, the discussion part detects the main characteristics of the Hungarian regions' development; from two aspects of measurement: the trend variables of well-being indicators and urban prosperity indicators are to be evaluated and explained. Among the material conditions, and the downside risks of the prevailing peripheral disadvantages are to be assessed. Finally, there are the conclusions and the references.

Literature background for regional place-based development

According to Barca et al. (2012), the place-based approach has the aspect that geographical context really matters, in terms of its social, cultural, and institutional characteristics. Besides, the place-based approach also focuses on the issue of knowledge in policy intervention. As described, the place-based approach assumes that the interactions between institutions and geography are critical for development, as these interactions foster development. In order to assess the likely impacts of a policy, the interactions between institutions and geography therefore require us to explicitly consider the specifics of the local and wider regional context (Gill, 2010).

The place-based approach concludes that development strategies should target mechanisms which build on local capabilities (both human and industrial ones) and promote innovative ideas through the interaction of local and general knowledge and of endogenous and exogenous actors in the design and delivery of public policies (Rodrik, 2005).

Noguera (2009) admits that public action conditions a range of processes and activities that continuously influence the intensity and direction of development;

among which, the study considered (a) the implementation and use of Information and Communication Technologies (ICT), (b) the development of innovation processes related to the proper functioning of business networks; (c) the nature and conditions of social capital, or the effectiveness of relations between local society; (d) the model of governance; and (e) the integration of tourism in development strategy. It is important to note that place-based incentives only succeed when they are accompanied by efforts to strengthen institutions and infrastructure.

Camagni and Cappello (2014, pp. 1-20) points out that the winning strategy in regional development is neither to focus on champion places and regions, in search of the highest efficiency, nor on lagging areas only, in search of equity. It is rather centred on the development potential of all places, represented by its territorial capital, material, human, cognitive, social and relational. Our paper is also tracking these territorial issues, as well as their availability and efficiency potentials. As many literature suggests,[2] policies should be tailored on each region's specificities, competitive advantage and needs, engaging all possible assets and enlarging existing excellences.

Regional development, measured by well-being indicators

Measuring well-being is indispensable when place-based governmental policies are considered for development. Measures of well-being can help policy makers to enhance the design and targeting of regional policies. They can also empower citizens to demand placed-based policy actions that respond to their specific expectations. The OECD conceptual framework for measuring well-being is considering both on individuals and on place-based characteristics (OECD, 2016). It starts with the consideration that making better policies for better lives means understanding what matters to people. Its questions are: "What do people perceive and value about their local conditions? How do they behave when they are not satisfied with one aspect or more of their life? Do local inequalities in the accessibility of services matter in shaping citizens' choices and do they have an impact on national well-being? How much does the place where we live predict our future well-being?"

Currently, regional measures are available for OECD countries in eleven related topics: income, jobs, housing, education, health, environment, safety, civic engagement and governance, access to services, community, and life satisfaction.[3] These are comparable internationally and thus, provide tools for assessment of the development of regions in concern. Also, they serve as guidance for policy-makers on the use of well-being metrics for improving policy results (Gardiner et al., 2004). Strategic planning and strategic management, as activities of innovative cities and local governments play an important role in the well-being of citizens (Barati-Stec, 2015).

Sub-national data offer a more detailed picture of how life is lived, than national averages do (Eurostat, 2017). Although no country appears to have regions that enjoy simultaneously high or low levels of well-being in every dimension, evaluating the trends could contribute to proper policy responses (Garcilazo et al., 2010).

Table 1: OECD well-being topics

Dimensions	Topics	Indicators
Financial conditions	Income	Disposable household income per capita (in real USD PPP)
	Jobs	Employment / unemployment rate (%)
	Housing	Number of rooms per person (ratio)
Quality of life	Health	Life expectancy at birth (years) Age adjusted mortality rate (per 1 000 people)
	Education	Share of labour force with at least secondary education (%)
	Environment	Estimated average exposure to air pollution in PM2.5 ($\mu g/m^3$), based on satellite imagery data
	Safety	Homicide rate (per 100 000 people)
	Civic engagement	Voter turnout (%)
	Accessibility of services	Share of households with broadband access (%)
Subjective well-being	Community	Percentage of people who have friends or relatives to rely on in case of need
	Life satisfaction	Average self-evaluation of life satisfaction on a scale from 0 to 10

Source: OECD, 2016

Table 2: Score trends by topic, as of regions in Hungary (2000-2014)

Region	Code	Income	Jobs	Housing	Health	Education	Environment	Safety	Civic engagement	Accessibility to services
Central Hungary	HU10	–	+	–	+	~	+	~	–	+
Central Transdanubia	HU21	+	+	~	+	~	+	+	–	+
Western Transdanubia	HU22	~	~	–	+	~	+	–	–	+
Southern Transdanubia	HU23	+	+	~	+	~	+	~	–	+
Northern Hungary	HU31	+	+	–	~	~	+	~	–	+
Northern Great Plain	HU32	+	+	–	+	~	+	+	–	+
Southern Great Plain	HU33	+	~	–	+	~	+	~	–	+

Note: + : the region has shown progress in this topic; ~ : the region has not changed greatly in this topic; – : the region has shown decline in this topic. For the topics of community and life satisfaction, due to missing data, change cannot be shown.
Source: OECD, 2016

The trends show improvement across most regions in Hungary in terms of income, jobs, health, environment and accessibility to services. Considering the material conditions (income, jobs and housing), there are more recent data available for housing. According to the Hungarian Spatial Development and Planning Database, TEIR, the number of newly built flats exceeded by far the one of demolished flats in each region, so therefore the housing indicator has improved in the previous years.[4]

The high-performing Hungarian regions fare better than the OECD average in five of the well-being indicators (jobs by unemployment rate, share of households with broadband access, safety by homicide rate, education by labour force with a secondary degree, and community by perceived social network). Regions in Europe with similar well-being indicators are Central Slovakia, East Slovakia and West Slovakia (in the Slovak Republic), Moravia-Silesia and Northwest (in the Check Republic), Mazowieckie, Slaskie and Swietokrzyskie (in Poland).

Besides the overall picture about the regions' development, a more differentiated, nuanced approach can be achieved via considering the disparities among regions (Boldrin and Canova, 2001). In this regard, regional disparities in a country for each topic is computed comparing the ratio between top and bottom 20 per cent regional values of a country to the ratio of top and bottom 20 per cent regional values in the OECD area. In case of Hungary, the largest regional disparities are observed for access to services, jobs, education and safety (OECD, 2016). As the authors analysed in their previous study (Engelberth and Sági, 2016), especially the Northern Hungary is stressed by deteriorating demographical situation, high rate of unemployment, and the prevailing peripheral disadvantages.[5]

The development of the peripheral regions in Hungary, like Northern Hungary is hindered by the aging population, the re-settlement of the young habitants to the centre region, and, as a result, the spatial segregation of these regions. Counteracting to the further outflow of financial and human resources from the peripheral regions, and also retaining locally generated incomes within the region should be a target for place-based regional development strategies. Guiso et al. (2010, pp. 1-49) argue that civic capital is the missing ingredient in explaining the persistence of economic development. Although social and civic capital remain roughly constant over long periods of time, one of the potential sources of accumulation of civic capital is education. Therefore, in regional development policies' emphasis should be placed on education, training and on a shift in mentality.

Regional development measured by urban prosperity

A city's ability to create value is manifest as the comprehensive long-term growth in the urban economy and the economic density, and depends on the conditions of a city's elements and environment. Ni (2017, pp. 1-23) has built the Bowstring Model to analyse the driving factors of urban prosperity, as measured by hard and soft factors of prosperity.[6]

Table 3: Factors of urban prosperity in the Bowstring Model

Factors	Topics	Index
Hard factors	Population and human capital	Population index Education index
	Financial and physical capital	Bank index
	Innovation and technology	Patent index
	Connection and infrastructure	Number of flights MNC index
	Agglomeration of industries and cities	
	Location and ecological environment	Distance to sea CO2 emission
Soft factors	Security and social harmony	Crime rate
	Government regulation and service	Ratio of central and local tax revenue Ease of doing business
	Market mechanism and policies	Freedom index
	Culture and social values	Multilingualism index
	Life satisfaction	

Source: Ni, 2017, pp. 1-23

Budapest was ranked 120th and 132nd in 2010 and 2011, respectively, in the Global Urban Competitiveness Report (Ni, 2011, p. 4). In these years the capital was classified as cluster IV city, showing small GDP per capita and population (Ni, 2011, p. 118). Since then, Budapest had not been mentioned among the top 200 cities around the world. However, its role has gained importance as a result of its connection to the Silk Road Initiative; within Central Europe[7] it has recently been ranked as of the 40th top Silk Road city in aggregate connections (Ni et al., 2017a, p. 139). The level of connection between Budapest and other Silk Road cities could be highly beneficial for the economic development of the city and its region (Central Hungary), for allocating resources as a result of the connections.

Further on we should note that an affirmative relationship exists between connections and the income level of a city. Ni et al. (2017a, p. 141) found a positive correlation between the income of Silk Road cities (measured by both GDP per capita and GNI per capita) and their performance in the global connection index. Higher income level is a driving factor, but also the result (the positive outcome) of connections. Knowing the magnitude of the investments to physical infrastructure alongside the Silk Road, and the capital expenditures to logistic centres financed from the Initiative, Budapest will be able to benefit in terms of income growth.

With regards to Silk Road cities, there is also a positive correlation between global connections and GDP per land area, whereas the later measures the total amount of wealth accumulated per unit of land area in a city (Ni et al., 2017b, p. 153): cities with higher GDP per land area correspond to higher levels of connection. Taking into consideration the improvements in housing in the previous years (as mentioned in the previous chapter), Budapest has good potentials in strengthening connections and development, and may display its advantages in attracting global production factors.

Table 4: Global urban competitiveness indicator system

Category	Indicator	Data source
Company strength	Multinational company index	Multinational companies from Forbes Global 2000
	Forbes 2000 total	Company total on the Forbes Global 2000 list
	Industrial structure	Experts' view
	Industrial standard	Experts' view
Local elements	No. of patents	World Intellectual Property Organisation
	Unemployment	Statistical data of countries
	Bank index	Financial enterprises on Forbes Global 2000
	University rankings	Webometrics Ranking
Local demand	Population	Statistical data of countries
	GDP	Statistical data of countries
	National per capita income	Statistical data of World Bank
Software environment	Crime rate	UN International Centre for the Prevention of Crime statistical data
	Language diversity index	Statistical data of countries
	Ease of doing business	Global Business Environment Report published by World Bank
	Ratio of central versus local taxation	Statistical data of countries
Hardware environment	PM 1.5 emissions	World Health Organisation data
	Benchmark hotel prices	Holiday Inn, Bookings data
	Ease of road travel	Holiday Inn, Bookings data
	Distance from sea	Google maps
Global connection	Multinational company connection	Forbes Global 2000 data
	International reputation index	Experts' view
	No. of air routes	International Air Transport Association data

Source: Ni et al., 2017a, p. 21

The above indicator system concentrates on the overall merits (quality) of a city, expressed in the enterprise quality. Budapest is ranked 20th in the company strength category,[8] which is rationalised by the fact that several multinational companies have their seats of operation (i.e. shared service centres) in the city. The authors believe that along with the further development of the global value chains, a city like Budapest, connecting the Silk Road, has great prospects in advancing its economic development and its position in the global ranking. In this respect, identical place-based governmental strategies (i.e. corporate tax initiatives, enhanced focus on innovativeness, and institutional reforms) are recommended (Lentner, 2015). Anttiroiko (2014, p. 36) points out that business promotion activities stand at the core of urban attraction strategy, with incentives offered to businesses. Better business environment *per se* is not sufficiently enough for a city to catch up with high-income cities, since global connections necessitate favourable settings for innovation and the dissemination of innovation (Anholt, 2005).[9]

When only capitals are taken into account, in 2017 Budapest was ranked as the 24th global capital city (Ni et al., 2017b, p. 61). In general, the urban competitiveness of capital cities in Europe pushes them higher in rankings (see for example London, Paris, Dublin, Vienna, Stockholm, Copenhagen, and Budapest). In this regard, political connections also bring comparative advantage (Eurostat, 2014).

Budapest is among the most prominent arena for international meetings: according to the International Congress and Convention Association, in 2016, the city was ranked for the 16th by the number of meetings organised within the year (ICCA, 2017, p. 20).[10] Besides business networking, branding is a promising means to overcome the structural (size-) limits of a city like the Hungarian capital. The city has encouraging opportunities to create a brand, to manage the branding process and to offer brand value to international audiences and businesses to benefit from branding, as well as gaining media attention (Anttiroiko, 2014, p. 33).

Conclusions

Regional development policies must reasonably be place-based depending on the issues and aspirations of the particular regions struggling with constraints of the demographic, housing and employment trends. Also, while reflecting specific regional needs and traits, the development strategies must encounter the common aspects of well-being.

Measures of regional development include material conditions, factors effecting the quality of life, and subjective elements of well-being. Despite the regional disparities and the centrum-periphery gaps, Hungarian regions improved in many aspects throughout the past couple of years and their well-being is perceived as similar to a few other Central European regions.

Urban prosperity and competitiveness is measured by hard and soft factors as well. In this regard, the Hungarian capital has good potentials in strengthening connections and development. In essence, the principles of human- and physical factor-derived strategies are the key in framing regional development. They should place emphasis on innovation and business connections, and should be coupled with the particular values of the regions.

Notes

1 This study was made with support from the Research Fund of the Budapest Business School, University of Applied Sciences.

2 See, for example, Foddi et al., 2013. Also the different paths of development are emphasised by Cortright, 2002, pp. 2-16.

3 The above OECD indicators of the perceived development of regions and sub-regions are measured by a questionnaire of 11 socio-economic issues of the regions in concern. Here follows the questions of the questionnaire (in relation to well-being, without those questions which serve the statistical clustering): 1) Is your household's income lower/ around/ above the Hungarian minimum wage? Does your household receive governmental subsidy regularly? Do you think that the disposable income of your household belongs to the low/ average/ high levels in your place of living? Did the disposable income of your household decrease/ stay the same/ increase throughout the past five years? 2) How many of your active family members are employed? How many of them are unemployed? 3) How many rooms (above 12 square metres) are there in your house? Is your family (or a member of your family) the owner of the house? 4) Do you perceive that the health services in your home town or village are below/ at/ above the levels in your place of living? 5) How many of your family members have passed at least secondary education? 6) Do you perceive that the air pollution in your home town or village is below/ at/ above the levels in your place of living? 7) Do you perceive that the safety of your home town or village is below/ at/ above the levels in your place of living? 8) How many of your family members voted during the last national election? 9) Do you have broadband internet connection in your house? 10) If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not? (OECD well-being question) 11) Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time? (OECD well-being question)

4 Housing data are available at the website https://www.teir.hu/idosoros-elemzo/.

5 The centrum-periphery dilemma is not unknown in the Hungarian history. It has been prevailing throughout the past decades, freezing the socio-economic structures even after the millennium. See also Lőcsei, 2012, pp. 31-43; Engelberth, 2016, pp. 31-51.

6 Tests from the indices showed that a city's economic development strongly results from improved market mechanism and higher degree of economic freedom; meanwhile improved education and increased accumulation of human capital in a city also presented high positive effect on urban growth. Better business environment has invaluable effect on a city's ability to attract investment. In addition, technological innovation represented by patent licensing and diverse culture represented by multilingualism are both essential to a city's economic development.

7 In Central Europe 10 cities obtained ranking: Frankfurt (11), Warsaw (17), Vienna (18), Zurich (19), Munich (25), Prague (26), Hamburg (30), Dusseldorf (32), Budapest (40) and Berlin (41).

8 It has been ranked back according to the local demand and to the hardware environment (278th and 305th, respectively), which is reasonable, considering the distribution of the world GDP. See Ni el al., 2017a, p. 293.

9 Besides their direct effects, knowledge and innovation, which can be significantly enhanced by positive spillover effects among private firms and other players in the local economy, provide opportunities for a broader scope of governmental interventions (Zhang, 2014, p. 1). See also Lever, 2014, pp. 8-16; Molnár and Hegedűs, 2017, pp. 185-186.

10 There have been 108 meetings held in Budapest in 2016, the most of the country.

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Dávid Fekete

Latest Results of the Győr Cooperation Model[1]

Summary

Nowadays partnership cooperation and city networks are of increasing significance in the operation of large cities. The essence of the model is that the key to local economic development, boosting innovation and increase in competitiveness is close cooperation between higher educational institutions, economic stakeholders and governing bodies to form the future of the region. Győr, a county capital, is the 6th largest city in Hungary. It is the centre of the most rapidly growing economic region, with its main employer being AUDI Hungaria, which in 2017, employed more than 12,000 people directly and nearly another 10,000 indirectly. The Győr Cooperation Model has four main stakeholders at the moment: the Hungarian government, the Municipality of Győr, the Széchenyi István University and the economic partners, especially AUDI Hungaria. They have established a scheme of cooperation which significantly increases the city's and region's competitiveness and contributes to the development of its infrastructure. In this study the recent activities performed in the framework of the said cooperation and having a significant role in urban development, such as the improvement of the economic environment of Győr, the organisation of EYOF, the integration of the university and the growing importance of the city becoming the centre of knowledge, are described. Three processes influencing the future development of Győr are highlighted in the article: development in the framework of the Modern Cities Programme, the further development of the university by the establishment of a connecting technology park, and the tender directed to winning the title of European Capital of Culture in 2023. To achieve these goals a close cooperation is required between all the mentioned partners.

Journal of Economic Literature (JEL) codes: N94, O18, P25, R51, R58
Keywords: triple helix model, urban development, urban regime, cooperation model, city network

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City networks as forces in urban development

Nowadays partnership cooperation and city networks are of increasing significance in the operation of large cities. In Hungary an increasing number of communities recognise the necessity of systematic consultation or formalised organisational cooperation between the various parties making efforts for the benefit of the city. In the international literature, one of the most important related theories is the triple helix model. The essence of the model is that the key to local economic development, enhancement of innovation and increase in competitiveness is close cooperation between higher education institutes, economic stakeholders and governing bodies in shaping the future of the region (Etzkowitz and Leydesdorff, 1996; 2000). According to Lengyel (2010) and others, the reason for the need to strengthen cooperation is that regional units compete to improve the living standards of inhabitants in their respective regions or cities, and to boost regional and local economic growth. Once cooperation has been strengthened, one of the city's important task is to identify its position in competition.

The triple helix model generated extensive discussions in the literature, many volunteered to expand the scope of participants in the model and/or to criticise it. The author of this article belongs to the latter, as in a previous research (Fekete, 2015) he pointed out that a focussed examination of the municipal dimension is necessary and the government is not identical with the central government bodies. Carayannis and others extended the scope of participants of the triple helix model to the civil society, thus giving it the name "quadruple helix model", and then also included the factors related to the natural environment in the model, thus establishing by it the notion of a "quintuple helix" (Carayannis and Campbell, 2012; Carayannis et al., 2012; Vas, 2012).

Multi-party urban development cooperation and their operation are often termed as "urban regimes" in the literature. For the purpose of city development, new cooperation were established in the 1980's in the USA, and this process forms the basis of the urban regime theory (Stone, 1989; Stone and Sanders, 1987). According to Pálné (2010), the urban regime school shows many similarities with the community-based development school advocating the economic approach that local development policy practices can often offer a more successful alternative to the main or central economic development approaches. In the urban regime analysis, the contribution of new-type development coalitions to the development of a city is important (Pálné, 2010). The procedures in urban economic governance have been analysed on several occasions (Somlyódyné, 2014; Fekete, 2017c), with cooperation between the organisations in the region, the level of dialogue between them, the extent of institutionalisation and its effect on the development of the region used as factors. It is also important to note that a key element of a city's growth and development parallel to focusing technological and knowledge-intensive activities in a region is coordinated and effective cooperation between the government, the municipalities, the university and other economic stakeholders (Filep, 2014).

As indicated above, in many urban spaces, procedure analysis and the examination of interaction between the stakeholders of the city have an important role and many representatives of this field in the Hungarian and international literature deal with this subject. In this article I show the most recent results, including the antecedents of cooperation and possible future scenarios of the urban development coalition I call the Győr Cooperation Model.

Strengths of the city

Győr is the 6th biggest city in Hungary. It is a city with county rights, the capital of Győr-Moson-Sopron County and Győr district. The number of inhabitants in Győr is 129,372 (KSH, 2015), its area is 174.5 km^2. Győr is situated in the Budapest, Vienna and Bratislava triangle, and for centuries it has been an important economic and transport centre. The city has a direct access to the motorway in the directions of Budapest and Vienna, it has its own airport (Győr-Pér Airport) and river port (at Győr-Gönyű). Győr is the centre of Hungary's strongest economic region, its largest employer being AUDI Hungaria, which in 2017 employed more than 12,000 people directly and almost another ten thousand indirectly. AUDI has a special economic and social effect on Győr (Czakó, 2014). Among the 23 cities with county rights, the highest amount of business tax is paid here, a trend of improvement indicates the strength of Győr. In 2016, HUF 145 billion (EUR 500 million) of business tax was collected by the cities with county rights, of which HUF 22 billion (EUR 73 million) in Győr (Table 1).

By now the Győr economic region has become Hungary's most prosperous centre. According to experts studying the city's economic development, throughout history procedures linked to the cooperation of the various city-forming factors can be observed. Applying the territorial capital theory to Győr, Rechnitzer states that the concentration of the city's territorial capital elements was dense already in the past centuries and this is the reason why Győr managed to accomplish certain structural changes (in the 19th century the city was transformed from a military to a trading centre and then in the 20th century to an industrial city) (Rechnitzer, 2016).

The Győr cooperation networks have been studied by several people recently (Filep et al., 2013). In the latest study by Rechnitzer and his colleagues highlighted the most important elements of the model. Researchers examined the model mainly from the aspect of personal contact points and gave account of the cooperation network of the higher education industry and the municipal sector, emphasising the fact that this is a predominantly informal network based on personal contacts. Unfortunately, the analysis does not discuss the central government's role, despite the fact that it is clearly important in the development of Győr. The article considers facts mainly from the university's perspective and lists the specific industrial projects (the new building of the Department of AUDI Hungaria Internal Combustion Engine, the AUDI Hungaria Faculty of Vehicle Engineering founded in 2015) and community projects (University Sports Hall, the Jedlik Bridge opening up the university grounds) that served the benefit of the University as well as joint programmes (e.g. University for Senior Citizens and various voluntary programmes). Researches criticised the model for the lack of formalised organisational operation (Rechnitzer et al., 2016).

Although only two years have passed since the last publication assessing the situation, the findings listed in the next chapter clearly indicate the intensity of cooperation between the four mentioned sectors and rapid growth in the city.

Table 1: Business tax revenues of the cities with county rights in 2014, 2015 and 2016 (HUF)

Name of the city	Business tax revenue in 2014	Business tax revenue in 2015	Business tax revenue in 2016
Békéscsaba	2 809 826 980	3 141 704 497	3 133 537 062
Debrecen	10 008 673 201	11 686 758 369	12 140 798 528
Dunaújváros	3 943 053 000	4 549 800 000	4 942 139 689
Eger	2 782 374 756	3 032 575 275	3 191 423 635
Érd	1 621 676 000	1 671 845 000	1 984 949 888
Győr	17 157 166 891	19 317 130 403	21 915 990 063
Hódmezővásárhely	1 630 318 162	1 721 552 928	1 818 367 029
Kaposvár	2 547 628 404	2 666 819 164	2 870 561 982
Kecskemét	7 345 987 892	8 096 538 280	8 703 704 743
Miskolc	7 485 595 375	8 943 240 255	9 223 893 254
Nagykanizsa	3 223 399 000	3 957 286 000	3 019 631 600
Nyíregyháza	6 292 206 616	6 292 206 616	7 055 353 534
Pécs	6 487 999 827	6 763 324 455	6 873 175 553
Salgótarján	1 029 387 000	1 126 617 000	1 171 793 297
Sopron	3 063 457 569	3 265 532 530	3 386 125 948
Szeged	7 447 234 218	8 584 736 647	8 845 268 421
Székesfehérvár	11 479 570 222	12 729 229 222	15 225 891 664
Szekszárd	1 908 246 000	2 053 598 000	2 218 562 497
Szolnok	3 947 000 000	4 373 800 000	4 476 020 142
Szombathely	6 477 589 015	7 559 621 981	7 875 686 814
Tatabánya	4 541 374 000	4 913 460 685	5 369 629 608
Veszprém	4 571 100 422	4 702 453 668	5 336 588 522
Zalaegerszeg	3 243 727 608	4 371 460 332	4 130 531 821
Total amount	121 044 592 158	136 062 684 146	144 909 625 294

Source: Korsós, 2016

Latest achievements of the Győr Cooperation Model

Based on the above-mentioned fact, currently the four most important participants of the Győr Cooperation Model with regard to resource generating capacity[2] are the Hungarian government, the Municipality of Győr, the Széchenyi István University and the economic stakeholders operating in the city, especially AUDI Hungaria.

There is a list of the recently completed and the currently running investments and urban development actions requiring the cooperation of at least three of the four participants (Table 2) as initiators, sponsors or beneficiaries of the particular investment.

Table 2: Major developments in Győr in a breakdown by cooperating partners

	Government of Hungary	**Municipality of Győr**	**Széchenyi István University**	**AUDI, SMEs**
EYOF infrastructure	X	X	X	
Special government decisions	X	X		X
Decreasing local industrial tax, enlargement of industrial park, development of local road network	X	X	X	X
HEICC	X	X	X	X
Modern Cities Programme	X	X	X	

Source: The auhor's compilation

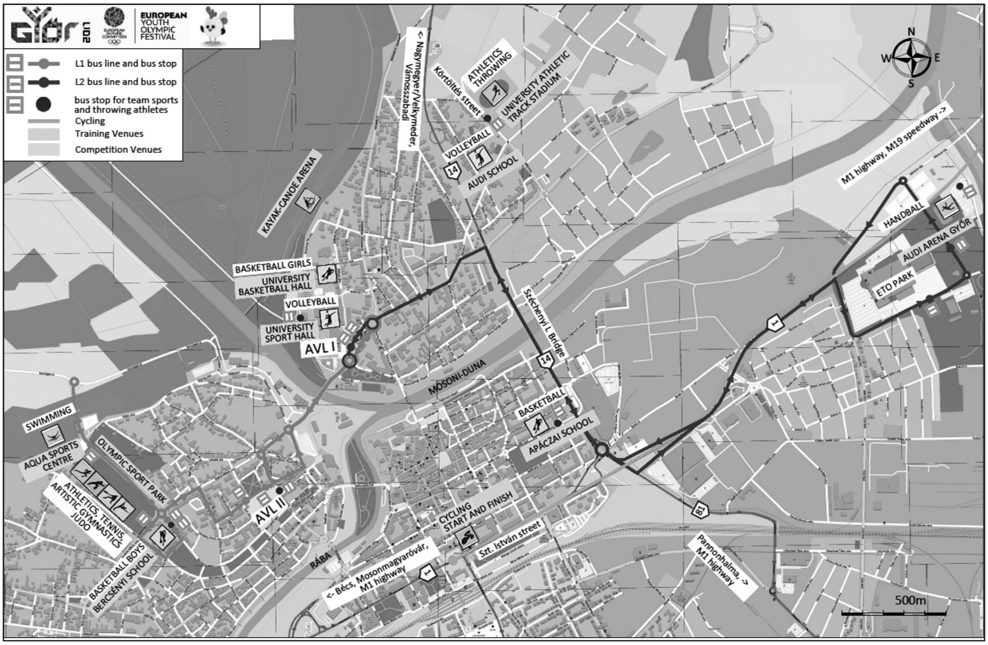
EYOF

In 2017 Győr had the privilege to organise the European Youth Olympic Festival. EYOF was the first Olympic event in Hungary using both Olympic symbols (the flame and the flag). In 2011 Győr submitted a tender jointly with the Hungarian Olympic Committee to organise the event, and the European Olympic Committee granted the right of organisation to Győr in 2012. The minutes of the General Assembly reveal that more than 2500 athletes between 14 and 17 years of age from 50 countries took part in the event. The total number of participants, including accredited athletes and their staff was 3600, and in addition to the work of the organising committee additional 1500 volunteers helped on the event. EYOF generated very large interest and almost 80 thousand people visited the event.

For the successful organisation of EYOF, the collaboration of the government, the city and private capital was essential, as there was a great demand for infrastructure development. Most of the sport venues were financed by the Hungarian government: the new multifunctional hall, the 50-meter competition pool with its outdoor pool, and the Olympic sports park (track-and field and sports halls), from HUF 15 billion (EUR 50 million) granted by the government. Győr contributed to HUF 2 billion (EUR 6.7 million). In addition, the city developed its road network by constructing a new bridge for HUF 10 billion (EUR 33 million) (GYMJVÖ, 2017).

The university was the key beneficiary of the sports events, as one of the venues of the Olympic village was the newly constructed dormitory (AVLI) with the recently renovated adjacent buildings financed jointly by government and municipality. The government allocated HUF 6 billion (EUR 20 million) to the project and HUF 3 billion (EUR 10 million) from the city. The new basketball court was also built with the financial support of the city. The other venue of the Olympic village (AVL II) also amply illustrates the importance of the cooperation model. The site of the former oil factory was bought by the municipality and a private property developer (OTP Ingatlan Zrt.) was invited in to construct an apartment building with 200 flats. After the EYOF the company sold the flats thus easing the existing pressure on the Győr property market[3] (Figure 1).

Figure 1: Competition and training venues of EYOF Győr, 2017



Source: Municipality of Győr

Organisation cost nearly HUF 5 billion (EUR 16.7 million), which was provided by the city of Győr, and the city realised an income of HUF 1.2 billion (EUR 4 million) from the participation fees. Besides AUDI, the sponsors of the event included almost all the significant companies and businesses of Győr. EYOF played a predominant role in the life of the city. A modern sports infrastructure adequate for the 21st century was established, a higher number and better sports facilities became accessible, the transport infrastructure of the city was significantly improved and university students' housing was upgraded.

Case-by-case government decisions

The Government of Hungary introduced the opportunity of development funding based on case-by-case government decisions in 2004. Based on the decision of the government, large companies investing in development in Hungary and thus providing new job opportunities can apply for development subsidies. The government probably wishes to encourage businesses which, either due to their size or other reasons, are ineligible for EU funding to invest in development.

Table 3: The most important investment projects in Győr receiving specific government

Company name	Activities	Number of jobs	Amount of support (HUF million/ EUR million)	Date of signing the contract day/month/ year
Nemak Győr Alumíniumöntöde Kft. (Nemak Győr Aluminium Foundry Ltd.)	Expansion of cylinder production plant	180	1 413/ 4.7	20/10/2017
Dana Hungary Gyártó Kft. (Dana Hungary Production Ltd.)	Production of road vehicles, parts of vehicle engines	200	2 892/ 9.6	05/10/2017
Audi Hungaria Motor Kft. (Audi Hungaria Motor Ltd.)	engine production	380	6 026/ 20	19/10/2015
Busch-Hungária Kft. (Busch-Hungária Ltd.)	ductile cast iron production	105	505/ 1.7	30/06/2014
Nemak Győr Alumíniumöntöde Kft. (Nemak Győr Aluminium Foundry Ltd.)	cylinder head production	100	406/ 1.4	30/06/2014
Wuppermann Hungary Kft. (Wuppermann Hungary Ltd.)	steel strip processing	192	2 930/ 9.8	30/06/2014
Audi Hungaria Motor Kft. (Audi Hungaria Motor Ltd.)	engine and vehicle development	102	1 700/ 5.7	23/12/2013
Audi Hungaria Motor Kft. (Audi Hungaria Motor Ltd.)	car production (press plant)	300	2 482/ 8.3	28/09/2011
Audi Hungaria Motor Kft. (Audi Hungaria Motor Ltd.)	car production	1800	13 000/ 43	06/07/2011

Resource: Edited by the author based on kormany.hu, 2018

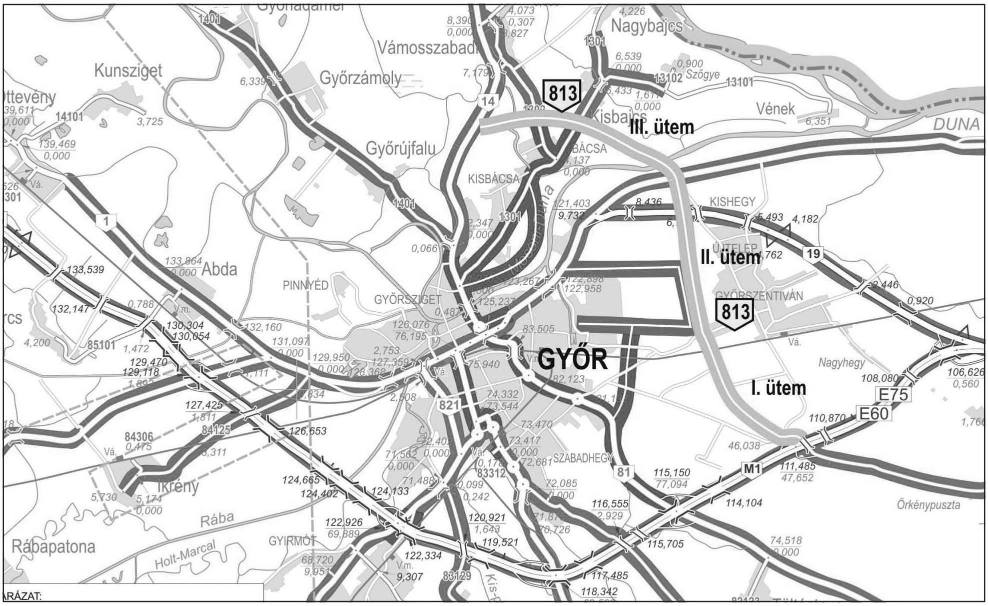
Table 3 clearly reveals that in the past seven years, five enterprises developing premises in Győr received support based on a case-by-case governmental decision. Some of the companies were supported several times within the framework of this scheme, and AUDI received development support in several stages (4 times between 2011 and 2018), which contributed to the creation of about 2600 new jobs. These schemes are apparently based on mutual benefits: the government supported the creation of nearly 3300 new jobs in Győr, while the affected enterprises, and of course, the city of Győr benefited from the increased amount of business taxes paid on increased production volumes (as shown in Table 1). With a rise in the number of people employed, the government could also increase its tax revenues.

Urban economic development

The municipality of Győr is the most important party that shapes the economic environment through its institutional system and through its related businesses. Recently an increasing number of emerging evidences indicate a shift in economic governance. The most important decision of the city of Győr has recently been a reduction in the business tax rate: as of 1 January 2018, it was cut from 1.8 to 1.6 percent, which means that among the cities with county rights Győr and Kecskemét impose the lowest business tax rates (the other 21 cities with county rights impose the maximum allowed rate of 2 percent). The Győr International Industrial Park Ltd. (Győri Nemzetközi Ipari Park Kft.) fully owned by the city, offers numerous services to businesses whether relocated or already in operation there. The most recent development project included the expansion of the industrial park, financed by the municipality, after completion of the expansion of the factory siding.

The city budget earmarks significant amounts every year for economic research. As a result, Győr has built more exploration roads to the industrial park and the logistics park of AUDI, and moreover, it has provided fast access to the industrial territories by the improvement of certain transport nodes in the city. The construction of the eastern ring-road (main road no. 813, see Figure 2) will change life in the city, as from the spring of 2018, vehicles will be able to reach the industrial territories of Győr directly from the highway, and the truck traffic across the city will be eliminated. This latter investment is funded by the Hungarian Government.

Figure 2: Track of the new eastern ring-road (main road no. 813)



Source: Municipality of Győr

The fact that justifies joint organisational framework also results from a recent development: the Mobilis Interactive Exhibition Centre *(Mobilis Interaktív Kiállítási Központ)* has been operated by a company in the joint ownership of the Győr municipality and the university since 2015. The Mobilis Interactive Exhibition Centre plays an important role in career guidance, attracting young people to natural sciences and technical sciences (engineering). This is not the first case that the university and the city join forces in business organisation. The incubation centre of Győr, INNONET Nonprofit Kft. is operated in a similar joint ownership structure. INNONET was founded in 1997, with the aim to establish and operate an innovation and technological centre, which is still in the profile of the company.

Although Rechnitzer and others miss formalized cooperation in Győr (Rechnitzer et al., 2016), there have been city initiatives in this direction in the past few years. With the cooperation of the government and educational organisations operating in the city, AUDI and the related SMEs, the university and the city, two cooperation organisations were established and take an active part in the economic governance of the region: the Győr District Employment Pact *(Győri Járási Foglalkoztatási Paktum)* and the Automotive Industry Career Model Cooperation in Győr. Moreover, in order to be able to use the opportunities in cultural and creative economy, the Győr Local Community was also established. It works in close collaboration with the city in order to be awarded the title "European Capital of Culture" in 2023.

New direction in strengthening the city's role as a knowledge centre: Higher Education and Industrial Cooperation Centre (HEICC)

Besides the above-mentioned city investments to improve university infrastructure, the year 2017 was decisive in the life of higher education institutions, as two new faculties were added to Széchenyi István University.[4] With the association of the former Apáczai Csere János College, engaged in teacher training and tourism and operating in Győr for centuries, and the former College of Agricultural and Food Sciences, operating in Mosonmagyaróvár, a town at about 40 kilometres from Győr, the university took a major step towards becoming a university of sciences. The government decision on integration was facilitated to a major extent by the joint support and lobby of the municipality and the economic actors of the city.

Széchenyi István University, AUDI Hungaria and the city of Győr elaborated the HEICC concept in 2013, following a comprehensive analysis of the current situation. The establishment of the centre was supported by the government of Hungary by about HUF 14 billion (EUR 47 million), using national and European Union resources. State financing was granted against the backdrop of central efforts to indirectly boost regional economic growth. After 2010 the government took a number of actions to strengthen and stabilize the local economic environment, including the above form of financing, the new public finance system that forms the basis of a stable national economy development (Lentner, 2015) and municipal debt consolidation (Lentner, 2014). Support to modern industrial centres and university knowledge hubs is another important direction (Lentner, 2007).

HEICC will add three new buildings to the university: automotive innovation research, development and testing will be carried out in the Building of Dynamometers, which will also contain an e-training laboratory, and in the Packaging Test Laboratory. The Management Campus Building will focus on activities related to the development of SMEs, with lecture rooms and creative spaces. The buildings will have been completed by the summer of 2018. Their acquisition cost will add up to nearly half of the HUF 6.4 billion (EUR 21.3 million) support, and the remaining amount will be used for purchasing the necessary equipment for the university. Besides infrastructure developments, HEICC also has numerous important forward-thinking research topics. The sub-project *Legal questions of the application of automated vehicle systems* focuses on the recognition that the emphasis in determining the direction of automotive research is on self-driving cars, but the legal regulation of such highly automatized vehicles is incomplete, and there is a need to prepare and update a legislation of an international level. The *Electromobility Research Group* responds to another important future direction in the automotive industry: the modelling and development of alternative electrical engines, in this case especially the ones related to electrical driving. The *Infocommunication Technologies (ICT) Research Group* deals with the questions of industry 4.0 and digitalisation, with special regards to the questions of industrial applicability of cloud-based sensory services. As the only accredited packaging test laboratory of Central Europe is found at Széchenyi István University, equipment development and research in this field have also become part of the HEICC project in the framework of the subtopic *Logistics, packaging technology*. Self-motivated student groups catalysed applied research in many fields at the university (e.g. the SZEngine development team). HEICC also endeavours to have an increasing number of similar creative student communities at the university, with support from the sub-project entitled *Student innovation – self-motivated student communities.*

The vertical directions of the above-mentioned sub-topics are crossed along a horizontal focus by the sub-topic on *Development of services supporting the international competitiveness of SMEs* (Fekete, 2017d). This means that research in each of the sub-topics present a point of contact with the SME development sub-topic, as the aim of research in certain sub-topics is to realize joint product- and service development with industrial partners to enable SMEs to more effectively connect to the international division of labour. Although Győr has an outstanding network cooperation and organisations in the field of economic development, none of the companies has yet decided to include SMEs in the international division of labour to strengthen their supplier qualities. HEICC undertakes a trailblazer role in SME development, and responsibility for elaborating a fundamentally new methodology (Fekete, 2017a). The significance of HEICC lies in its ability to raise the competitiveness of a group of the city's SMEs to an international standard and thus serve a more diversified, sustainable economic development of the city.

Modern Cities Programme

In March 2015, Prime Minister Viktor Orbán announced the Modern Cities Programme in Sopron. With the conclusion of the 23rd such agreement in Hódmezővásárhely in May 2017, all of the cities with county rights had been promised access to significant development resources. According to the summary of the Prime Minister's Office, cities with county rights can count on development resources in the total amount of about HUF 3400 billion (EUR 11.3 billion) in the future. The Modern Cities Programme has opened a new dimension in the life of cities with county rights in terms of financing resources and in approach, and has provided unprecedented financing resources for the Hungarian network of cities. Implementation is expected in the next decade, and the programme will have a pivotal role in the development of national economic power centres, in population retention and in the improvement of the quality of life.

On the basis of the agreement concluded in April 2017 in Győr, the city will be able to implement developments in an amount of about HUF 120-130 billion (approx. EUR 400 million), falling into the following groups: traffic development, research-development and innovation, strengthening of sports economy, cultural and tourism developments (Fekete, 2017b).

Table 4: Correlation between the projects of the Modern Cities Programme and the long-term objectives of the city

Important objectives	**Related Modern Cities Programme investments**
Environmental and health industry	Construction of a new ambulance station Construction of an open parking garage for the hospital
Sports economy	Construction of a new sports hotel on the territory of the Olympic Sports Park
University research-development	Establishment of a digital development knowledge centre at Széchenyi István University
Increasing the special values of the built and natural environment	Establishment of a new recreational and leisure centre on the territory of Püspökerdő Renewal of II János Pál Square
A high level of cultural and art life	Complete renewal of the National Theatre of Győr Construction of a new concert hall
The attractions of the city are outstanding both nationally and internationally	Construction of the Győr-Dunaszerdahely motorway Construction of a cycle track between Győr and Pannonhalma Establishment of a water adventure park Development of the zoo Construction of a new conference centre

Resource: The author's compilation

As several criticisms have been worded against the Modern Cities Programme, namely, for failing to related to the strategic objectives of certain cities, the Table 4 has been compiled to establish whether the planned projects meet the objectives of the vision included in the Urban Development Plan of Győr valid up to 2030 (Fekete, 2014). It can definitely be stated that a remarkable part of the development projects included in the agreement are related to the exact objectives of the urban vision in the way shown in the table, while the developments which cannot be classified among them (e.g. ring-roads) also indirectly contribute to the attainment of set objectives in a significant way.

Summary and outlook

In this study I have set the objective to present the latest achievements of the Győr Co-operation Model. A review of the most important statements of the related literature (triple helix model, urban regime theories and regional competition) reveals that the regional competition between Hungarian cities also urges Győr to raise more significant resources in order to develop by strengthening its internal cooperation network. The city is a traditionally important intersection of trade routes, and has been one of the most significant industrial centres of Hungary since the end of the 19th century. I have examined the cooperation networks between the elements of four sectors: the local government of the city, the Hungarian government, the economic stakeholders active in the city (with special attention to AUDI) and Széchenyi István University, a knowledge basis.

It has become apparent that previous criticism regarding the absence of a formal network beyond the informal relationships is less effective nowadays: more organisations have been formed which deal with certain segments of economic governance in the city. Through the cooperation of the reviewed stakeholders, significant infrastructure development projects were implemented in the city during the 2010s, and moreover, city image building international events such as the EYOF also took place. The continuous strengthening of the economy is a positive message for the companies operating in Győr.

I am convinced that the outstanding network of relationships between the decision-makers and the leaders of organisations is an important driving force behind the success story of Győr. This requires political support from the government (since 2010 the leaders of the country and the city have been provided by the same party), stability in the administration of the city for 12 years (since 2006 Zsolt Borkai has been the mayor of the city), and outstanding personal relationships between the current leaders of AUDI and the university. In addition, the political leaders of Győr have often held positions in the national administration in the past few years and this has increased the lobbying power of the city: the submission of the EYOF tender were probably supported by the facts that the mayor of the city was the president of the Hungarian Olympic Committee between 2010 and 2017, and both of Győr's members of Parliament elected in individual districts are ministers of state.

In addition to the retention and improvement of the current cooperation systems, three trends prevail in the city's future expectations. Through the implementation of the Modern Cities Programme, the procedures launched in the city (including the development of different infrastructure networks, continued urban planning, and the strengthening of new economic trends) will be reinforced. By combining government resources and the local economic power, Győr can experience a new large-scale development and the synergies between certain operators can be reinforced, and the city can be more rapidly integrated in the European city network. The HEICC programme facilitates the evolution of a knowledge centre, the university's internationalisation and the shift towards the most recent R&D, while the digital development centre to be implemented in the framework of Modern Cities Programme can bring along the formation of a new technological park. All these may strengthen the international competitiveness of SMEs in Győr. If the city is awarded the title of European Capital of Culture in 2023, it would be a community event similar to the EYOF and would allow new large projects. The right of organisation would boost cultural life and the local creative economy just as in the case of the EYOF, which has moved Győr towards sports economy.

Notes

[1] Supported by the Count Bethlen István Research Centre, Győr.

[2] This does not mean, of course, that civil organisations and public initiatives in Győr are important, but in this model, the institutional involvement of the civil sector has not yet been resolved, most frequently, the population and NGOs have the opportunity to enforce their views in the preparatory phase of a specific development project.

[3] The labor demand of companies operating in the city could only partly be met in the past by intra-country migration. At the same time, the housing market in Győr was unable to follow the significant increase in the number of employees, which resulted in a significant increase in rental fees and shortage in rental housing. The building of flats for the EYOF, housing developments in the city, and the 1200 new dormitory places have a positive effect on the situation of workers and renters.

[4] Széchenyi István University currently has 9 faculties: Apáczai Csere János Faculty, AUDI Hungaria Faculty of Vehicle Engineering, Deák Ferenc Faculty for Law, Faculty of Health and Sports Sciences, Faculty of Architecture, Construction and Transportation, Faculty of Mechanical Engineering, Information Technology and Electrical Engineering, Kautz Gyula Faculty of Economics, Faculty of Agricultural and Food Sciences, and the Faculty of Arts.

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Lajos Veres

The Current State and Future of the European Danube Region Strategy (EDRS)

Summary
The European Danube Region Strategy (EDRS) is a macro-regional development strategy and Action Plan for regions and countries in the Danube River Basin. Its purpose is to regulate the sustainable development of the Danube macro-region and the protection of its sites, landscapes and cultural values. The strategy plays a particularly important role in promoting sustainable transport, in linking energy systems, in environmental protection, and in the preservation of water resources in order to improve the business environment and offer a wide range of opportunities for economic development in the macro-region. This study presents the European Danube Region's Strategic Action Plan and its priorities, paying special attention to Hungarian activities and businesses. The results of the EDRS are reflected in the international coordination and in the preparation of projects and major developments through resource allocation on the level of the EU and in Hungary. The author gives an overview of the future of European macro-regional strategies and the EDRS.

Journal of Economic Literature (JEL) codes: D04, E61, P25, R58.
Keywords: macroregional strategies, development policy coordination, regional economy, regional planning.

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Introduction

In the Presidency Conclusions of 18 June 2009, the European Council requested the Commission to prepare an EU Strategy for the Danube Region (EUSDR).[1] The Commission adopted a Communication on 8 December 2010 (with an Action Plan identifying specific actions and examples of projects in 11 priority areas),[2] which was then endorsed in April 2011 by the Council.[3]

The European Danube Region Strategy (EDRS) was adopted by the Hungarian Presidency on 30 June 2011 in Budapest. It was the second EU macro-regional strategy, which followed the EU Strategy for the Baltic Sea Region. A first Report to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the EUSDR was issued on 8 April 2013.[4]

Figure 1: EDRS countries

Source: www.danube-region.eu/

Countries in the EDRS area:

– 9 EU Member States: Austria, Bulgaria, Croatia, Czech Republic, Germany (Baden-Württemberg, Bayern), Hungary, Romania, Slovakia, Slovenia

– 3 additional connecting countries: Bosnia and Herzegovina, Montenegro and Serbia

– 2 neighbours : Moldova and the Ukraine (4 districts)

A complex approach to the Danube area required new methods for the development of the strategy. As a versatile corridor, the Danube River emphasizes the transnational character of strategy creation. Obviously, the Danube also areas appear in Hungary's National Development Plan documents and policies.

National interests may differ from country to country, in specific issues (Lentner, 2007). In addition, different priorities may be included in the separate development programmes and strategies for the Danube NUTS2 and NUTS3 regions. The Danube-Cities (ESPON categories) are developing at a rapid pace, especially in the metropolitan areas.

Therefore, the elaboration of the Danube Strategy could not be part of a traditional planning process with a designer workshop finding the optimum vision, collects policy expectations and sets professional requirements. A continuously (or at least regularly) operating international design system was needed. Some of the projects in the INTERREG programmes III and IV indicate positive experiences in this area (Veres, 2010a; 2010b). Demand has increased for forums not created for unilateral information and opinion formation but for the purpose of discourse. This was the purpose, for example, of the Danube-Region Cohesion, Interregional International Scientific Conference organised at the University of Dunaújváros already on four occasions.

The Danube is an important link between the European Union and the countries acceding the EU. Consequently, the European Union also plays a major role in the development of the Danube as one of Europe's most important and busiest waterways. A series of international scientific conferences provided opportunities in Hungary and in the neighbouring countries for the participants to familiarize themselves with the social and economic as well as natural developments taking place along the Danube, and to identify possible goals and directions in improvement. This allows the Danube countries, regions and communities can play a significant role in Europe's development (Veres, 2010c).

The discourse-triggering conferences resulted in the exploration and enhancement of opportunities for cooperation between the countries along the Danube, in the generation of new joint projects, and in the expansion and promotion of international and interregional relations (Veres, 2016).

Summary of the EDRS Action Plan

In early June, 2010, DG REGIO, the body in charge of the preparation of the Danube Region Strategy on behalf of the European Commission, delivered a consultative version of the Action Plan for the Member States on the basis of previously submitted national contributions and stakeholder conferences. This was the basis for the subsequent bilateral and multilateral negotiations with Member States and for the legitimacy of actions selected for the cooperation (European Commission, 2010).

The EU Strategy for the Danube Region was published in two documents: a Communication from the European Commission to the other EU Institutions, and an accompanying Action Plan, which complements the Communication. The projects are considered to be illustrative, providing examples of project types or approaches encouraged in general. The essence of the procedure is that the actions[5] or projects[6] included in the Action Plan are implemented by the Member States and the stakeholders on the basis of the subsidiarity principle.

The Action Plan sets clear priorities, and provides the information required for implementation and follow-up. The priorities are broken down into well-defined actions, with sample project proposals for the presentation of the supporting actions. As a common feature of the actions specified in the Action Plan, they all support the existing EU policies, including the EU's strategic guidelines outlined in the EU 2020 document, the integrated approach based on the principles of sustainability, social cooperation and a number of other effective EU regulations.

Despite the fact that the Action Plan serves stability for a certain period, the thematic priorities[7] may change over time, and so the actions and projects may also be reviewed, transformed or replaced (this is called. a "rolling" plan).

The main conclusions of the Action Plan in the original structure

Improving the connectivity of transport links and energy systems

Improving accessibility and mobility

Mobility goes beyond technical aspects and infrastructure; it includes organisational issues, meeting transport-related demand, regional development and even personal life styles. Most of the problems affecting *the system are caused by a lack of coordinated planning and implementation*. In the case of appropriate developments, *the Danube can become a cost effective transport corridor*. In terms of inland navigation, goods traffic on the Danube only amounts to 10% of freight forwarding on the Rhine, and consequently, it can be increased by improving intermodality or by using higher-standard assets. Development needs are affected by the fact that the Danube is not navigable throughout the year, its ports need improvement, and neither the fleet, nor the personnel are sufficient. The road and rail systems are inefficient, some elements, including border-crossing points, are missing.

Integration of energy systems, energy efficiency and renewable energies

As the power supply systems are made of power networks and markets, it is important to ensure that disadvantaged and remote regions also have access to the Trans European Energy Networks programme (TEN-E). Energy security, diversification and effective governance are important factors. In addition, the Structural and European Agricultural Fund for Rural Development provide good funding opportunities for projects, in particular for the decentralised production of energy from local renewable sources, and for research networks. Market organisation and the actions taken to improve cooperation help to ensure the security of supply, balance supply and demand more effectively, and exploit the economies of scale on investments. In order to improve energy efficiency, market resources must be managed in an integrated manner, and the security of supply can be increased by reducing energy needs and increasing the share of energy produced in the Danube Region.

Environmental protection, the protection of water resources and risk management

Conservation and maintenance of biodiversity, landscape, air and soil quality

The natural heritage along the Danube is of European significance. Over the past few decades its vulnerability has increased. For this reason, a number of environmental directives and legislative acts were adopted by the EU and compliance is a key issue. Decline in the number of native species and natural habitats (deforestation, urbanization, intensive agriculture, hydropower generation, etc.) is a major problem to be solved. The concerted management of protected areas, linking habitat systems, and expanding and exchanging knowledge increase the sustainable use of natural resources, and raise environmental awareness. The method of using land is of key significance for water and soil protection. Appropriate action to reduce air pollution can only be taken if a single database of the emitters is compiled.

Maintaining and improving water quality

As several countries share *water bodies,* their protection is a joint responsibility and requires international and intersectoral cooperation.

The Danube Commission (ICPDR[8]), established to enforce the Danube River Protection Convention signed in Sofia in 1994, has a key role in the implementation of the EU Water Framework Directive aimed at restoring the good condition of waters and in the drawing up of river basin management plans. Similar partnerships have also been established for tributaries, such as the Sava and the Tisza. In the deteriorating water quality of the Black Sea, The *contamination* of the *Danube* contributes most to the deterioration of Black Sea water quality.

The Danube River Management Plan and the supporting research, monitoring and analysis have identified four main challenges to water quality across the Danube Basin (surface and groundwater, chemical and ecological status).

Management of risks caused by nature and by human activity

The extreme weather conditions caused by the climate change all around Europe including the Danube Region call for a solution. The frequency of floods, droughts, erosion and drift ice is expected to increase, and directly threaten the population and the economic actors. In addition, in the Danube Region, the high number of industrial risks are associated with the occurrence of permanent environmental risks. *In the Danube Region there are many flood-risk areas.* Climate change is expected to further increase extreme water flows and will also affect water supply. Therefore, common procedural rules should be developed to prevent and respond quickly to disasters, linking participants in risk management. The objective is the development of a *Climate Adaptation Strategy for the Danube Region* with the involvement of tourism, water management, navigation and agriculture, and to implement an international Flood Risk Management Plan under the leadership of ICPDR. In relation to floods and climate change, it is important to *improve the procedures of regional planning and construction regulation* and to exchange experiences and best practices between communities.

Development of social, economic and human resources

Knowledge and innovation

In terms of the level of innovation development, *there is a considerable northwest-southeast division in the Danube Region.* Major differences are shown primarily in the intensity of cooperation, partnership, the capital supporting innovation, and corporate investments in R&D. A general problem throughout the area is that *innovation projects are underfunded,* and government support and highly qualified human resources are missing. Although in the field of research, bilateral cooperation between universities and research institutions has traditionally been intensive, there is no *system for multilateral cooperation.* Joint research and educational collaborations can be developed on a geographical basis.

Competitiveness and business support in the Single Market

The greatest challenges in the region are the different levels of framework *conditions for competitiveness* and entrepreneurship. Through boosting the institutional capacities and industry associations to support businesses, the conditions can be created locally for innovation. Macro-regional cooperation is needed to bring the Single Market to completion, particularly in services.

Strengthening international cooperation is crucial in the case of countries at different stages of development and with various innovation environments. To this end, the "cluster approach" should be preferred, and the system should be built on a map of the existing clusters. It is important to use the opportunities given in the framework of the European Research Area (ERA) cooperation.

Information society

The information society is a source of cohesion and environmental sustainability. It promotes the adaption of public services to user needs (e.g. e-commerce, e-governance, e-health, e-education / e-learning), provides information to citizens, and increases the number of innovations and marketability.

Compared to countries located elsewhere in the EU27, those in the Danube Region have insufficiently developed information societies. The number of computers at homes, at enterprises and in the public sector need to be increased, broadband coverage should be extended, especially in rural areas, and the e-content and accessibility, such as e-government, e-health, e-education, e-commerce, e-social inclusion need to be improved.

Full use of human resources in the Danube Region

Due to the decreasing number of births the population is decreasing in the region, and the ratio of highly skilled workers is generally lower than in other countries of the EU27. These make the better use of human resources imperative. In the region the mobility of researchers and students, called "*knowledge mobility*", is also lower than in the other parts of Europe. *Labour mobility* is particularly important in order to resolve the legal and administrative issues related to social security and the recognition of qualifications. It is important to promote *labour market* integration through closer cooperation between labour market organisations, including the coordination of strategies and the exchange of information. In order to increase the exchange of researchers, students and physicians and to reduce one-way migration flows, cooperation and coordination must be intensified between primary, secondary and higher educational organisations, and the mutual recognition of professional qualifications and degrees must be facilitated.

Creation of an Inclusive Danube Area

In Europe, 80% of the Roma population live in the Danube catchment area. Attempts at their social integration have frequently been made solely on the basis of action against discrimination. However, social and economic exclusion and territorial segregation are equally important factors. A higher level of awareness and a new monitoring system can support the work of authorities. Particularly important are the projects that bring the members of the Roma community together with the majority of the society.

Promotion of tourism and the Danube Regional culture

The Danube Region comprises a wide range of diverse communities with different histories, cultures, ethnicities, religions, markets, societies and states. In accordance with various international conventions concluded in the field of culture (e.g. by UNESCO), inclusion, openness, acceptance and mutual respect for values must be promoted. Linked partly to culture and heritage protection, *tourism increasingly contributes to economic growth.* For this reason, there is an increasing demand for positioning the Danube Region and for the creation of a common identity in tourism. The relationship between different nationalities fosters creativity, and an appropriate basis for innovation and economic development. A cultural approach to tourism improves the attractiveness of the area both for the local people and to the tourists.

Development of governmental systems

Improving institutional capacities and cooperation

The countries of the Danube Region have different legal traditions, more or less traditions, transparency, democracy, market economy and, in general, political stability. In terms of institutional capacity, there are major differences between the individual countries, public and civil sectors, urban and rural areas, which also affect the political ability to enforce the law. As a *closer cooperation* in the Danube Region and the exploration of *growth potentials* depend heavily on trust between the cooperating partners, a clear and transparent regulation, the division of responsibilities the assignment of competences to institutions at various levels, and the facilitation of information flow at all levels are necessary.

Security

Economic integration and cross-border trade carries the risk of increase in organised crime. The prerequisites of development in the countries along the Danube include peace, security and economic prosperity, which need to be underpinned by law, fight against corruption and organised crime, and the prevention of illegal migration and border crossings. The differences between legislations, policy diversity, and the long and cumbersome legal harmonization are conducive to organised crime, and this is why the dissemination of good practices has a significant role.

The EDRS adopted in 2011 on the technical basis of the Action Plan eventually identified 11 priority areas (Table 1).

Table 1 shows that Hungary played an important role in coordination and was assigned priority areas PA2, PA4, PA5, representing a professional challenge and responsibility, and requiring increasing cooperation.

Report to the national assembly on the implementation of the EDRS

On 2 March 2015, the European Affairs Committee of the Hungarian National Assembly heard a report about the current status, achievements and conclusions of the implementation of the European Danube Region Strategy. The report was made by István Joó, Minister of State responsible for the implementation of the Danube Region Strategy.[9]

Special attention was paid to the experiences obtained during the achievement of the Hungarian objectives:

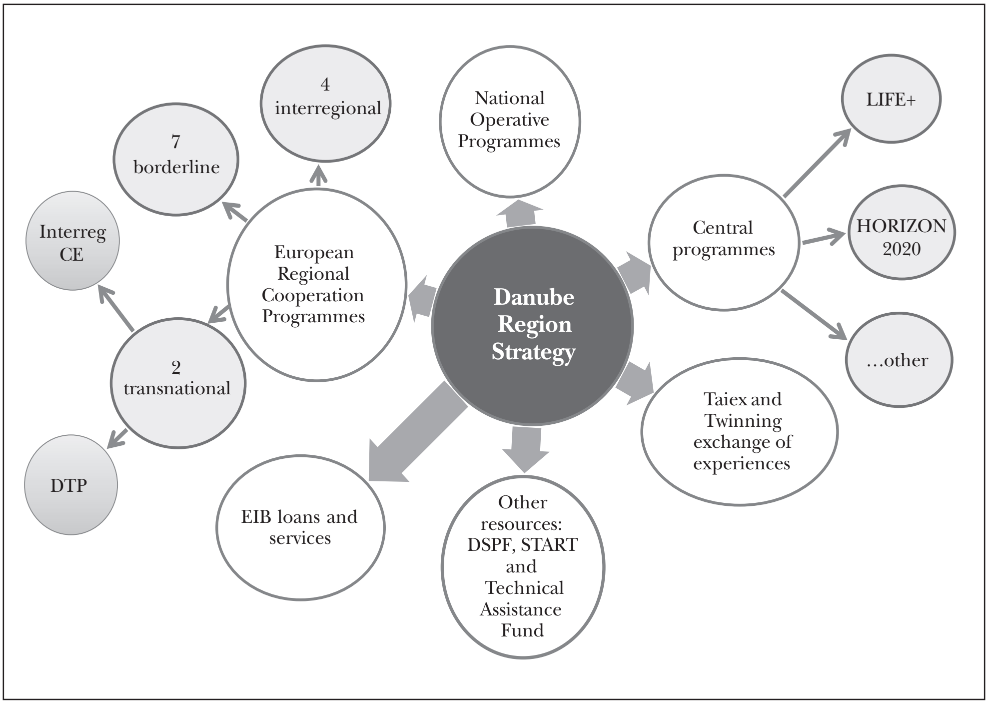
– One of the important objectives was to have the highest possible number of tenders under Hungarian leadership in connection with the Danube Strategy in order to gather information and knowledge in the framework of international projects and to help our companies improve their position in various markets.

Table 1: EDRS pillars and priority areas

Policy coordination development along four pillars and priority areas 11					
Connecting the Danube region to other regions			**Creating prosperity in the Danube region**		
PA 1/a	Mobility – inland waterways	Austria and Romania	PA 7	Knowledge society	Serbia and Slovakia
PA 1/b	Mobility – rail, road and air transport	Serbia and Slovenia	PA 8	Competitiveness	Baden-Württemberg and Croatia
PA 2	Sustainable energy	Czech Republic and Hungary	PA 9	People and skills	Austria and Moldova
PA 3	Culture and tourism	Bulgaria and Romania			
Environmental protection in the Danube region			**Strengthening of Danube region**		
PA 4	Water quality	Hungary and Slovakia	PA 10	Institutional capacity and cooperation	Austria and Slovenia
PA 5	Environmetal risks	Hungary and Romania	PA 11	Security	Bulgaria and Germany
PA 6	Biodiversity, land, air and soil quality	Bavaria and Croatia			

Source: Jenei, 2017

Figure 2: Financing toolkit relevant and available for the Danube Region Strategy in Hungary



Source: Jenei, 2017

– Hungary has outstanding knowledge and experience in water management, and macro-regional cooperation provides an organised framework for transferring this expertise to countries with relatively less experience in this area, whether in the Western- Balkan, or east of us.

– The third objective was to use the instruments of the strategy to promote Hungarian water diplomacy efforts. In the post-2011 period, there was a successful cooperation between experts engaged in the management of the Danube River and those working with the Mekong River. Increasing interest is shown in Hungarian water management mainly in Asia. Hungary was given an outstanding opportunity to guide water management activity within the framework of the strategy.

Achievements

The Danube Region Strategy has been efficiently integrated in the 2014-2020 development period, and the considerations of the Danube Region Strategy have appeared everywhere from the Partnership Agreement through various funds used in Hungary to operational and cross-border cooperation programmes.

Hungary has retained a leading position obtained when this cooperation began during its presidency in 2011.

– Strategic partnership was established with Germany, in particular the Baden-Württemberg region, with the Czech Republic and with non-EU countries.

– The Strategy has been highlighted in various operational programmes, in different funds and as a new element in bilateral cooperation. Recently, this type of cooperation has been established with Baden-Württemberg, Bavaria, Croatia, Moldova and Serbia, and joint economic committees or joint intergovernmental committees have had sessions in this framework.

– *The Danube Transnational Programme* was set up in Budapest, and raised more than EUR 250 million for the achievement of the objectives and projects of the Strategy in the next period. Its managing authorities and the technical secretariat operate in the framework of the Ministry for the National Economy.

– As an important achievement, the criteria, objectives and projects of the Danube Region Strategy have appeared in *local planning procedures* (Pest County Council, Voivodina and Southern Hungarian counties).

– As an added value included in the macro-regional approach, these countries have jointly specified the *gas market infrastructure projects* that should be implemented from the available financial resources in the 2014-2020 period, and have succeeded in channelling these achievements into the various decision-making procedures of the European Union.

This model has been able to show how the implementation of a particular infrastructure element would affect the price of gas in the individual countries of the Danube Region. The construction of a *gas storage facility* can be highlighted as such a forward-looking example. Almost all the countries surrounding Hungary or located in the Danube Region (only those that are EU Member States) have indicated that they would like to implement gas storage building projects using EU funds in the 2014-2020 programming period.

The relevant analyses have revealed that at the moment there are 4 billion cubic meters of excess capacity, and if the anticipated developments are implemented, this will increase to 9 billion cubic meters.

– Based on the *Biomass Action Plan of the Danube Region,* a macro-regional project has been elaborated and will be implemented in the near future with the management of the Szent István University. Eight countries participate in this collaboration related to most important objective, which is to launch and implement the highest possible number of projects with Hungarian management or participation in the 2014-2020 period. We expect to compile a statistical database for bioenergy suitable for supporting investment decisions.

– Based on a comprehensive assessment of *the geothermal potentials* and development opportunities of the individual countries, the preparation of a macro-regional project has started with the participation of ten countries and will probably be managed by the Hungarian Institute of Geology and Geophysics.

– In support of the integration efforts of non-EU countries, the energy division directed by Hungary held *a training course about the energy market in Moldova.* Previously, Moldova undertook transpose certain provisions of the European Union's third energy package, however, when it came to putting them into practice, difficulties were encountered. Within the framework of the Danube Strategy it was therefore of paramount importance to implement a *knowledge transfer project in Chisianu.*

– The *Water Quality Priority* Area is jointly managed by Hungary and Slovakia. Recently, analyses have been made on the status of buffer zones, waste management, and the use of alternative wastewater treatment techniques. A project may now be launched with Hungarian direction for the management of sediments in the Danube River catchment area. Serious efforts were needed to position the Budapest Technical University the future project manager: Western European countries' unwillingness to admit relevant Hungarian experience and expertise had to be overcome.

The purpose of the project planned to involve six countries is to provide input on the sediment balance to legislators and stakeholder experts as a basis of subsequent decisions. The *undesirable deepening* of the Danube bed is a well-known fact and grounded solutions may be found to this problem during the project.

Nearly 70 percent of Hungary's water management problems relate to the Tisza River. Previously, international catchment management was managed by the International Commission for the Protection of the Danube River (ICPDR) in Vienna. *The handover of the Tisza Office in Szolnok was a major achievement,* and this branch will assist the work of the Tisza Group as a coordinating platform.

– *Flood control* is coordinated jointly by Romania and Hungary. An action plan has been compiled for flood control in the Danube Region. A survey of flood control in all the 14 countries of the Danube Region Strategy has begun with Hungary's management.

– In the period between 2014 and 2020, the criteria set out in the objectives of the Strategy are enforced in an organised framework. There are best practices and cross-border cooperation programmes inherited from the 2007-2013 period.

As for other opportunities, centrally managed funds are available from Brussels, such as the Life+, the Horizon 2020, and the European territorial cooperation programmes, including transnational programmes, such as the Central Europe Programme and the Danube Operational Programme (see Figure 2).

Many say that a significant portion of these funds were already available in the 2007-2013 period, and, although in a limited amount, they were also available in the last two years. However, it is important to note that partnerships and the frameworks of cooperation which have developed their concepts in accordance with criteria set by the Danube Region Strategy and are actually be able to have access to these resources have only evolved recently.

In order to improve the flow of information, in 2015 a project financing conference was organised by the Hungarian Ministry of Foreign Affairs and Trade for Hungarian stakeholders who wish to implement projects in relation to water management and energy in the next period.

The new role of macro-regions

In 2015 the European Parliament made a critical and analytical overview of the new role of macro-regions in the European territorial cooperation (European Parliament, 2015) and concluded that *macro-regional strategies have become a crucial concern* in shaping the European territorial cooperation in the post-2013 cohesion policy. The European Union is currently implementing two macro-regional strategies: the EU Baltic Sea Strategy and the EU Strategy for the Danube Region. In October 2014, the EU Adriatic and Ionian Strategy was also adopted. In addition, recommendations have been made for and debates are ongoing about the development of similar strategies for other macro-regions, especially coastal ones, the Alpine, the Carpathian, the North Sea, the Black Sea, the Western and Eastern Mediterranean Sea and the Atlantic Arc regions.

Developments in concepts and legislation related to macro-regional cooperation

The European Parliament first discussed the conceptual definition of macro-regions and macro-regional strategy, the latter *called an increasingly important area of governance* for European territorial cooperation. Macro-regional strategies are important tools not only for regional policies but also for foreign policy. The future of macro-regional strategies are discussed against conflicting views on post-2013 cohesion policy and a changing regulatory framework. The European Parliament's comments clearly point towards support to a territorial and contractual approach in macro-regional cooperation, in line with the Europe 2020 agenda. It was noted that the added value of macro-regional strategies lies in promoting the involvement of neighbouring countries, *the creation of territorial synergies and the reduction of regional disparities.*

The macro-regional strategies under consideration are analyses of the Carpathian Region, the North Sea, the Black Sea, the Atlantic Arc and the Strategy for the Western and Eastern Mediterranean. At the current stage, the concepts of certain strategies have not yet been clearly linked to specific needs or specific actors / partial areas, while in the case of other strategies, due to the high level of social and economic cohesion, there is still considerable doubt concerning the need for macro-regional cooperation. Contrary to other strategies, the feasibility of macro-regional cooperation can be questioned because of the social and economic inequalities and political instability.

The classification of macro-regional strategies is based on an in-depth assessment of the need for cohesion as a means of achieving a macro-regional level of social, economic and territorial cohesion as a tool for cohesion in post-2013 cohesion policy. According to the analysis, macro-regional strategies should be divided into three groups: 1) macro-regional strategies that function as possible means of the EU's foreign policy (Mediterranean and Black Sea Strategies); 2) macro-regional strategies used for combatting development inequalities (Danube Region, Baltic Sea, Adriatic, Ionian and Carpathian regions) and 3) macro-regional strategies that serve as potential tools for exploiting territorial synergies (Alpine, Atlantic and North Sea strategies).

Conclusions and policy recommendations

Added value: The added value of macro-regional strategies for European territorial cooperation and cohesion policy needs to be assessed on the basis of the nature of the reviewed macro-region. According to the three elaborated approaches, the different categories of macro-regional cooperation classified in different categories are expected to have different added values.

Monitoring and evaluation: The preliminary assessment of political and financial needs and capabilities should be given priority in assessing the feasibility of future strategies;

Technical assistance: The European Parliament should continue to provide financial support to transnational activities, while also carefully assessing in this respect what and how they can fulfil in the next few years;

Regulatory framework: The European Parliament should examine the idea of conditionality of macro-regional cooperation and the usefulness of European Grouping of Territorial Cooperation in macro-regional strategies in greater depth in the coming years.

Evaluation of progress in the Danube Strategy

Numerous projects were launched or improved as a result of the EUSDR. These include: the master plans on Fairway rehabilitation and maintenance and on LNG navigation; the creation of nature protection networks and the development of common methodologies for the assessment and management of natural risks due to the climate change; and the setting up of a network for improving security on the Danube River (European Commission, 2016).

The EU Strategy for the Danube Region has clearly improved cooperation culture, linking stakeholders and dovetailing existing institutions to share knowledge and experience. The ministers of transport at the Ministers' Meeting of the Danube Region received high-level political support to ensure better management in Danube shipping. The achievements of the cooperation culture and activity shown as an important goal in the Danube Region Strategy also fed through as spectacular results in automotive industrial cooperation. The experience gained in the European Union and more specifically, in the Danube Transnational Programme has contributed to the development of a Cooperation in Automotive Higher Education and Research in Hungary, the evolution of a coordinated innovation activity, and network cooperation (Tóthné Borbély, 2013).

The Danube Financing Dialogue is an example of a match-making platform offered by the strategy for project promoters and financing institutions to discuss issues and identify suitable solutions related to financing projects in the region (Lentner, 2015a).

The EUSDR has also made the governance system more effective by strengthening coordination between policies and institutions at a national level. It has facilitated reaching out to relevant stakeholders at both national and local levels, and continued dialogue with civil society organisations (Lentner, 2015b).

Another important area where the EUSDR has made a genuine contribution included the EU enlargement and neighbourhood policy agendas. It has helped to intensify thematic cooperation with the five participating non-EU states and to bring stability to the area through solid networks and partnerships. Relevant initiatives include the setup of the first European Grouping of Territorial Cooperation with a non-EU country (Hungary and Ukraine), and the establishment of a new coordination scheme in 2015 to allow Moldova to participate in the strategy. Serbia has also taken an active part in coordinating two of the strategy's priority areas.

The implementation of the EUSDR has been supported by the Danube Transnational programme. The latter covers the same geographical area, provides financial support to specific transnational projects and supports the strategy's governance. In 2014, the 14 participating countries jointly set up the Danube Strategy Point (DSP), which became operational in June 2015. The DSP has mainly been active in monitoring, communicating and providing support to priority area coordinators and to cooperation between priority areas.

Challenges

Irrespective of promising initial achievements, the EUSDR would benefit from a number of specific policy and operational measures, such as the continued integration of the *transport and energy infrastructu*re, *actions to counter water pollution, natural risks,* common labour market and education policies, competitiveness measures, in particular for SMEs, and measures addressing demographic challenges and brain drain. The *security dimension* remains important as is the need to develop public administration capacities.

In addition, new challenges have been faced in the past two years, for example relating to migration flows, global security and terrorism (Veres, 2017).

The *administrative capacity* available for the arrangement of implementation and for improving cooperation remains an issue, particularly in non-EU countries. This still requires appropriate responses at both national and regional levels.

Notes

1 European Council Conclusions of 19 June 2009, point 34: "It… invites the Commission to present an EU strategy for the Danube Region before the end of 2010".

2 Communication from the Commission concerning the European Union Strategy for the Danube Region. 8.12.2010, COM(2010) 715.

3 Conclusions of the General Affairs Council, 13 April 2011 and Conclusions of the European Council, 23-24 June 2011.

4 Report from the Commission concerning the European Union Strategy for the Danube Region. 08.04.2013, COM(2013) 181 final.

5 The action requiring intervention by states and stakeholders is a priority is in line with the objectives of a priority (project) area. This may include a new approach, improved policy coordination, and an objective to be achieved by the given state's own methods, and it does not necessarily require funding. Every action is based on the current EU competences and the expectations arising from the EU regulations. Examples: new approach, removing phosphates from detergents, improving policy coordination, agreement on a joint position during the review of the TEN-T and TEN-E networks.

6 A "project" is a specific action that has a start and an end date, and requires funding, a project leader and partners.

7 A "priority" is a key theme allowing the macro-regional strategy to contribute to improving the current situation by addressing the most serious problems (challenges) or by a better use of the opportunities. To this end, each priority in this document specifies the conflict areas waiting for a solution.

8 International Commission for the Protection of the Danube River.

9 Jegyzőkönyv az Országgyűlés Európai ügyek bizottságának 2015. március 2-án, hétfőn, 11 óra 00 perckor az Országház főemelet 66. tanácstermében megtartott ülésről. www.parlament.hu/documents/static/biz40/bizjkv40/EUB/1503021.pdf.

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Péter Szatmári – György Suha

International Development Policy Structures for Cooperation in Science, Technology and Education in Hungary

Summary
In the context of Hungarian development policy, scientific and educational cooperation has a key role. The primary aim of this paper is to give an overview of the significant elements of the current international development cooperation and international humanitarian activities in Hungary. Secondly, it analyses, in a dimensional approach, the opportunities of policy and organisational structures and funding mechanisms for science, technology and innovation in developing countries. This article recommends more subtle ways of reforming political decisions that could support innovation with a deeper insight into some aspects of Hungarian "best practices". Finally, it touches upon issues of tertiary education including the identification of funding instruments and interactions between the private sector and government actors.

Journal of Economic Literature (JEL) codes: F35, F53, G18, H52, I28
Keywords: development, research, tertiary education, funding mechanism, Hungary

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International development cooperation and international humanitarian activities form an important part of Hungary's international relations and as policies developed in line with Hungary's commitment in the international donor community are key elements of Hungary's role in addressing global challenges. According to the relevant Hungarian law in force,[1] under the management of the Minister of State for Security Policy and International Cooperation of the Ministry of Foreign Affairs and Trade and the Deputy State Secretary for International Cooperation, the Department for International Development and Humanitarian Assistance is responsible for developing a policy for the International Development Cooperation and International Humanitarian Assistance, for its coordination by the Government, and for its implementation.[2]

Hungary's 2016 annual summary statistics about spending on official development assistance pointed out that last year, similarly to previous years, multilateral development cooperation prevailed, primarily due to the ratio of mandatory contributions to the EU, voluntary contributions to various EU Funds and support for international organisations. In terms of bilateral International Development programmes and projects, the problem of resources with a low level of funding reappeared. Within the OECD, the Development Assistance Committee (DAC) was founded in 1960. Hungary joined to the OECD in 1996 and since its accession to the EU, it has had an observer status in the OECD DAC as an EU Member State. As a result of the accession procedure, launched in 2016 and taking several months, Hungary became the 30th full member of the DAC on 6 December 2016.[3] As a member of the Committee, Hungary became part of a global process that aims at coordinating Development Policy all over the world, and deals with the coordinated implementation of the UN Development Sustainable Goals in the long run, as crises can only be handled effectively if a global approach is adopted and Member States cooperate. The Sustainable Development Framework, establishing directions for development after 2015, called Agenda 2030, was adopted by consensus on 25-27 September 2015, at the UN Development Summit, by the Heads of State and Government of the UN Member States with Hungary as a participant. The Framework sets 17 goals and 169 partial goals for the period between 2016 and 2030, and replaces the Millennium Development Goals (MDGs) adopted in 2000.[4] Hungary had a pivotal role in establishing the Sustainable Development Goals (SDGs), since Hungary co-chaired the UN Open Working Group (OWG) commissioned to make a proposal for the goals with Kenya for one and a half years. In terms of adopting the framework, it was emphasised that international peace and security and sustainable development are inseparable, and thus the causes triggering conflicts can only be eliminated through sustainable development. Moreover, the Agenda includes a target system and sub-system to achieve the dual aim of poverty reduction and sustainable development in a balanced manner. Simultaneously with intergovernmental negotiations aiming at the establishment of the Sustainable Development Framework, preparations were going on for the 3rd Funding for Development Conference of the UN held between 13 and 16 July 2015 in Addis Ababa. The final document of the Conference, the Addis Ababa Action

Agenda (AAAA) forms an integral part of the Sustainable Development Framework 2030, thus providing its implementation. The Sustainable Development Framework and the Paris Agreement adopted at the 21st Conference (COP21) of the parties of the United Nations Framework Convention on Climate Change (UNFCCC) are interconnected in many ways. The elements of transformation included in the Agenda 2030 have an effect on the implementation of the decisions made at the Climate Summit, while the decision about the legally binding climate agreement also affects all the goals of the Framework.

Migratory pressure is still one of the greatest challenges affecting Europe. The International Development Cooperation has a key role in handling factors that trigger migration locally, that is, in providing assistance through international cooperation to ensure living conditions appropriate for hundreds of millions of people so that they are not compelled to leave their home countries. The main goal of the UN Sustainable Development Framework adopted in 2015 (Agenda 2030), including the Sustainable Development Goals (SDGs), is that people can live in peace and security, under balanced and sustainable conditions in every state of the world within 15 years. Besides the "human sectors", the International Development scheme also has a great potential in terms of the economy. Development activities also contribute to improving the international opinion about a particular country and to enabling the economic actors to pursue their interests in the medium to long term. While migration and asylum were not among the priorities of development and foreign policy instruments under the EU budget, due to the mass waves of migrants and asylum seekers coming to Europe, they were integrated horizontally into most of the sub-programmes, which in turn resulted in the reallocation of resources. The Commission started to use the funds, in an ever increasing ratio, for supporting the resettlement and assimilation of migrants and refugees primarily in countries the neighbouring the states affected by conflicts, and wherever the conditions allowed, also for providing assistance to them to return to their homeland. The Commission set the overall objective of providing better living conditions for forced migrants and refugees also during the transitional period spent in refugee camps and host communities. Thus, the EU paid greater attention to remedying the consequences of mass displacements in addition to handling the causes that trigger migration (e.g. deep poverty, unstable political and economic systems, harsh security conditions, etc.). However, this did not mean a complete change of focus: it was rather a more focused approach in handling consequences, which – in terms of handling causes – had been established by the beginning of 2016, mainly as a result of establishing Trust Funds[5]. Making payments to the extra-budgetary European Development Fund, which serves the development of the African, Caribbean and Pacific Group of States (ACP) as part of the Cotonou Agreement, is Hungary's obligation arising from EU membership. At the moment the scheduling and allocation of funds is under way for the 11st EDF[6] (2014-2020). The overall budget of the 10th EDF is EUR 22.682 billion, out of which Hungary has to pay EUR 125 million based on its quota (0.55%).[7] The funds can only be used in specific sectors as set out in particular country strategies (in general: environmental protection, water management, energy, agriculture, food industry, health care industry, construction, education and culture, building capacities, human rights, migration and supporting democracies).

Hungary has been a member state in the Organisation for Economic Co-operation and Development (OECD) since 1996. DAC plays a leading role plays a pivotal role in this procedure and in reducing poverty. DAC urges and assists its member states in establishing a comprehensive Development Policy and in coordinating their particular policies with Development Policy, and once in every four years it makes a comprehensive evaluation of the International Humanitarian Assistance and Development Policy of each member state. Hungary takes part in the high level and executive meetings of DAC, as well as in its monthly formal sessions and in the work of particular committees. As regards the reform of ODA, the integration of new, innovative forms of funding into development funding performed in the various working groups of the OECD in 2016 with the main focus on soft loans eligible as ODAs, the administration of development activities in the private sector, and the just recognition of the amount of energy invested by the donors besides the profit of recipient countries. In terms of bilateral scholarships and contributions for developing countries in 2016, 103 students from developing countries participated in the Stipendium Hungaricum programme funded by the Ministry of Human Capacities and coordinated by the Tempus Public Foundation. The scholarship programme, which has become well-known again after several decades, is especially important. It aims to improve Hungary's "international visibility", presenting our national values in a global context. The aim of the educational policy programme is to foster the internationalisation and improve the quality of Hungarian tertiary education, to strengthen the international relations of the Hungarian academic elite, to increase the cultural diversity of tertiary education institutions and to promote the competitive Hungarian tertiary education all over the world. The economic and foreign policy objective of the programme is to lay the foundations of the personal and professional attachment of students graduated in Hungary, thus potentially enhancing the understanding of Hungarian peculiarities and interests among the elite of their home countries, and establishing the social capital necessary for developing Hungarian economic relations and fostering its aspirations for a market entry. It is not negligible that the presence of international students has a positive impact on the economic development of a particular city or region. In addition, the programme contributes to the promotion of the Hungarian language, as some students start their university studies in Hungarian, following a preparatory training. In the multilateral context, the university-level agricultural programme in Hungary for fellows from developing countries based on the agreement between the Government of Hungary and UN FAO, which continues the practice of previous years, falls into this category. The contribution made by the Ministry of Agriculture to the UN FAO scholarship enabled 34 countries to participate. The Regional Educational Centre of the Hungarian Competition Authority organised five seminars on competition law in 2016, as part of its annual programme for the competition authorities of its primary target countries out of which three events were held in Budapest, one in the Russian

Federation and another in Serbia. Within the framework of its bilateral agreements, the Hungarian Academy of Sciences provides financial assistance for the mobility costs of joint research projects and gives mobility support for individuals who wish to travel with research purposes. The subsidised projects mainly last for 2-3 years. The Hungarian Academy of Sciences provided financial support for 10 developing countries in 2016. Moldova held the presidency of the Police Cooperation Convention for Southeast Europe (PCC SEE) in the first half of 2016. The Moldavian party, due to training programmes previously organised at the International Training Centre of the Hungarian Ministry of Interior and building on the positive experiences during last year's Hungarian presidency, asked the Hungarian Ministry of Interior and the PCC SEE Secretariat to organise the Moldavian Presidency's training programme[8] in Hungary. The Hungarian party did not only provide logistics support and assistance for the organisation, but an instructor of the Faculty of Military Sciences and Officer Training of the National University of Public Service also developed the curriculum of the training programme and moderated the training together with the PCC SEE lecturers. 16 military education specialists from ten PCC SEE countries participated in the training, and they found it professional and highly organised. Similarly, professional cooperation based on special knowledge transfer was initiated by the Secretariat of the Police Cooperation Convention for Southeast Europe (PCC SEE). The target group of the training was the pool of military experts with multiple years of experience in the field of the document security of PCC SEE member states.[9] The aim of the professional forum was to provide an opportunity for regional professionals to share their experiences about false and forged Iraqi documents, to review trends and best practices in the field of document security and to strengthen the professional network in the area of documents within the PCC SEE. In addition to the British, German, Belgian and Swiss experts, the Pest County Policy Headquarters, the Ministry of Foreign Affairs and Trade, the Hungarian Special Service for National Security and the National University of Public Service also sent lecturers to the workshop. The curriculum of the training was developed by the professionals of the Hungarian National Police Headquarters, the International Training Centre of the Hungarian Ministry of the Interior and the National University of Public Service in collaboration with the representatives of the Secretariat. Since 2012, Hungary has been a member of the Delhi-based Global Development Network. It is an international network of researchers in Development Studies that focuses on the development of the Third World. The organisation excels other international research institutions and networks by organising its annual conferences presenting new research results.[10]

Recently, Hungarian diplomacy has also sought to enhance cooperation between the various disciplines of the Hungarian Academy of Sciences especially in the areas of Sustainable Development, Climate Impact, Healthcare and Agricultural Sciences and the scientific and educational professionals of countries entitled to ODAs. Bridging the gap in academic knowledge and education in underdeveloped countries is of key importance in development. In October 2016, the Committee for International and Development Studies of the Hungarian Academy of Sciences received the delegation in Hungary for the preliminary investigation before the Committee's accession to DAC, and informed them about the cooperation between the Ministry and the academia. However, the results of these efforts also depend on the commitment of the parties. This partnership assumes governmental awareness and an appropriate national legal environment.

Countries should commit to invest in R&D

Experience leaves no doubt that innovation (developing and commercially and/or socially exploiting new products, processes, services, infrastructure, etc.) is vital for the success of companies (at the *microeconomic* level) and economies and to increase individual freedoms, the quality of life and societal well-being, at the *social* level (Sener and Saridogan, 2011). OECD countries show that higher per employee and more intense technology diffusion correlate strongly with total factor productivity. The impact of innovations[11] in communication, mobility and e.g. healthcare on the quality of life is unmistakable. Innovation is the result of technological development in combination with organisational changes, new management methods, marketing concepts, financial techniques or policy approaches. All these increasingly rely on scientific research done in natural, engineering and medical sciences, and at present more than in the past, to a major extent in social sciences and the humanities. Former developing countries in East and South-East Asia,[12] Latin-America and also South-Africa[13] demonstrate that this is the way ahead. Companies do invest in research and development, which they would not do in the absence of good economic reasons, and that is why in almost all OECD countries business funding R&D has increased[14] considerably. But firms are withdrawing from longer-term research, while patents reveal that they are based increasingly on academic research findings (citation in patents of academic publications). So here is an important reason why government investments are necessary for maintaining the overall R&D enterprise. More generally, there are three compelling arguments. The first one focuses on improving the quality, productivity, cost-effectiveness and accessibility of a variety of services,[15] infrastructure and policies which fall within the – full or partial, direct or indirect – responsibility of the government. Secondly, while basic research does not exclusively serve public good (in other words, others can also use it without diminishing the value for its producers and other firms cannot be prevented from using it), firms will obviously not invest in the entire research they eventually benefit from. Governments have to step and have always stepped in through funding research at universities and institutes of basic science. Thirdly, a considerable amount of knowledge is "tacit" and embodied in persons, procedures and organisations. Using published knowledge requires extensive and expensive learning processes; and capabilities (people, equipment, etc.) are necessary to appreciate and assimilate ("absorb") results from elsewhere. This leads to the modern rationale for investment in public basic research, which creates technological opportunities; increases technological diversity by providing a source of new interactions, networks and technological options, whereas firms tend to exploit the variety included in the existing technological path; and it is also a source of skills, required to translate knowledge into practice; an enhanced ability to solve complex technological problems; and the "entry ticket" to the world's stock of knowledge. Countries that have been able to benefit most from science and technology have systematically built up ways and means to carry out research and development and support firms, government agencies and other organisations in society at large in applying research findings, whether domestically or abroad. Several characteristics are shared, and developed countries, emerging economies and some developing countries do not differ considerably in this regard.

Organisation and funding systems for science

In many developing countries establishing a national body with responsibility for science and technology was part of the initial institutional framework.[16] They had, and sometimes still have, a series of responsibilities: defining policies for science and technology, coordinating science and technology and funding R&D are often included, but also supervising or managing research institutes. They may also attend to the registration of ongoing research, assume responsibility for compliance with international provisions (biodiversity and ethics for example), propose legislation for intellectual property, and occasionally even run a national patent office. A key lesson successful countries have learnt is the need to differentiate between several of these functions and to articulate them in separate organisations, some of them within the government structure, some at arm's length or completely independently. In several countries a new type of body has emerged over the past decade or so as an expression of the importance of science and technology, and education, in the social and economic development of a country. The increasing focus on innovation as the mechanism through which the impact of science and technology is often realized, and the awareness that an international, global perspective must be developed only add to the reasons to create such a Research and Innovation Council (which is the name of a successful example in Finland[17]). The essence is that the government, the industry, research organisations, universities and vocational training institutions agree on and commit to a medium- or long-term vision and strategy of economic and social development. To this end, the government creates a high-level body combining key stakeholders from the government, the private sector and other institutions. Developing and agreeing on the key components of a strategy for economic development; committing to working together, coordinating activities, and mobilising the members' respective constituencies; defining systematic action plans (for example as regards incentives to improve the business environment and entrepreneurship; human resources development; technology, knowledge and innovation; the information infrastructure; communicating with society at large) and monitoring and measuring progress would be the key roles of such a council. It would not take over formal responsibilities but if stakeholders indeed commit to a direction and to work together it may be a powerful informal instance of coordinating across the public and private sector.

Role of a vital business sector

The most obvious standpoint (Golob et al., 2002) is that the business (entrepreneurial) sector usually does not undertake considerable research. Indeed, historical experience shows that with increase in the overall R&D efforts in a country, the financial share of enterprises in the total amount of R&D also increases.[18] The Gross R&D Expenditure measured as a percentage of Gross Domestic Product (GERD/GDP), which in quite a few countries is now close to or upwards of 3%, is financed at a rate exceeding two-thirds by private enterprises. In the period between 2000 and 2015, the GERD share in Hungary rose by a total of 0.59 percentage points. It reached its peak in 2013, when the gross research and development-related expenditure made 1.39 percent of Hungary's GDP. In 2015, this ratio was 1.38 percent, considerably lower than in Austria but higher than in Italy. To the extent that proper economic, social and legal conditions result in expanding and strengthening the sector of private enterprises, one may also expect private R&D efforts to grow.[19] One very effective way is to support companies in employing scientists, engineers and advanced technicians. In many countries schemes are in place to subsidise the wage costs at a decreasing rate, say from 75% in the first year to 25% in the third one, and 0% thereafter. Companies often retain these persons subsequently. Financially supporting specific R&D or innovation projects in companies after an independent check on likely viability or collaborative projects between a company and a researcher at a university or public research centre is also proven to be effective. Technology adaptation and dissemination programmes with a group of companies or an industry branch, supported by a (public) national industrial research institute, are another example. Dissemination is indeed one of the fastest ways to increase the skills and productivity of companies on a wider scale.[20] It is in the focus of attention in many emerging economies, and is increasingly discussed in developing nations. The key notion is that there is often a certain specialization of economic activity in a region, whatever the precise size. There is a virtuous circle of "proximity": companies, even outright competitors benefit from the same suppliers, from agreements and interaction with universities, polytechnics and technical colleges for focused training, from regional governments and banks creating optimal conditions, from joint public, public-private or even private R&D programmes, and so on. Science or technology parks, or public industrial research institutes, with incubator and business development services to assist entrepreneurs in the initial stages of setting up and growing their company, are part of the game everywhere. And very directly, providing tax support, by allowing companies to deduct part of the salary costs of R&D personnel, is found in general by economists to be an effective stimulus. All in all, developing a rich mix of measures and instruments to help increase skills levels, productivity and R&D efforts of companies is a key policy area and challenge for governments in developing countries. There are numerous good examples, and countries moving fast, such as China and South Africa, have gone already quite some way (Haour and Zedtwitz, 2016).

Tertiary education sector: public and private responsibilities

The university sector or, more generally, tertiary education deserves considerable attention. Many developing countries and emerging economies have seen the sector evolve in a particular way. Often one finds one, by now very large, national university which in the past drew most of the talent in the country, both as professors and as students. As student numbers began to grow new national and increasingly private universities were established (Tindemans, 2009). The (former) national university has often grown so large that concerns for decreasing quality are more than justified as funding has not matched the student numbers. Research was rather concentrated at the national university, also because in many cases this university had close links to one or two universities abroad. Private universities concentrate with few exceptions on areas such as business administration, finances, ICT or for example international relations. The mushrooming number of small universities[21] has, however, brought a serious quality issue to the fore, making a considerably tighter accreditation system an absolute necessity. Sometimes, however, governments are still very restrictive in providing licenses to private universities or in other ways, sometimes unknowingly, raising obstacles. The result is that in those countries gross enrolment into tertiary education is at a very low level. Public financing is often non-transparent and rather more follows historical patterns than funding mechanisms that allocate the scarce public resources in the best possible way (McLendon, 2003). Moreover the national university or the few public ones rather deal with the ministry of finance than the ministry of (higher) education, creating a further hurdle towards a transparent and equitable system. In countries with a very strong academy of sciences the additional problem was and often still is that the development of a strong research capacity at universities was effectively choked. Establishing a more balanced system of tertiary education, which is much less focused on one or a few central universities is essential. There are very good reasons for differentiating between universities and professional institutions that offer shorter (one to two year) degree programmes or diplomas or longer (three to four year) professional degree programmes. Only a relatively limited number of universities should be encouraged or allowed to develop into or continue operation as research universities. The dilution of research funding is a threat all over the world and a serious issue, for example, in Europe, but much less so in the US. China clearly follows the US example. Providing high-quality undergraduate education is an important and valuable mission for a tertiary educational institution. A set of interlinked issues relate to the functioning of institutions of tertiary education. But governments need to create the majority of the conditions that provide incentives for the individual institutions to improve their management and operating methods. Universities need strong management, as the traditional academic procedures of appointing persons to key positions are not always well suited to modern requirements. The same applies to human resource management already mentioned in the context of staff development. Universities and other tertiary institutions need increased autonomy, including internal financial autonomy and flexibility in employment conditions. Those conditions, at least in public institutions, often resemble those of the civil service, and the recognition that these are not suitable has taken roots worldwide. Governments are increasingly granting autonomy in exchange for accountability.[22] That is often combined with various forms of performance-based funding, discussed in greater detail in the next section. A link to national priorities is another element whether this is implemented through a financial mechanism or not. Governments may require universities to respect such priorities in ways they may freely choose but should report upon in their annual accounts or strategic plans.

Supporting innovation: funding instruments

Developed countries, the most advanced countries and emerging economies do not only differ in the availability of funding, but also in the lack of a differentiated and transparent funding system for research and innovation. It may seem a technical matter, but it is not. Funding mechanisms play a crucial role in improving quality, managing researchers and institutes, ensuring both sustainable infrastructure for research and competition dynamics, and in providing incentives for cooperation between universities and companies. As an example, in quite a few developing countries experience is now being built up through a mechanism of providing funding on a competitive basis to excellent researchers and their teams, using (international) peer review as a selection procedure, funding coming from international partners in development.

In the first place, governments provide direct funding from their tertiary education budgets, mostly as institutional or core funding, to create the infrastructure for research. There are several ways in which this can be done. Even in developed countries this is still often strongly based on discretionary ways, described by some as arbitrary. But attempts are being made to base these core funding allocations on more or less detailed budgeting and on the funding of specific cost categories, governments or tertiary education funding agencies tasked by governments in some countries to replace governments in doing this, increasingly searching for formula-based lump sum contributions, and this implies that governments base their contribution on rational calculations[23] whereas universities retain the full freedom to spend the money in ways they deem fit. Both past performance and agreed future targets may lie at the basis of such performance – or formula-based funding mechanisms. The second major contribution to university research also comes from the government, but through and independent "Research Council" (there may be more of them for different fields of science) and, to a minor extent, from an "Innovation Funding Agency". This funding is typically provided on a competitive basis, using (international) peer review as the selection mechanism. The ratio of what is often called the "first flow of funds" to university research and the "second flow of funds" varies widely. Some countries (with the US and the UK as key examples) rely heavily on the competitive mechanism, others place the emphasis on the core funding. Actually, this is a policy issue: continuity versus dynamics, as some would like to phrase the dilemma. How to promote concentration of research and thus differentiation of missions of tertiary educational institutions is a vexing problem that governments in most parts of the world face. With regard to tapping private resources, whether it is for stimulating companies to carry out more research or for attracting private donations to boost research in public institutions, governments need to consider which tax measures will effectively trigger individuals, private foundations or charities and enterprises. Competitive funding for research projects is a key as a complement to institutional funding. Nowadays almost all countries nowadays avail themselves of a mechanism to provide such funding. The National Science Foundation[24] in the USA is a well-known example, but in the framework of modernizing research and research funding systems, many countries have set up "Research Councils" or National Funding Agencies with the main task to make research money available for the best researchers by transparently assessing proposals or past performance through peer review (often international) in competition. There is a good case for allowing them operate to a major extent in a "self-organising" mode, run by scientists, although governments should set a certain framework for such a National Funding Agency. The Russian Foundation for Basic Research[25] and the National Natural Science Foundation of China[26] have been successfully functioning for the past twenty years, but also the Uganda National Council for Science and Technology[27] now also provides competitive grants from government money with assistance from the World Bank. Even in France, a country which used to rely extensively on CNRS having its own research institutes and research units at French universities, the French Research Agency[28] (AFR) now provides competitive funding. As the STI system evolves and extends, governments may wish to consider whether more research councils or funding agencies would better serve the different fields of science (Tindemans, 2009). As mentioned above, governments can do several things to encourage companies to increase skills, productivity and research efforts. How should one go about it? And what type of support measures is one to consider? Initially for reasons of efficiency and the lack of (human) resources one may well consider to making the same funding agency that on a competitive basis funds academically-oriented or strategic research also responsible for the support measures that target companies in the first place. But eventually, as the STI system matures, one usually finds a separate agency tasked with the promotion of research and innovation in companies. The reason is that proposals to get support from companies or involving companies often require some form of business plan, market assessment and a strong managerial approach. Assessing such proposals requires different skills from those who need to assess on a competitive basis research proposals. Governments are also considering the instruments they can use to introduce more differentiation, concentration and specialization, which as mentioned before are important policy challenges for the tertiary education system. This has led in several countries to competition between various institutions as a whole or departments rather than between individual scientists. Sometimes public and private partnerships are required in such competitions. The competition is not always complete. For example in China's case, the limited number of universities allowed to participate in the so-called "Project 985" were identified by the government,[29] using academic performance as an important criteria. Another strategy governments may adopt, especially to increase concentration and also specialization, includes mergers between tertiary educational institutions. It is not an easy option to implement, and certainly not when part of the problem is the occasionally very high number of rather small private tertiary institutions. Yet governments should consider the use of accreditation to improve efficiency and quality by increasing the average size of universities and providers of professional training.

Consistent STI system as tool for development

Closely linked to the system of funding science, technology and innovation (STI) and to the functioning of tertiary educational institutions and research institutes is the system of quality assessment. Theoretically sometimes a distinction is made between Quality Control (QC), which is the licensing or accrediting of institutions or programmes ex ante; Quality Assurance (QA), which relates to assessing ex post whether programmes (not institutions) have performed according to the set goals and promises; and quality promotion or fostering, which means the adoption of the attitude of making quality a key parameter in the management of an institution, of faculties, the provision of education and the conduct of research. Autonomy is increasingly provided in exchange for accountability and the latter often depends on reliable quality assurance mechanisms to be in place. One important component of such a system of quality assurance is a formal accreditation system for tertiary education. Many countries nowadays require that the individual programmes (an undergraduate or graduate programme in chemistry, for example) and/or institutions as a whole are accredited on a regular basis. Public funding (in the case of public institutions) or the operating license (in the case of private institutions) can be made dependent on a positive outcome, although in both cases some think that market information (in the form of outcomes of accreditation reports, in other words, naming and shaming) available for students automatically does the work without formal sanctions. Not all countries have a national system; some depend on professional bodies (for example, in engineering) to perform the accreditation. But the mechanism is basically the same: the institution (or department or programme management) is required to carry out a self-evaluation – retrospective and prospective – according to a strict protocol; an accreditation committee appointed by the accreditation body visits the site, and writes an accreditation report with recommendations or even requirements for improvements to be made before the accreditation body gives its verdict. Setting up a proper, transparent and unbiased accreditation system is one of the urgent challenges for governments in developing countries, and it is a very positive development that this is now happening on a significant scale. This is also an area offering quite some scope for regional and international cooperation to exchange views, to establish common protocols, to get international experts on board for national accreditation exercises, and eventually maybe to set up joint accreditation systems. On a global level one finds the International Network for Quality Assurance Agencies in Tertiary education,[30] the INQAAHE with membership from all over world from developed countries, developing countries and emerging economies. The research staff is considerably less homogeneous in terms of quality assurance mechanisms. They are straightforward in the case of agencies providing competitive funding as the evaluation is the key element during selection and granting. But for the core or institutional funding component of research at universities or research institutes, practice still widely differs, or is completely absent. Yet, governments are increasingly of the view that public funding needs to be linked to regular performance evaluations. For this reason, an increasing number of governments appoint committees to evaluate research institutes in a way similar to the accreditation process in education: by self-evaluation, site visits and a verdict with or without direct financial or other implications (including the dismissal of the management). In other cases, governments only require that the institutions or umbrella organisations take the responsibility for such evaluations, and then report the findings to the government. The standard of measuring and evaluating the performance of a research organisation naturally depends on the nature of the institute. An institute for clinical research, an institute for industrial research and an institute for agricultural research that may use a considerable extension component, have different audiences and clients, require different evaluation criteria, and their clients must be strongly involved in assessing performance.

A marked difference between the universities and research institutes in developing countries and in developed nations is found in the area of information and communication technology support. Education, especially tertiary education, and research depend so heavily on support that closing the gap is impossible without adequate provisions. Computers, software tools, management information systems are needed in large numbers, and people need to be trained to use all these. In the past two decades, the establishment and building of a network that provides high-quality data communication services has become of paramount significance. In all developed countries and in many others dedicated national networks called NRENs are in place for the purpose of research and education. These are "knotted" together by continental and global links (very high-capacity cables, increasingly optical fibres). In many developing countries the local capacities are insufficient, national connectivity is poor, as is international connectivity. The other side of the coin is that costs are very high and reliability is low. There is no reason why that situation should be allowed to persist. With the new undersea cable along the African coast, the global coverage of the backbone system is virtually complete. What remains to be built are the national systems and their connection to the continental and global backbones.

Notes

1 Act XC of 2014 on International Development Cooperation and International Humanitarian Assistance was passed by the National Assembly during 15 December, 2014 session.

2 http://nefe.kormany.hu/act-xc-of-2014-on-international-development-cooperation-and-international-humanitarian-assistance-is-now-accessible.

3 www.oecd.org/hungary/hungary-joins-the-oecd-development-assistance-committee.htm.

[4] The main difference between the two frameworks is that while MDGs focus only on the problems of developing countries, primarily on humanitarian assistance, the new goals also concern developed countries.

[5] The Trust Fund on Financing for Development was established in May 2000, in order to support substantive preparations for the International Conference on Financing for Development (March 2002, Monterrey, Mexico) and the participation of developing countries in the Conference. The Trust Fund now seeks voluntary contributions, in order to support the preparation and organisation of the third International Conference on Financing for Development.

[6] Financially, the Member States still make payments for the 10th EDF (2008-2013).

[7] The overall allocation for the 11th EDF has increased to EUR 30.5 billion, and so has the quota for Hungary (0.61%), thus Hungary's payment obligation has increased to EUR 187 million.

[8] The training focused specifically on a "Train the Trainer" type of programme for developing and holding PCC SEE webinars.

[9] Austria, Albania, Bosnia and Herzegovina, Bulgaria, Hungary, Macedonia, Moldova, Montenegro, Romania, Serbia, and Slovenia.

[10] The large-scale conference on Development and Urbanisation was held in Budapest in 2012.

[11] www.oecd.org/innovation/inno/50586251.pdf.

[12] https://medium.com/@LetsTalkPayments/fintech-innovation-in-southeast-asia-f723945d5208.

[13] www.worldbank.org/en/country/southafrica/publication/south-africa-economic-update-more-innovation-could-improve-productivity-create-jobs-and-reduce-poverty.

[14] https://www.oecd.org/sti/outlook/e-outlook/stipolicyprofiles/competencestoinnovate/financing-businessrdandinnovation.htm

[15] Examples include defence, education, health, water, energy and food security, physical infrastructure, governance, social security, protection from crime, or regional and global obligations governments increasingly have (e.g. biodiversity or climate change).

[16] Various names occur such as a national council for science and technology or a national or state commission for science and technology.

[17] http://valtioneuvosto.fi/en/research-and-innovation-council.

[18] https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS.

[19] Yet, there are many things governments can do to promote this.

[20] An approach that has attracted considerable interest concerns so-called industrial or economic clusters.

[21] Having less than 5000 students.

[22] This has several dimensions, but a system of quality assurance which provides transparent and comparative information on the quality of education, research and outreach activities (such as community services or technology transfer) that institutions of tertiary education carry out, is at the core.

[23] E.g. the number of students and/or degrees granted when it comes to education, or on publications or PhD degrees in the case of research.

[24] The National Science Foundation is a United States government agency that supports fundamental research and education in all the non-medical fields of science and engineering, www.nsf.gov.

[25] www.rfbr.ru.

[26] www.nsfc.gov.cn.

[27] uncst.go.ug.

[28] www.agence-nationale-recherche.fr.

[29] The project was first announced by the CPC General secretary and Chinese President Jiang Zemin at the 100th anniversary of the foundation of Peking University, on May 4, 1998, to promote the development and reputation of the Chinese tertiary education system by the establishment of world-class universities in the 21st century and eponymous after the date of the announcement, May 1998, or 98/5, according to the Chinese date format.

[30] The International Network for Quality Assurance Agencies in Tertiary education is a world-wide association of near 300 organisations active in the theory and practice of quality assurance in tertiary education, www.inqaahe.org.

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Gábor Kutasi

Stability of CEE Banks in the Crisis Years

Capital Adequacy and Too-Big-to-Fail Parent Banks in CEE[1]

Summary

The paper analyses the factors of capital adequacy in the banking FDI of Central and East European countries by relying on the Bankscope database. The main hypothesis is that parent ownership mitigated the impacts of the financial crisis on commercial banks, as parent banks capitalized those affiliates which turned red in household and corporate lending. This type of cross-market rebalancing is tested by a regression analysis. Several different factors were identified such as the too-big-to-fail phenomenon of parent banks, the FX rate volatility, the changing monetary environment represented by a 3-month market rate, the fiscal shock caused by sector-specific taxes and the risk of debtor failures represented by proxy of non-performing ratios.

Journal of Economic Literature (JEL) codes: F31, F37, G17, G21, G33

Keywords: capital adequacy, capital adjustment, multinational banks, too-big-to-fail, non-performing loan, Central and Eastern Europe

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Introduction

Due to the US financial crisis and the recession in the EU, the European banking system suffered serious losses in the first decade of the new millennium. Moreover, the banking market of Central and Eastern Europe (CEE) showed a variety of individual

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impacts as a result of the multiple risks of national policy, foreign exchange and solvency. Banks in the CEE region suffered capital losses due to global and local impacts. This process put a pressure on foreign investors to rethink their strategies and either re-capitalize the losses or withdraw their direct investment from the region.

The paper analyses these capital adjustment decisions, with focus on the following factors: 1) status of the parent bank; 2) foreign exchange rate volatility in CEE countries; 3) the changing monetary environment expressed in inter-bank market rates; 4) public finance induced shocks on the banking sector by sector-specific taxes; and 5) non-performing loans (NPL) in the domestic market of operation.

The hypothesis is that too-big-to-fail (TBTF) parent ownership mitigated the impact on CEE commercial banks, as parent banks capitalized the affiliates that turned red in household and corporate lending. Accordingly, a strong cross-market rebalancing emerged in the Central and Eastern European region.

The analysis uses a multiple regression model including cyclical effects, monetary indicators, NPL ratios and a sector-specific tax dummy. The analysis demonstrates that the predominance of TBTF parent banks was a protective factor, as they ensured the necessary capital adjustments of their CEE bank affiliates.

The methodology is derived from capital buffering models and makes the regression model of the analysis. The methodological section commences with the theoretical origins of the composed estimation model, the optimal capital structure equation. Three indicators with an available database will be used to represent capital adequacy, thus testing the hypothesis in three different approaches. Finally, the empirical analysis is followed by an explanation of correlation, significance and adequacy of the database.

The empirical conclusions show that the macroeconomic and regulatory factors have an insignificant impact on the capability of CEE affiliates and branches of multinational banks, and it is almost only the financial power and investment strategy of the parent bank which matters in their capitalisation.

CEE banking and cross-border linkages

Although, in the second decade of the 21st century, the CEE commercial banking sector operates in market economies as usual, the region has a legacy of the command economy that lasted up to 1989. Benczes (2008) summed up the impacts of the past on the banking sector, which was privatised relatively recently, transformed into a kind of two-tier system and opened up to foreign investors, who then became majority owners in the undercapitalized transition region. Besides, CEE markets are characterized by small scales, low financial penetration and low product diversification. These resulted in peculiar features regarding the vulnerability and stability of the CEE banking sector (Benczes, 2008, pp. 128-138).

The small and fragmented market in CEE is not only due to the region's geographical and political fragmentation, but also to the differences between the national financial and fiscal-monetary policy mixes and strategies. Sovereign risks and interest rate policies affect the structure of loans and deposits differently. Before the global and the euro crisis, all CEE countries had national monetary autonomies. Some of them chose the strategy to pass it to the European Central Bank as soon as possible (Slovenia, Slovakia, Estonia and Latvia), or are planning to do so (Bulgaria, Romania and Lithuania), while others have been making efforts to preserve the national currency (Czech Republic, Poland and Hungary). Certain monetary authorities apply strict and high interest rates, some do not. In the eve of the crisis certain countries had higher foreign reserves, others had lower, etc. These policy differences modified and differentiated the credit and deposit structure of the countries. According to Lentner's (2015a) details and analysis of this process, foreign currency loans were spread by policy incentives. Due to the differences between the various national risk premium and interest rate policies, in the countries (Hungary, Baltic states, Romania, and the Ukraine) which retained high rates while also giving opportunity to foreign currency loans, the depreciation caused by the global panic in the emerging market currencies hit households and firms indebted in euro, Swiss franc or other foreign currencies. The solution for meeting the challenge of foreign currency indebtedness is described, among others, by Lentner's case study (2015b). On the other hand, the countries which kept their risk premium close or below the euro area market rates were only slightly exposed to foreign exchange risks related to loans.

Árvai et al. (2009) focused on cross-border interbank spill-overs between Western and Eastern Europe. They recognized an asymmetric dependency of CEE countries on Western European banks, as banking contagion is determined (mitigated) to a major extent by multinational banks. The measured exposure of Western (except for Austrian and Swedish) banks is low. The historical market share figures of foreign banks clearly show that foreign ownership is predominant in the CEE region, considerably beyond 50%, everywhere except Slovenia. Foreign ownership share is important for two reasons: on one hand, strong ties with multinational banking provides indirect channels to one another in the CEE region through the common lender parent bank; and on the other, the relatively big multinational banks mitigated and prevented the mass failure of CEE banking sectors as these TNCs had the liquidity to refund banks for their equity lost and guarantee the deposits left uncovered by the increasing amount of non-performing loans.

Theoretical background and the reasonableness of regressors

Moshirian (2008, p. 2291) concludes that FDI was an "important vehicle for multinational banks to enter developing countries". He diagnoses that the European financial integration and the emergence of large multinational banks started a new era in the competition and consolidation of banks. His assumes that the home country bias becomes much smaller in an integrated sectoral environment.

First of all, it should be clarified why banks invest in a foreign country.[2] Berger et al. (2001) assume a global advantage of multinational banks in comparison to domestic banks, as multinationals have access to better technology to evaluate and monitor the risks and better practices to treat moral hazard. According to Goldberg and Saunders (1981), Brealey and Kaplanis (1996), Konopielko (1999), Buch (2000), Moshirian (2001) and Williams (2002), banks follow their customers. Others (Claessens et al., 2001; Hymer, 1979) are of the view that banks seek efficiency and higher profitability, which can be achieved by extending the market or the number of foreign customers. Lesnik and Haan (2002) measured a strong positive correlation between the liberalisation of the banking market and the banking FDI moving into developing, transiting countries. Claessens et al. (2001) modelled tax advantages sought by foreign banks.

In their studies on CEE and other post-Soviet European countries, Papi and Revoltella (2000), and Mathieson and Roldòs (2001) came to the conclusion that return on equity (ROE), the NPL ratio, the attitude of the host country's authorities and the liberalisation of entry regulations were the most significant factors of attractiveness. Naaborg (2007), however, found that several studies in the literature contradicted each other regarding the link between efficiency and foreign ownership. Horen (2007) analysed whether it matters if the host and home countries of banking FDI are developed or emerging ones when it comes to location decisions. Based on location-related knowledge, he found that banks from developing countries are more important in other developing national banking markets.

Although this paper seeks evidence for the capability of multinational affiliates to resist crises, one must keep in mind the statement made by Eller et al. (2006, p. 302), namely that "foreignness" does not automatically guarantee higher efficiency and competitiveness, and thus a higher economic growth multiplier. The current hypothesis, however, does not concern cost efficiency but liquidity guaranteed by the TBTF nature of parents to avoid bank failure.

The market-seeking activities of multinational banks in CEE countries resulted in predominant oligopolies in the regional banking market, backed by large banks considered to be too big to fail. In Stern and Feldman's (2009) explanation, the TBTF phenomenon implies that political decision-makers bail out big banks in the case of a failure, because they fear an extended banking crisis and a sudden stop in lending, which may trigger general economic depression. TBTF parent banks are important factors in the re-capitalisation of the CEE banking sector, as the losses were ultimately backed by the parent banks' home governments. Being a TBTF bank means it can suffer any degree of loss, their home government will save them, and that is why they can reserve their capability to re-capitalize their affiliated CEE banks with net losses.

Which banks can be considered as TBTF? Stern and Feldman (2009, p. 12) define the term as banks that "play an important role in a country's financial system and its economic performance". Apart from the bank's size, its share in payments and securities transactions also matters. This makes a bank ingrained in the economy, as market actors can assume with certainty that the government will save it in the case of a failure.

Borio (2009) and Rixtel and Gasperini (2013) explain the importance of the economic crisis on the funding of banks. In their view, the crisis increased the ratio of non-performing loans rapidly reduced the prices of financial assets. This trend deteriorated the corporate value of banks, and is important for two reasons. First, parent banks can also be affected by toxic assets and non-performing loans in their domestic markets, as shown by Rixtel and Gasperini (2013, pp. 4, 7), who also demonstrated the impact of the crisis on the 3-month LIBOR, bank credit default swaps (CDS), and the permanent relative devaluation of global bank stock indices since 2008. This can reduce the parent banks' financial capacity to refund CEE affiliates losing equity. However, it is offset by the TBTF nature of the parent banks and their bail-out. Second, the opposite shock through the intra-bank channel includes the case when the value of the affiliates is reduced by the consequences of the crisis, and the parent banks must raise funds to make their contribution to equity so that the affiliates can meet the capital requirements.

Fluctuations in foreign exchange (FX) rates may also have significant impacts. As, referring to the results of Froot and Stein's (1991) model, Ushijima (2008, p. 293) states: "the limited access to external capital due to informational frictions renders FDI sensitive to foreign exchange rate... This is because appreciations of the home currency increase firms' net worth or internal funds in terms of foreign currencies, enabling them to outbid foreign rivals in acquiring information-intensive overseas assets." The composition of FX loans and the volatility of the FX rate can have an impact on assets and the equity of banks. Needless to say, clearly there is a degree of correlation between the NPL ratio and the FX rate. An increasing default risk was manifested in CEE due to the depreciation of national currencies, and the increasing risk premium of insurance against credit default swaps (CDS). The combined effects of recession in CEE economies, the liquidation of companies and the termination of jobs, declining wages in manufacturing and the depreciation of the value of the real estate stock as a guarantor of loans resulted in the depreciation of the credit stock. Part of the collateral value behind bank loans disappeared due to the recession of the real economy.

In addition, monetary policies changed significantly due to the global crisis, not only in the Federal Reserve, but also in CEE and the Euroregion. Central bank rate cuts, increased money supply, innovative central bank interventions (e.g. two-week central bank bonds), etc. appeared.

In the event of an economic crisis, new sources are required to increase the budget revenue, especially if the government is compelled to exercise fiscal discipline due to an unsustainable public debt and the consequent increased credit risk premium, or if there is shortage of credit on the capital markets. The banking sector can become tempting for the government, since banks work with money. In the CEE region, banking taxes and taxes on financial transfers have been in effect since 2010. For example, the Hungarian government levied taxes on banks' turnover and transfer services in a very innovative manner, thus setting an example for Poland and other countries. In addition, the Hungarian government limited the banks' opportunity to shift this burden on the customers. The new taxes were imposed on a temporary basis, with reference to the crisis, but they eventually became a permanent component of the public budget. Such tax shocks confirm the assumption that equity restoration is particularly related to losses from tax liabilities. In the literature, DeAngelo and Masulis (1980) assume that an optimum capital structure is achieved if the marginal tax advantages and marginal disadvantages of bankruptcy are equal. Stolz (2007, p. 22) translates this to banking capital structure as a trade-off between "tax advantages of deposit financing and leverage related cost… due to the reserve requirements". Hungary imposed a high bank tax on turnovers in 2011, but a lower rate had already existed since 2009. Slovenia levied a bank tax after August 2011. Slovakia imposed a one-time tax in 2012, but, not surprisingly, this turned out to be permanent in 2013 in a modified form. Poland imposed the bank tax in 2014. In the rest of the CEE countries bank tax had only existed in theory (e.g. Croatia, Romania and Bulgaria) or had not been part of the government's taxation plans at all (e.g. Estonia, Latvia, Lithuania and the Czech Republic) before 2014.

Non-performing loans are a significant factor in banks' assets and equity. The NPL ratio reduces a bank's lending capacity via provisions. The assumption of the analysis is that an increasing NPL ratio forces the bank to decide whether it wants to keep its lending capacity with a capital increase or change the lending strategy and accept the reduced capacity.

Regression analysis is based on the following methodological background: the analysis of capital adjustment of banks in specific circumstances, defined in the introduction, ought to be based on the literature of the optimal capital structure. Stolz (2007) surveys the change of capital buffers accumulated by banks in the case of the required charter value, reserve rate and minimum capital which try to prevent bank failures. This approach helps us develop the methodology along regulatory aspects. Stolz (2007, p. 13) defines the purpose of regulation as follows: "The traditional banking literature… has identified a moral hazard problem at banks, as depositors, the largest source of funds, are likely to be unable and/or unwilling to monitor banks' investment strategies. This irresponsiveness of funding costs to banks' risks gives rise to moral hazard behaviour on the part of banks: banks have an incentive to decrease capital-to-asset ratios and to increase asset risk, thereby increasing their probability of default and extracting wealth from deposit insurance system. Hence, regulation has to set minimum capital requirements, thereby forcing banks to hold more capital and, thus, placing more of their own funds at risk."

She refers to the conclusion drawn by Merton (1978), which states that banks maintain their reserves above the required minimum and the charter value to have a buffer for any unexpected case. However, regulation can cause moral hazard if the total of the regulatory minimum capital requirement and the buffer exceed the book value. In this case, banks start to pay dividends from earnings instead of accumulating a buffer. Their "risk-loving and gambling for resurrection" strategy increases the moral hazard in the banking sector and makes the failure and contagion more likely. Based on this phenomenon, the Basel III regulation, which increased the capital requirements, can result in the increasing need for re-capitalisation and/or for bail-out in the banking sector. This conclusion is confirmed by Gennotte and Pyle (1991), who established that the capital minimum increases the risk of bank failure. In the earlier version of the Basel Standards, Berger and Udell (1994) as well as Peek and Rosenberg (1995) analysed the moral hazard of stricter regulations. Maurin and Toivanen (2012) also analysed the capital buffer. They also concluded that banks operate above the minimum capital requirements.

Hanson et al. (2011) and Kok and Schepens (2013, pp. 6-7) studied the risk that, if banks reduce their assets, their lending activity must be suppressed, which has an adverse impact on non-financial investment and consumption, and generates depression. In addition, decline in assets means less securities in the banks' portfolio. In addition, crises may reduce banks' balance sheets and cut their equity instead of a capital increase. Special taxes on banking turnover or asset values have impacts similar to crises or to tightening regulatory measures. The authors refer to Lemmon et al. (2008), Flannery and Rangan (2006), Berger et al. (2008), and to Gropp and Heider (2009), who examined the determinants of the optimum amount of bank capital and the speed of related capital adjustment. They emphasised that sometimes market implications overwrite or exceeds the regulation, and so the regulation will have no effect. On this basis, Gropp and Heider (2009) distinguish binding and non-binding capital requirements.

The dynamic analysis of banks'capital adjustment to specific circumstances (detailed above) may be based on the literature of the optimal capital structure. Specifically, the current regression analysis is based on the methodological ideas of Stolz (2007) and Kok and Schepens (2013). These models introduce the following dynamic function:

$$K^*_{i,t} = \beta X_{i,\,t-1}\,, \tag{1}$$

where $K^*_{i,t}$ is the bank-specific, time-varying optimal capital ratio in the dynamic model, and $X_{i,\,t-1}$ is the vector of bank-specific variables. The index i is the indicator of the bank and t is for the year.

Adjustment is measured as a difference between the optimal ratios of two periods:

$$K_{i,t} - K_{i,t-1} = \lambda\,(K^*_{i,t} - K_{i,t-1}) + Regular_{i,t}\,, \tag{2}$$

where $K_{i,t}$ and $K_{i,t-1}$ are the effective capital ratios, and λ is the speed of adjustment to the optimal ratio. A low value of λ implies a passive capital management by banks. $\varepsilon_{i,t}$ is the residual. The projection of capital adjustment can be given as follows:

$$K_{i,t} = \lambda\,(\beta X_{i,\,t-1}) + (1-\lambda)\,K_{i,t-1} + e_{i,t}\,, \qquad 0 < \lambda < 1. \tag{3}$$

The t and 1 indicators highlight the dependency of the capital ratio on the ratio of the previous period, thus making the model dynamic.

Methodology

The current focus is on the level of protection enjoyed by banks in the region or the degree of their vulnerability in terms of capital adequacy. The data is taken from the Bankscope database a comprehensive, global database of banks' financial statements. It contains the balances, financial reports and specific rating data of banks in CEE countries.[3]

The baseline model is represented by the following equation:

$$K_{i,t} = \beta_0 + \beta_1 K_{i,t-1} + \beta_2 FX_t + \beta_3 RATE_t + \beta_4 NPL_t + \beta_5 D_{parent\text{-}TBTF,t} + \beta_6 D_{Tax,t}, \quad (4)$$

In equation (4), K is the capital adequacy indicator. FX is the standardized relative index of the annual nominal exchange rate in comparison to 2007, in euro, to the national currency, calculated as follows:

$$FX = 1 + (FX_i - FX_{2007})/FX_{2007} \quad (5)$$

The calculation in equation (5) is necessary because first of all, the FX rates of national currencies to the euro are very different in terms of digits, requiring a common denominator. Second, banks work with a nominal volume of money and therefore the change in the nominal FX rates can significantly modify the net earnings and the value of assets, equity and liabilities. The FX rates are values at the end of the period (year). The benchmark is 2007, as the depreciation of CEE national currencies started at the end of the third quarter of 2008.

RATE is the national, annual data of a 3-month money market interest rate calculated by Eurostat. As economic cyclicality is included in the model with both the money market rate and the capital indicator of the previous period. To avoid excessive complexity and multicollinearity in monetary indicators, the three-month market interest rate is the only monetary variable included in the regression analysis as a proxy for all money market and monetary policy processes.

NPL is the ratio of non-performing loans. In this analysis, its proxy is the Loan Loss Reserves / Gross Loan (LLRGL) ratio, which provides provisions against NPLs.[4] The regression model contains a dummy $D_{parent\text{-}TBTF}$ for the parent bank's position as a TBTF. Its value is 1 if the parent is TBTF and 0 otherwise. In this study the TBTF dummy is 1 if either of the following conditions apply:

1) the parent bank is among the 250 largest European banks;

2) the parent bank is among the 10 largest banks of its country of residence;

3) the parent bank is among the 30 largest banks of its residence country if this country is Germany, Austria, France, Italy, USA, Japan, China, Netherlands, UK and Russia, as these countries have a large concentration of banks and are significant investors in the region;

4) the parent bank is in state ownership;

5) the parent bank is backed by a car manufacturing holding (e.g. VW/Porsche, Renault Fiat, etc.).

In any other case, the value of the dummy is 0.

The above-mentioned trade-off between tax advantages of deposit financing and leverage cost is represented by D_{Tax}, which is the dummy of national sector-specific taxes on banks, which is 1 if a bank tax is in effect. This way the model can distinguish years with and without a sector-specific tax in place.

As the two dummies reflect different aspects, it is important not to fall into the *dummy variable trap* (Gujarati and Porter, 2009, p. 281). Attention must also be paid to multicollinearity between the NPL ratio and the *FX* ratio. The depreciation of the national currency affects the NPL ratio in countries significantly indebted in FX credits, as discussed above. The model does not contain direct GDP growth indicators to eliminate any further multicollinearity, as the money market rate, the NPL ratio and $K_{i,t-1}$ already represent cyclical effects.

As in light of the regressors, regression focuses on the correlation between the development of capital adequacy the model uses three Bankscope indicators for the adequacy of banking capital:

1) the TIER1 ratio, which expresses a banking firm's core equity capital as a percentage of its total risk-weighted assets;

2) the Total Capital Ratio (TCR), which is a synonym for the Capital Adequacy Ratio and is calculated as follows: (Tier 1 capital + Tier 2 capital) / total risk-weighted assets;

3) the Equity to Total Assets ratio (ETA).

The regression uses data for the period between 2009 and 2014. The geographical range is the eleven CEE EU member states, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. Although there are 379 CEE banks registered in Bankscope, only 290 of these had data for LLRGL and only 167 banks had TCR and ETA data for all of the years of the analysed period. The data are annual ones, since the quarterly breakdown has been very deficient.

With three ways of operationalizing the dependent variable, the specific regression functions are the following:

$$TIER1_{i,t} = \beta_0 + \beta_1\ TIER1_{i,t-1} + \beta_2\ FX_t + \beta_3\ RATE_t + \beta_4\ LLRGL_{i,t} + \beta_5\ D_{parent\text{-}TBTF,\ i,t} + \beta_6\ D_{Tax,t}, \quad (6)$$

$$TCR_{i,t} = \beta_0 + \beta_1\ TCR_{i,t-1} + \beta_2\ FX_t + \beta_3\ RATE_t + \beta_4\ LLRGL_{i,t} + \beta_5\ D_{parent\text{-}TBTF,\ i,t} + \beta_6\ D_{Tax,t}, \quad (7)$$

$$ETA_{i,t} = \beta_0 + \beta_1\ ETA_{i,t-1} + \beta_2\ FX_t + \beta_3\ RATE_t + \beta_4\ LLRGL_{i,t} + \beta_5\ D_{parent\text{-}TBTF,\ i,t} + \beta_6\ D_{Tax,t}, \quad (8)$$

Data for FX and interest rates were downloaded from Eurostat. The banks' ratios (TIER1, TCR, ETA, LLRGL) and the parent banks' TBTF phenomenon were collected on-line from Bankscope. Information on bank-specific taxes was collected from the business press.

Analysis and results

The regression was run using OLS with the stepwise method which mode can fine tune the relevant regressors and excluded the insignificant ones. The overall results of the analysis are summed up in Table 1, which shows a high degree of fit with R^2 values around 0.78-0.8 The F-test results are highly significant and verify that the composition of regressors influence the three capital adequacy ratios. The Durbin-Watson test, which measures the autocorrelation of residuals, indicates that the results are over the upper bound.

Based on an analysis of multicollinearity, regressors are independent from each other. Table 2 shows that the values for the variance inflation factor and tolerance are very low, which means that most of the regressors do not actually influence one another. Numbers in bold indicate moderate cases of covariance. An examination of the detailed correlation and covariance results reveals that collinearity is only strong between the interest rate and the foreign exchange rate (correlation was measured around -0.5 and -0.55), as logically follows and expected from the interest rate parity theory. Besides, the collinearities between the exchange rate and LLRGL, on the one hand, and between the interest rate and LLRGL, on the other, are worth mentioning (with a correlation around -0.2 to -0.24). As mentioned above, this was expected. However, multicollinearity does not invalidate the regression analysis, as the number of observations is sufficiently large for the estimator to be able to make a difference between the variables.

Table 1: Model summary

	adjusted R^2	F-test	Durbin-Watson	Significance	Number of observations (residual degree of freedom)
TIER	0.788	609	2.018	***	492 (489)
TCR	0.741	726.991	1.972	***	766 (763)
ETA	0.798	1156.295	1.987	***	879 (876)

*Note: *** denote significance at 1%.*
Source: The author's calculations

Table 2: Collinearity indicators

	TIER		TCR		ETA	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
LLRGL	0.891	1.122	0.92	1.087	0.915	1.093
Lagged dependent variable	0.963	1.038	**0.685**	**1.46**	**0.703**	**1.422**
FX index	**0.671**	**1.49**	0.962	1.039	0.944	1.059
$D_{parent\text{-}TBTF}$	0.979	1.021	0.95	1.052	0.950	1.053
D_{Tax}	0.947	1.056	0.698	1.432	0.719	1.39
RATE	**0.67**	**1.492**	0.997	1.003	0.984	1.016

Source: The author's calculations using SPSS, entry mode

The results for the individual regressors are summed up in Table 3. The most important variable explaining capital adequacy is its value in the preceding period (t-1). This is an obvious conclusion, as financial or capital stocks are highly determined by their past. It is more interesting that if the dummy is in a TBTF parent's ownership, it is positive and significant in all cases of capital adequacy ratios and both methods. In the cases of TCR and ETA, TBTF is significant at the 1% threshold, or in the case of TIER1, at 5%. Thus, this regressor remains included in the stepwise method in the functions of all capital adequacy variables. This leads to the conclusion that the characteristics of bank owners in the CEE region have a positive influence on the capital adequacy ratio.

As for the rest of the variables, LLRGL is insignificant in the cases of TIER1 and TCR. It only has a significant influence on ETA, which is expected as the LLRGL provisions directly modify the value of the equity. The FX index is completely irrelevant in the determination of the three measures of the dependent variable. The effect of the banking tax is negative, as expected in most specifications, and its impact is comparable to the TBTF owner phenomenon. However, it is not so highly significant. The market interest rate is only significant in the case of a TCR, calculated with the stepwise method.

Only the t-1 value of the dependent variable and the TBTF parent dummy were included in all three capital adequacy regressions at a 5% significance level. The strange phenomenon is that the third regressor included is always different in the three functions. This is explained by the considerable differences in the number of observations, due to data availability. Concerning the value of the constant, ETA has a very low value, which indicates that the composed regressors cover the explanation of the dependent variable very well.[5]

Table 3: Results of the regression analysis

	TIER	TCR	ETA
constant	3.908 (0.609) ***	4.61 (0.479) ***	1.024 (0.367) ***
lagged dependent variable	0.883 (0.017) ***	0.857 (0.015) ***	0.893 (0.015) ***
LLRGL	excluded	excluded	–0.069 (0.023)***
FX index	excluded	excluded	excluded
$D_{parent\text{-}TBTF}$	0.052 (0.604) **	0.064 (0.451) ***	0.058 (0.328) ***
D_{Tax}	–0.05 (0.57) **	excluded	excluded
RATE	excluded	–0.037 (0.076) **	excluded
N	492	766	879

*Note: Standardized coefficients and standard errors are in parenthesis. *, **, *** denote significance at 10%, 5%, and 1% respectively. "Excluded" means that the variable does not meet the 5% significance expectation of the stepwise method.*

Source: The author's calculations using SPSS

Conclusions

This study analyses the determinants of capital adequacy in CEE banks. Several potential determinants are identified, such as the TBTF phenomenon of parent banks, the FX rate volatility, a changing monetary environment represented by a 3-month market rate, fiscal shocks due to sector-specific taxes, and the risk of debtor failure, represented by loan loss reserves to the gross loan ratio. Using the insights of the capital adjustment theory, a regression model is built up to explain capital adjustment.

It is assumed that ownership by a TBTF parent moderated the impact of the crisis in CEE commercial banks, as the parent banks recapitalized their affiliates which had turned red with regard to household and corporate lending. This type of cross-market rebalancing was confirmed by the regression analysis, which concluded that the parent bank being TBTF or multinational matters in capital adequacy in the CEE region.

By regressing three different capital adequacy indicators of the CEE banks, it is possible to draw insights on several determinants. First, multinational banks have been instrumental in maintaining capital adequacy and the lending capacity in the CEE region. In the case of all three capital adequacy indicators, the TBTF parent indicator was significant. The TBTF parent banks' topping up the capital of CEE subsidiaries was crucial in the maintenance of financing capacity during the financial crisis, characterized by increasing defaults on loans. Second, clear conclusions also emerge on other potential determinants. The indicator of NPLs (LLRGL) and the proxy for monetary policy (the market rate) had no significant impact on the risk-weighted capital adequacy ratios (TIER1 and TCR). This is in contrast with the sector-specific tax, which had a significant adverse impact on these ratios and thus deteriorated the lending capacity.

The empirical results are explained through macroeconomic and regulatory factors, which have a limited impact on the capacity of CEE affiliates and branches of multinational banks, and the single factors that matter in their capitalisation are the financial muscle and investment strategy of the parent bank. These factors seem to overwrite the default risk of NPLs and previous insights on regional monetary transmission. This is especially obvious in the CEE business environment, where the banking market is predominated by affiliates in multinational ownership.

Notes

1 The work was created in commission of the National University of Public Services under the priority project KÖFOP-2.1.2-VEKOP-15-2016-00001.

2 For a full summary of the literature, see Bol et al., 2002.

3 Some aspects must be mentioned about the database. Although the global crisis and defaulting domestic debtors have made the CEE banking sector unattractive for investors, some changes have nevertheless been initiated in the ownership structure of banks to alter their foreign/domestic characteristics. In the database, such changes are taken into consideration and are registered dynamically. The CEE banks that have shares publicly traded on the stock exchange and thus numerous foreign institutional or private investors with low ownership percentages, but no foreign investors with a significant leverage (minimum 25% ownership), are classified as domestic banks in their countries of residence (such as OTP in Hungary, or PKO Bank or Getin Noble Bank in Poland). The rationale behind this decision is that foreign portfolio investments are made through the trade of existing shares on the stock exchange and not via initial public offering. The incompleteness of Bankscope made it necessary to chase the owner of some CEE banks, as many of these are owned through intermediaries and the geographical source of FDI is not always clear, such as in the case of CEE banks with Italian owners. In many cases, the Bankscope database was complemented with national banking data (where available). All things considered, the ultimate owners' residence was taken into account. For example, many CEE banks are directly owned by Unicredit Bank Austria, which has Austrian residency, but the ultimate owner, Unicredit, is resident in Italy.

4 Although there is a specific indicator for the NPL ratio in the Bankscope, i.e. the NCO/average gross loans, the database is very deficient when it comes to CEE banks.

5 As the averages of the three dependent variables are close to one another (TIER = 15.59, TCR = 17.46, ETA = 11.77), their constants are comparable.

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István Tózsa

Hungarian Country Equity

Summary
This study tries to shed light upon the unfavourable Hungarian reputation in Europe and the value of Hungarian country brand. In doing so, it explains the components and the formation of country image, association, awareness, loyalty and equity as well. The study concludes with showing the measures with which even small countries can improve their rankings in Simon Anholt's global nation brand and good country index charts. These charts are based on the largest scale social big data study ever conducted and they exercise influence on the countries' economic prospects. The study also reveals the global regions where the Hungarian government should focus country marketing in order to achieve the most rapid economic benefits.

Journal of Economic Literature (JEL) codes: R58, M31, M38
Keywords: the Hun heritage in Hungary, nation brand, country equity, good country index, the "Magyaristan" belt

Ugros eliminandos esse

"The Hungarians must be eliminated" as it was ordered by King Ludovicus of Germany in 907 AD, just before a major battle at today's Bratislava between Hungarians and Germans. It was a political judgement over the Hungarians issued by the West Europeans, and if we consider the Hungarian history in European context, the leaders of the West European nations have always been against Hungarian interests. In 1242, when the Hungarian king sacrificed his kingdom to protect the western parts of Europe against the Mongol or Tartar invasion, and then in 1526 when the

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Hungarian king gave his life and kingdom in order to stop the Ottoman Empire's westward expansion, no European rulers supported the Hungarians in any way. In the late 1600s, in the early 1700s and in 1849, the Hungarian movements and wars of independence against the House of Austria had been encouraged by the French only as long as their geopolitical interest required them to do so and then the Hungarian case was forsaken. After World War I in 1920 when the Austro-Hungarian Monarchy had to be completely destroyed, the Hungarian Kingdom was divided by the French, English and American anti-German political interest among her neighbours, leaving only one third of the country's territory and resources. No other state suffered such a serious territorial loss after the two world wars. Then again in 1956 the great scale Hungarian civil uprising against the Soviet rule was also let down by the western democracies. After 1989 only the West European economies and markets profited from the broad scale liberalisation and privatisation of the Hungarian economy, and the expenses of the destruction of Hungarian economy were never fully compensated after joining the European Union in 2004. The very frequent infringement procedures in the 2010s, launched against Hungary in the EU, and the negligence of the EU Parliament shown towards the Hungarian efforts to protect the Schengen borders against illegal migration after 2015 also seem to confirm the general European negative attitude towards this country, with the only exception of the Polish.

According to the Merriam-Webster Dictionary, the second meaning of "Hun" is either a person who is wantonly destructive or a German soldier, used in a usually disparaging manner. In 2010-2015, when the current author asked English native speakers studying at the International Study Programme of the Corvinus University of Budapest, if the word "Hun" aroused a negative feeling in them, the following dialogue would ensue:

'Why, of course not.'

'Be sincere. There would be no consequences if you tell me.'

'Well… yes.'

Neither in the social awareness of the super power of the world, the USA, is there a more favourable image of the Hungarian nation. In one of their most popular national songs from the time of the American Revolution, in the "Soldier's Joy", there is a line referring to the atrocities committed by the British soldiers against the American civilians that names the perpetrators like this: "the British and the Huns". The most popular army song from the two World Wars is the "Over There". One of its lines goes like this: "Johnny show the Hun, you're a son of a gun".

It can be rightfully assumed that the heritage of the Huns, who devastated half of Europe in a barbaric way and the only nation and country name (*Hungarian, Hungary, Ungarisch, Ungarn, Hongrois, Hongrie, Ungherese, Ungheria, Húngaro, Hungria,* etc.) invokes some ill and unfavourable image in the American and West European social awareness. This is possibly the worst starting position in nation and country branding. Let us see what it is all about, and if this ill position can be cured, as well as what the chances of Hungary are in the competition of country branding and reputation.

Country image

All countries have always had images. The image is an amorphous picture recorded in the minds of people due to childhood experiences, school studies, subjective impacts and feelings. According to Papadopoulos and Heslop (2002) the country image like that of a corporation brand cannot be fully controlled by the government that wishes to reshape and form it. In their opinion the country image is based on perceptions and stereotypes and like a product brand it includes information both from facts and feelings. An image can be shaped by different events and it changes rather slowly.

The country image is such a multidimensional picture of the country of which the sources, the national economy, products, policy, history, culture, geography and the globally known personalities all can be identified (Jenes, 2012). Further influential factors can be the labour market, the international relations, the conflicts and the living standard, the quality of services, the relationship towards the natural surrounding and the environmental policy of the country.

Usually every country does marketing to gain the attention of tourists and investors. The experts of marketing recognized the importance of the country brand through its influence exercised on the national products (Made in Japan, Made in Germany, or Made in Hungary) in the 1960s. It has been followed by the scientific investigation of the country image from the viewpoint of marketing, from the 1980s on. The surveys eventually included the analysing of the country marketing activity parallel with the development of marketing aspects in order to support the deliberate image development of the country (Nadeau et al., 2008). From the 2000s the idea of the county branding has also been introduced with the efficiency analysis and the conscious branding techniques of the country as if it were a product.

Country brand

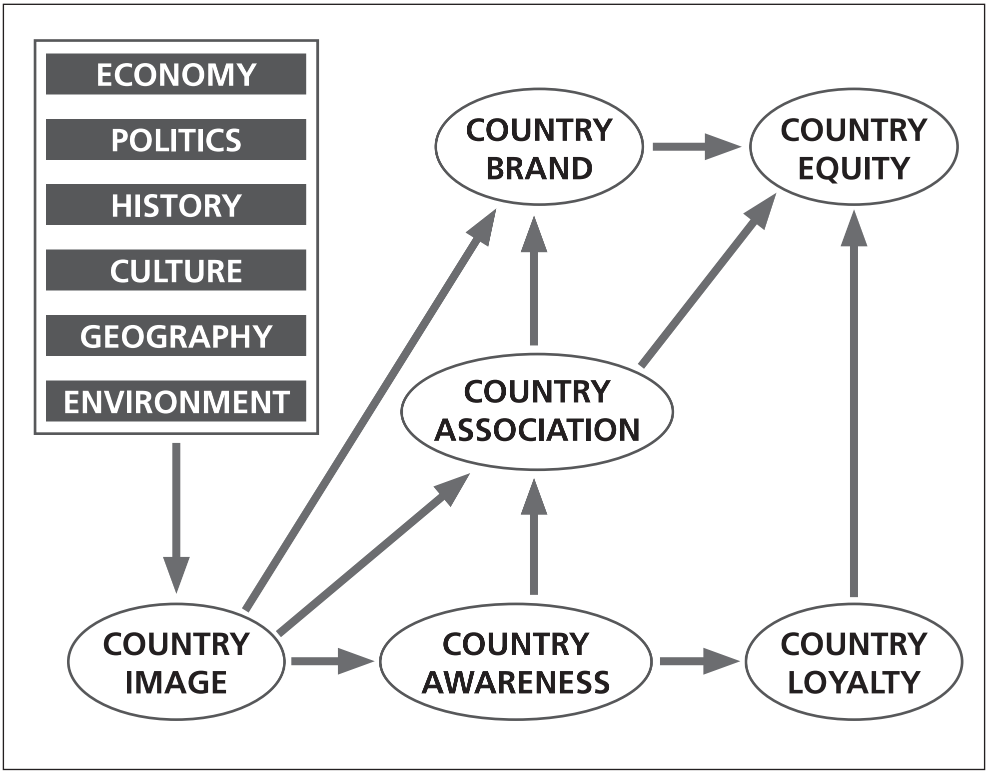
The basic questions of the scientific investigation of the country brand include the theory of the consumer-based country brand equity (Keller, 1993), and the model of the adaptive character of the thought (Anderson, 1993). This model is derived from the cognitive psychology and according to it the information regarding the products and services appear in the memories of the consumers in a hierarchic order, thus making up hubs in a network. It means that associations are connected to the information. Consequently there must be associations linked to the information regarding countries as well. These are displayed in the form of a network in the minds of the tourists and investors, too. Since these associations have both directions and intensities they enter into interference with one another.

According to Jenes (2014) the model of the associative network memory is a good platform to interpret the cognition and description of the dimensions of the country brand equity, too. The application of this model brought about the theory of country equity which is the extension of the classical brand equity theories. The researchers of the above field generally accept the country equity as an attribution of which the potential consumers think when hearing or reading the country name. Therefore the dimensions of country brand equity are the following: country awareness, country association, country loyalty.

The making of the country brand is a communication task. It can be embodied by a logo or slogan having been created from the country image appearing in the minds of the given country's population and of all the foreigners, providing it can be measured, assumed or interpreted at all.

During the course of country marketing it is the trust in its logo, slogan, brand or name that the potential buyer has to be convinced of. The buyers' target groups include the most important ones, first of all, the FDI investors, then the guest-workers, the foreign students, and the ill, seeking cures abroad, and finally the most effective advertising media target group, the tourists. Last, but not at all least, the local population of the country has to be convinced to trust in te country brand as a first step in national marketing even though it will not yield direct investment, or income. After all, no one else is going to believe in a country brand if the local population does not know, like or protect their country (Tózsa, 2014).

Figure 1: Sources and connections of the country image, country brand and country equity



Source: Based on Jenes, 2014

Sources of the country image

National sources of the country image include:

1) Economy (quality and the awareness of its products, reliability, economic and military power, labour market, social network and welfare);

2) Policy (foreign relations, democracy prevailing in its domestic policy, transparency of its economy, living standard, worldwide recognition of its politicians);

3) History (its role in world history, relations to neighbouring countries);

4) Culture (contribution to universal culture, worldwide recognition of pieces of fine art, literature, architecture, monuments, its artists, scientists, sportsmen, gastronomy and its tourist destinations);

5) Geography (landscape beauties, sights, geological, botanical values, fauna and national parks);

6) Environment (the level and effect of pollution, the quality of services, legal certainty regarding personal and property).

Country awareness, country association, country loyalty

Country awareness does not only mean that consumers know the country, its name, but they are able to quote some brands of products from the country as well (Papadopoulos, 1993). Country awareness also involves the knowledge of certain facts or data that the potential consumers possess about the country, without ICT aids such as Internet, smart telephone, textbooks, and lexicons. This way the source of country awareness is the country image influencing country association and country loyalty respectively.

Country association answers such a thought association with which the country names can contribute to the devaluation or appreciation of certain products, brands, services, or sights to see in the minds of the potential consumers. Country association springs from the country awareness and it is the complexity of not only information and knowledge, but rather beliefs, subjective convictions, impressions permeated with emotions (Pappu and Quaster, 2010). In the course of country branding the communication specialists do not only use the country image, but also the country associations, providing they are expected to raise positive emotions in the consumers (who can be investors, tourists, guest-workers, students. patients and domestic population).

Country loyalty influences country equity and is based upon country awareness and belongs to those customers who repeatedly trust the country's products, to the investors who repeat their investment in a foreign country, and to the tourists, students, and patients who express their trust in the country by repeating their visits there. The manifestation of country loyalty in the case of domestic population is patriotism. Country loyalty exists as brand loyalty in marketing, and can be expressed towards a certain country (Pappu and Quaster, 2010).

Country equity is a complex parameter that is defined by the country brand designed by communication specialists, by the country association based on country image and by the country awareness arising from subjective knowledge and emotions, and by the country loyalty (after Nadeau et al., 2008; Jenes, 2014). It is a collage of images constructed into hierarchic, associative network containing information, emotional impressions, maybe experiments and perhaps the official country brand, too. This collage is able to influence the decisions of the consumers (foreign investors, tourists, students, guest-workers, patients and domestic population) regarding a given country.

Country branding

Creating the country brand is the task for communication specialists who try to form it from the country image and associations, following the pattern of marketing products in business. The process of country branding was introduced into special literature by Simon Anholt (1998). With this he earned a similar worldwide professional reputation in urban marketing as Greg Ashworth did when he was the first in adopting the classical marketing tools and aspects to the place (1990), thus making ground for the professional field of urban marketing. It has to be noted, however, Anholt seems to interpret country image and country brand as some kind of synonym, since when describing image, he uses the expression brand and applies it as a logo from business marketing practice. In an innovative way he says country branding is nothing other than the possibility or more precisely impossibility of shaping country image.

In the age of globalisation every country intentionally or unintentionally becomes a seller in a global market place where it has to sell the trust in its own values, or if the leaders of the country do not feel like selling it, the trust in the country's values[1] will at any rate be given credit or not in the global marketplace. The consumers[2] deciding on whether to give credit to and trust in a country's brand or do this on the basis of minimal information and knowledge. This is the reason why the country image (together with the country association, brand, awareness and equity) does not contain only exact information and knowledge, but rather feelings, prejudices, sympathy, preconception with their interrelations ordered into a hierarchical network by the country association. In the global market of countries there are some 200 actors[3] each of whom is both a seller and a consumer.

Most countries try to apply logos and conduct branding communication. According to their philosophy their governments know the values of their countries, their scenic landscapes, their proper sites to invest, and their tourist destinations; however, they have to face the facts that the other countries are not aware of their values. Therefore they feel compelled to set up and open offices and agencies whose tasks include communication design, branding the country i.e. the PR and the promotion of the country. Anholt (2016) says and verifies it with research results that this kind of promotion with the exception of that of the tourist destination is quite useless and has no impact, since the country equity cannot be influenced by country branding no matter how much government money is put into it. In the global world of the Internet, country brand promotion towards the local population and the foreign consumers can work only in the dictatorships, where the political power directing the branding can close down all the communication channels, but its own. But even in this case only the local population can be made to trust in and believe the country's image. The potential foreign consumers will react to such an image in two ways as the people do who are being coerced to believe in something: 1) they either do not pay attention to it, or 2) they reject it with collecting contradictory reasons. Anholt (2016) presents the examples of Hitler's Third Reich from history and that of North Korea now.

Anholt's Nation Brand Index

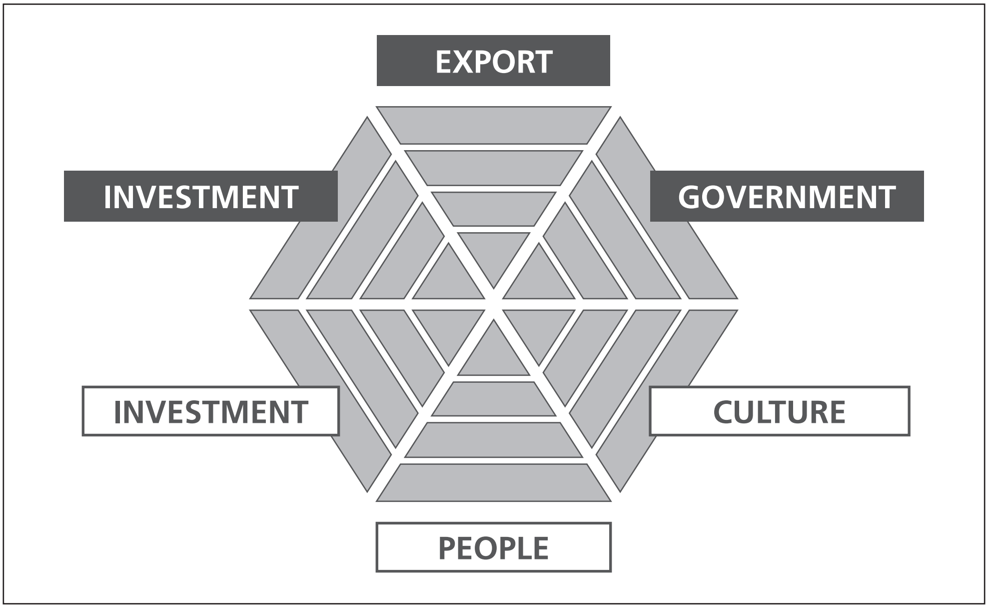
Governments, when they try to brand their countries (which equals the country image forming in Anholt's interpretation, too), they try to communicate with statistical data and facts what their country does and has. What is missing from this is what people think of it? And that is why this kind of country branding has no effect at all. Anholt (2007; 2011) has introduced a new method and a parameter with which he wanted to measure and rank the country brands and images. He created the *country brand* index with the *competitive identity* method. With this, relying only on the names of the countries as brands he has created the nations' rank list.

This nation brand rank index list has such an economic impact that according to the results of the Max Planck Institute one point improvement on this list induces 2% export growth of the given country (Anholt, 2016).

The basis of this nation index list is the competitive identity measurement that is the most extensive social science research. Since 2008 there have been 25 thousand enquiry sheets of 50 questions each, filled in and processed from 25 countries. The survey has been examining 50 countries that represents statistically 66% of the global population and 70% of the purchasing power parity. In the past 7 years it yielded 245 million data sequences to be processed.[4] Half of the questions of the enquiry sheets regard three "hard" parameters: the *export* (to measure the economic strength of the brand "Made in"), the *FDI* (Foreign Direct Investment), and the *reputation of the government* (from the aspects of democracy, transparency and environmental policy). Besides them there is a group of another three questions regarding the "soft" parameters. They are *tourism* (with the landscape and entertainment destinations of the country), *people* (the worldwide known personalities of a country, the immigrants and the Diasporas coming from there[5]), finally *culture* (including the cultural world heritage items, gastronomy, music and arts of the given countries).

The investigations of Anholt led to the recognition of an important fact that while the "hard" factors representing the economic power of a country are more or less known, the "soft" factors are usually unknown abroad which can lead to significant anomalies.[6] To detail why the lexical knowledge of people regarding universal history, literature, geography and art is so extremely low and why it is still declining may lead far. It cannot be explained by the shortcomings of schooling, but rather by the restructuring of knowledge. The smart phone, with which all the world's knowledge is in your hand or pocket, ranks lexical knowledge as something to be kept in the Internet cloud instead of your own memory where it is useless. This leads to the loss of knowledge with emotional surplus, too, including country awareness and image, and in case of local population to the loss of patriotism as well (Tózsa, 2016).

Figure 2: Anholt's country brand index

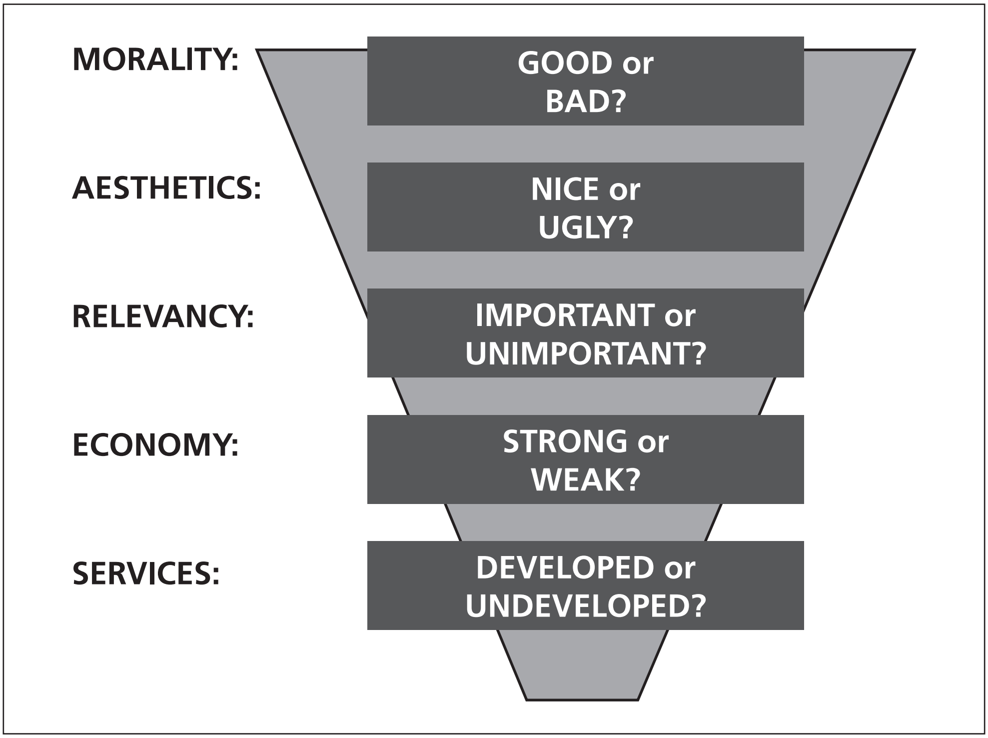


Note: See the strength of the "hard" factors (top) that are relatively rather known by the foreign consumers than the "soft" factors (bottom) that are less or not known by the majority. The strength of the factors can be displayed on a 0-5 scale hexagon diagram
Source: Anholt, 2016

When analysing the data of competitive identity deciding the nation brand, Anholt came to the conclusion that though the country image (brand) is not constant, it changes very slowly. It has continually been built into people's minds since childhood and single events like e.g. the Volkswagen scandal in 2015 cannot at all rock people's confidence in a country brand, this time in the German trademarks, and they continue to believe in the good quality of German products, trusting them as if nothing has happened. Anholt's research team surveyed the responses regarding the "soft" factors, too. They discovered that when classifying national brand indexes in social, historic, cultural aspects, the mental level of a decisive segment of the world's population[7] answers with the knowledge of a seven year old child (Anholt, 2016).

Having taken into consideration the result of the analysis of the huge data set, Anholt's research team established a refined national brand indexing method with the simplest approach. What is a country like? To be able to answer this, see the approach below on the mental level of a seven year old child: 1) Is the country good or bad? It means it is dangerous or useful for the rest of the countries, and if it is reliable in international relations. 2) Is the country's landscape pleasant, beautiful, or is it ugly? 3) Do I have anything to do with this country? It means if it is important or not significant for me for some reasons. 4) Is it strong, or is it weak, meaning rich or poor? 5) Does it have highly developed services, or not?

Figure 3: Anholt's good country image



Note: Components of the country equity. The basis of the good country index, showing that the moral aspect is by high the most important in judging the country names (images, brands) positive or negative; is it good or bad?
Source: Based on Anholt, 2016

Be good if you can[8]

According to Anholt, the good country index, drawn from the country name as an image or brand, can manifest the country equity on the country association interpreted on the mental level of a seven year old child. It comes from the recognition that the moral aspect (good/bad) is the most significant factor in the country equity. Who do people love? The good one. Like in case of modern business marketing, the basic issue is not the praising of the product or service, but the survey of the market demand; in the course of country marketing it is not sufficient, or to put it simpler, with the exception of tourism it is totally useless to praise and expose the values of a country.

The moral choice between good and bad is manifested in the question: what does this country do in favour of the other countries?

Anholt's Good Country Index is calculated for 125 countries (Hungary ranks 61. while e.g. China 125.). Similarly to the country brand index it is also changing very slowly, and it totally neglects the fact how much is spent on country marketing activity (i.e. promoting its "hard" factors). One of the moral lessons of the good country index application and survey (Anholt, 2016) is e.g. Malaysia that has launched a very heavy country marketing campaign in 2014 and it did not result in any change of its rank in the list, and on the other hand, there was e.g. the Czech Republic which did not spend on country marketing in 2015 and stayed at the same rank in the list as previously. Egypt spent a lot on country marketing activity in 2015 and yet its position got worse in the list, like Italy which did not spend on marketing. Chile and South Korea, however, got into a better position in the good country index list in 2015, despite not having spent on country marketing campaigns in the previous year. What did they do? South Korea opened up new doors in approaching North Korea as a gesture, made Seoul a greener and more liveable city than it had been before, and increased its activities in the international aids and charity organisations. Chile launched its start-up programme through the import of the USA start-up companies.

What a country or government does to its local population belongs to domestic policy, and it will be known from the international press, if it is ostensive and irregular enough to rise the stimulus threshold of the international media. The major question is what a country or government does to support other countries and governments? This is what has to be communicated in the course of country branding. Inherently each government of each country is egoistic, when they send delegations to international forums, their main objective is always to reach the most favourable position usually at the expense of the others. The first ten ranks are occupied in Anholt's good country index list by the member states of the European Union.

International public opinion appreciates the Union membership, because in the Union each nation-state could convince itself to give up a part of its economic sovereignty for the sake of the so called common good.[9]

So what can a small country do if it wants to be "good"? Global common good can be embodied by such an activity that serves other countries as well, in trying to solve global problems. They can be the participation in trying to decrease the causes of *climate change*, the protection of *human rights*, the response towards *migration*, the overcoming of regional *epidemics*, the participation in giving international aids to countries stricken by natural *catastrophes*, preventing *nuclear danger*, etc. Obviously these problems are exceeding the capacity of even the strongest countries, they are too global. However, during the country marketing the participation is the fact that has to be stressed. In case of Hungary such activity is that of the president of the republic, János Áder who exercises a great international influence in fighting against the global warming.

The major issue in achieving a favourable rank in the good country index list is what a given country has done in protecting global environment? Or even more precisely: what this country has done for us? If we now think of Hungary, the question is what Hungary has done for the other European countries? Today it is no use to mention historical milestone battles like the one in 1241 when the Hungarian king sacrificed his kingdom to stop the Mongolian invasion threatening Europe, or the battle in 1456 when Hungary stopped the Ottoman Turkish attack for 70 years at today's Beograd. Between 1526 and 1697 the Hungarian Kingdom used up all its resources including independence and area in order to protect the Christian Europe against the Ottoman Turkish westward expansion.[10]

Hungarian nation as it can be seen from its history is an extremely self-defeating one. The first two milestone battles in 1241 and later in 1526 were lost because of the infighting between the kings and the aristocracy, which has been repeatedly present in Hungarian politics up to now. It is something that might be explained only by supernatural causes like the Turanian Curse.[11]

Figure 4: "Hungary" in some Eurasian languages[12]

Source: Edited by the author

The names *magyar* (Hungarian) and *Magyarország* (Hungary) as our perception of brand names, north and west of the country is dominantly derived from the word "Hun", with the exception of the Czech Republic and Slovakia in the neighborhood. To the south and east of Hungary, its name is usually formed with the words "Ung" or "Veng" and the form of the Hungarians' original, qualified name, the "Magyar" also appears as a prefix. The pejorative sound of the word "Hun" can be understood in West, North, South and Central Europe and all over the world where the Portuguese, Spanish, Dutch, French and English who do identify the Hungarians with the Huns, established colonies. In these regions Hungary as a country brand is at a competitive disadvantage because of the gaps in regional knowledge and the negative emotions associated to the word "Hun" (barbarian).[14] In addition, the Hun-Hungarian *(Magyar)* association seems to be indelible even in the Hungarian social consciousness as it is supported by many historical beliefs and legends.[15]

Table 1: Strategic table of the Hungarian country branding related to Anholt's competitive identity[13]

Hun- (negative)	**Ung-**	**Veng-**	**Magyar- (positive)**
Albanian, **Arab,** Armenian, Dutch, **English,** **French,** Greek, **Hebrew,** Latin (scientific), **Portuguese,** **Spanish**	Bulgarian, Danish, Estonian, Finnish, Georgian, **German,** Irish, **Italian,** Latvian, Macedonian, Norwegian, *Romanian,* Swedish, **Ukrainian**	Belarus, Kyrgyz, Lithuanian, **Polish,** **Russian,** Turkmen	Azeri, *Croatian,* Czech, Kazakh, Kurdish, Mongolian, **Persian,** *Serbian,* *Slovakian,* *Slovenian,* Tajik, Tartar, **Turkish,** Uzbek

Note: Meaning of italics: language of a neighbouring country; bold: ≥ 40 million speakers, italics and bold: both
Source: Edited by the author

The purpose of the official Hungarian nation branding could be the winning of the public sympathy of the two most influential powers, Germany with some 80, and Russia with some 150 million populations. Also, Turkey[16] and Iran (Persia) also with some 80 million inhabitants respectively could be desirable partners in improving Hungarian nation brand. In doing so, Hungarians could also rely on the 40 million Polish nation[17] alone among the peoples of Europe.

In order to improve Hungary's good country index, the government ought not to advertise and promote the landscape beauties, the cultural heritage, events and festivals, since Anholt's findings pointed out their unnecessary nature. This activity has to be left in charge of the tourist agencies and the government bodies responsible for tourism. Hungarian government ought to communicate first of all in German, Russian, Italian, Polish, Turkish and Persian speaking areas what Hungary does for them!

In 2013 in Malmö (Sweden), in the Eurovision Song Contest a song titled "My Dear" (sung in Hungarian) reached No. 10, thanks to Germany, the weight of the German voters alone, who dedicated their score to the "Dear Hungary". What Hungarian image elements motivate the sympathy of the new age German public? Before the political change of the regime in 1989, Hungary provided a pleasant and cheap meeting place at the *Plattensee*, or Lake Balaton for the German families coming from the two politically divided German countries in the 1960s, 70s and 80s. Tearing down the "Iron Curtain" separating the communist countries from the European democracies was also a Hungarian initiation in 1989 which directly led to the German reunion.[18] As it can already be seen, the Hungarian defensive role played in the so called migrant crises having started in 2015, will further support the sympathy of the average German citizens towards Hungary and the Hungarian government, no matter what the official German policy declares.[19] All these will improve the Hungarian image in the German social consciousness as that of a country which knows the only reasonable way to protect Europe and first of all Germany, the main destination of the African and Asian migrants. Hungarians almost stand alone backed only by the Polish, Czechs and Slovaks in trying to maintain the Schengen border of the EU and Germany. The Hungarian measures are in sharp contrast with the helpless migrant management of the official EU. Therefore the German public might get over the negative "Hun" association, thus improving the Hungarian country brand in Germany.

Russia, trying to regain its great power position in the global geopolitical game, got into contradiction with the USA once again, after the Cold War. As a consequence of the NATO expansion in the Baltic region, the Ukrainian crisis and the annexation of Crimea were inevitable and scheduled responses to occur. Hungary also got into a new geostrategic position and it is not only about the country brand, but about a real policy choice: whom to do good for: the Russians or the Ukrainians? Ukraine is a neighbouring country with a Hungarian minority living in its Trans-Carpathian region. It is a huge country with a 40 million population and it offers Hungary a proximate and large market. Russia is a global power, the world's largest country and richest in natural resources, which if joined forces with China along the Eurasian New Silk Road project implementation, can be a worthy challenger to the USA (Bernek, 2016). The most feasible European gateway of the north continental New Silk Road (the One Belt, One Road Chinese project) is offered by Hungary.

According to the country association there are three countries among the large and strategically very important ones which can be good alliances in improving Hungary's image. One is the "ancient enemy" and a brother nation at the same time, Turkey. The other is Iran (Persia) the cradle of European civilization, and the third is the old friend, Poland. All three countries have special global geo-strategic positions from the viewpoint of the main geopolitical chess master, the USA. The chess master intends to move the Polish and the Turks to restrain and isolate Russia in Europe, while the Persians are meant to do the same regarding India and China (Friedman, 2016).

Obviously Hungary, with its Euro-Atlantic commitment in geopolitical sense cannot perform a "good country" role towards Russians and Ukrainians at the same time or to the Turkish and the Russians simultaneously. In these countries the Hungarian appreciation of their history and cultural values ought to be communicated. In order to achieve and strengthen the good country image or brand, Hungary has to be present in the destination countries, in their nation state level environmental events, in cases of emergency, natural disasters, rescue or relief actions (no matter how symbolic) Hungary's participation, care support and help have to be communicated and stressed. In the same way the expression of solidarity during the concrete or symbolic support has to be carefully communicated. It is not about only *doing good,* but *doing well.*

"Good and well" to strengthen the Hungarian country equity

In summary, harmonizing with the current geopolitical situation, the Hungarian government ought to pay attention to the communication of the activities below in order to enhance the good country image and brand in the primary destination countries (the "important" ones and the ones with "Magyar" prefixes).

Table 2: Fields and measures to be taken to strengthen Hungarian country equity abroad

Event	**Activity to communicate**
Forums, events related to global climate change	High level participation, holding speeches, organising the events, or sections of the events
Forums, events, related to global pollution	
Forums, events related to regional environmental problems	
Supporting green and liveable human environment	Educational publishing and online dissemination of works, pieces of arts
The protection of European culture	
Regional epidemics	Medical aid, rescue team, food aiding even if it is only symbolic
Natural disaster, catastrophe (earthquake, tsunami, floods, volcanic eruptions, droughts)	
Migration, illegal migration	Effective protection of the Schengen border, border control contribution to transit countries
Civil war	Geopolitical situation-dependent military assistance, even if it is symbolic
Strengthening cultural links	Maintaining historical, cultural relations abroad, commemorations, participation in events
Strengthening the soft factors (human, tourism, culture)	Organising Hungarian Days
European existence. Sustainability of the nation state diversity in the field of culture	Online publication of games and videos which will strengthen the European system of values

Source: Edited by the author

Due to its size and economic virtue, Hungary cannot incur any significant great power role in the various aiding measures, therefore the focus ought to be directed not on the volume of assistance delivery, but on a professional way of communicating its involvement in the international aiding activity. Thus as many people will learn about it as possible, not only in the recipient country but in the world public opinion.

Table 3: Priority of the country destinations to do good and well

Priority order to improve country equity				
1. Group ("important")	**2. Group ("Magyar")**	**3. Group ("Ung/Veng")**	**4. Group ("Hun")**	**5. Group ("remote")**
Germany Ukraine Poland Russia Turkey Italy Iran (Persia)	Croatia Serbia Slovakia Slovenia Czech Rep. Montenegro Bosnia Herzego-vina Azerbaijan Kazakhstan Tajikistan Uzbekistan Mongolia	Romania Austria Bulgaria Macedonia Switzerland Ireland Finland Sweden Norway Denmark Georgia Lithuania Latvia Estonia Belarus Moldavia Kyrgyzstan Turkmenistan	USA Great-Britain France Spain Portugal Netherlands Belgium Israel Greece Albania Armenia	China Japan South-Korea India Brasilia Indonesia Mexico etc.

Source: Edited by the author

In the first group of the priority table, the "important" countries are the ones with at least 40 million inhabitants that do not use in their Hungarian country brand the "Hun" prefix responsible for the most pejorative emotional country association, and such powers from Asia Minor and the Middle East who use the friendlier "Magyar" prefix. Owing to the geopolitical role of Hungary leading to the German Reunion, the Hungarian country brand did improve in Germany. In the second group there are countries applying names to Hungary derived from the "Magyar" and where the Hungarian country name value and equity can be maintained or improved with relatively small investment.[20] In the third group there are the nations using the "Ung" and "Veng" prefixes, and where the Hungarian country image and brand have a good chance to improve. The fourth group including most of the strong countries, there is a strong social consciousness of either the "Hun/barbarian," or the "Hun/hunger" associations. With them history has shown that where they find it appropriate, like the French political leaders, they easily sacrifice Hungarians when it serves their interests. It was the case many times during the 17th-19th centuries when the Hungarian political leaders of the freedom fights against the Austrian Empire were deceived and misled all the time by the French politicians. And in 1920 France, Britain and the USA in the Peace Treaty of Versailles ordered two thirds of the one thousand year old Hungarian Kingdom to be given to the neighbouring countries, just to isolate Germany from the Balkan and East European expansion, by destroying the strongest link of the Austro-

Hungarian Monarchy. With millions of Hungarians finding themselves abroad as national minorities in today's Romania, Slovakia, Serbia and Ukraine, the French and the British were assured that the region of the Carpathian Basin would never be united again for more than a century. And there would be no chance to revive the Austro-Hungarian Monarchy as the eastward geostrategic bridgehead of the Germans.

The fifth group contains the remote or overseas countries among which the ones listed, and especially China, Korea and Japan may have significant effect in forming global public opinion as well, regarding the country brand of Hungary. In most of the African, American, and Asian countries the legacy of the "Hun" prefix version prevails because it was simply inherited from their former English, French, Spanish, Portuguese or Dutch speaking colonialists. In case of some other "remote" countries the Hungarian country branding may rely on the effective assistance of the many communities of the Hungarian emigrants and their descendants like e.g. in the USA, Canada, Argentina and Australia.

Finally it has to be noted that unfortunately, perhaps as a consequence of the previously mentioned Turanian Curse, the current Hungarian political opposition always complicates the job of the current Hungarian government in trying to improve the Hungarian country brand. They are ready to sink the government vessel, even if they themselves sink with it. They prefer being captains on the life raft to being sailors in the country's boat. In early 2017 e.g. the opposition initiated a referendum against the organisation of the 2024 Olympic Games for which Budapest would have had quite good chances. Also, the misconduct procedures launched by the EU against Hungary are always backed by the EU representatives of the current Hungarian opposition. There is hardly another nation in the world the pro-government and opposition representatives of which would not be able to cooperate in case an issue of national importance. Hungarian nation, however, despite being extraordinarily talented, is such. *Nil novi sub sole*, the behaviour related to this Latin proverb can be traced back in history. In the 13th century most of the Hungarian barons wanted their wealth confiscating king to be defeated rather than to march to war with him, even though they themselves were slaughtered later by the grandchild of Genghis Khan, the Mongol. When Suleiman the great Ottoman-Turkish conqueror attacked Hungary in the 16th century, a major war lord deliberately missed the battle hoping that the reigning king would fall and he himself could be the new king with Turkish support. This self-destructive disregard can be detected in the 21st century as well in the EU Parliament, making the Hungarian good country brand building rather difficult. The European public has to face the question: how much good can this country do for others when it cannot do good, even itself?

Notes

1 Resources, products, history, culture, services etc.

2 Investors, shoppers, tourists, guest-workers, international students, the ill seeking healing – and the local population.

3 The number of countries is around 200, but the exact number depends on various factors like whether the country is a de jure independent area, whether it is recognized by the UNO, whether it is a colony,

an oversea dependency or protectorate, or the country is a *de facto* independent area, not recognized by the UNO only by certain other countries, but operating as a state seceded from another country with its own administration.

4 It can be interpreted as the application of big data in social surveys, the largest scale ever conducted.

5 Interestingly the more immigrants or guest-workers come from a country, the larger the Diaspora is, the country's image and equity is getting worse in the destination country, due to the following message generated in people's mind: "If so many people have to leave their country, that country cannot be a good place."

6 E.g. in the field of culture people place the USA with some 300 year history before Iran (Persia) the cradle of human civilization with a history looking back to some 5000 years

7 The 25 countries included in the survey stand for 70% of the world's PPP.

8 The forewarning of Saint Philip of Neri: *"State buoni, se potete."*

9 No one has ever recorded the economic loss Hungary suffered during the time of the preparation for the EU accession, following the change of the political regime in 1989. E.g. the Hungarian aluminium industry, apple orchards, agriculture, food industry used to be among the world's leading producers, but when the socialist economic borders had to be opened to market economy, all Hungarian trades went bankrupt, industrial factories, agricultural cooperatives all were privatised, sold and then closed down. The country had to pay a very high price accompanied with massive unemployment, inflation and decline in living standard, in order to be able to join the EU's market economy. The beneficiaries of these losses were the economies of the strongest European Union member states, via gaining new markets.

10 Hungarian mediaeval poets like Bálint Balassi referred to Hungary as the "Patria wearing the shield of Christianity and a sword painted with the blood of the enemy".

11 The Turanian Plain lies between the Ural Mountains and the Caspian Sea on the eastern edge of the European continent. This is the original homeland of the Hungarians, the Magyars, known as Great Hungary, or *Magna Hungaria*, in Latin. Today it is the territory of Bashkiria and the Tartar Republic of the Russian Federation. The majority of the *Magyar* (Hungarian) tribes wandered towards the Sea of Azov and the Black Sea in today's Ukraine, then in a few hundred years they arrived in the Carpathian Basin (in 895 AD) where in 1000 AD they were affiliated to the Roman Catholic Church and Christianity, known as the "new faith." However, some of the *Magyar* tribes had dwelled in the Turanian region until 1240, the Mongolian or Tartar invasion of East Europe. The Turanian priests or shamans of the ancient Hungarian faith put a curse on the Magyars having left their native land, saying "people leaving their homeland behind will be left by their gods, and their reward is a constant dissension and internecine fight". This is the essence of the Turanian Curse that seems to have struck Hungarians and is still displayed even in the EU Parliament among Hungarian representatives belonging to different parties; they take one another as the worst enemies sometimes completely neglecting the real interest of the Hungarian nation.

12 The distribution of the names meaning Hungary in Europe and in the Middle East, showing the ones who use the "Hun" forms in grey, and the ones using the 'Magyar' forms in black. The neighbouring nations (with the exception of the Austrians and the Romanians) and the nations in Asia Minor, the Middle East and Middle Asia use the "Magyar" forms. The majority of the West, North and South European nations apply the pejorative "Hun" formative, which generates a pejorative country association in their social consciousness, unfortunately.

13 Regions and nations with English, French, Spanish, Portuguese, Hebrew and Arabic native speakers are just "crumbs of comfort" from the viewpoint of Hungarian country marketing attempts. In German, Ukrainian, Italian, Russian and Polish languages the "Hun" is not directly present, therefore the Hungarian chances of the country branding might be better and are worth strengthening the good country image. Paradoxically the country brand sounds best among the native speakers of the ancient enemy, the Turkish, and in the source of the European or Western culture, the ancient Persia (Iran). They could be the best partners in creating the good country brand for Hungary.

14 On the one hand, the present writer was talking with an American woman teaching English in Hungary a few years ago, and she remarked she did not understand why the name Attila was so popular with the Hungarians. It was something, she added, as if someone was named Satan in the States. Well, indeed if

we consider the great Hun war lord having devastated a good part of today's West Europe, he cannot be expected to retain a positive image in the social memory of the Western civilization. On the other hand the positive image of Attila is present in the Hungarian collective memory since the Reform Age (early 19th century) when the Hungarians fought for their economic independence from the House of Austria, the Hungarian national literature and arts used the image of the world conqueror Hun over-king (referring to him as the forefather of the Hungarians) to awaken the national pride and consciousness of the Hungarians.

15 The present writer held an introductory lecture in 2006 to a Swiss group of university students about Hungary, on the bank of the River Danube in Budapest the capital city of Hungary. He happened to mention that the name of the country in Hungarian is not Hungary, but *Magyar* country. The Swiss were curious to know if the Hungarians had not been the descendents of the Huns. 'Of course, not' was the answer 'the Huns had dwelled in the Carpathian Basin for only 50 years in the middle of the 5th century AD, while the *Magyars* arrived here almost 5 hundred years later, in the 10th century, so the Hungarians have nothing to do with Attila's Huns.' Then the present writer pointed at the entrance of the big cave chapel in the side of a huge block of rock, the Gellért Hill on the other side of the Danube: "See that cave up the hill there? That lent its name to Budapest, the Hungarian capital, because Pest means cave in old Hungarian language." It was the moment when one of the Swiss students asked: 'And what does Buda mean, professor?' She must have known that the Hun Attila's twin brother's name was Buda. So the Hungarians themselves could not get rid of the Hun heritage even if they wanted to, it is present not only in the name of their country in many languages, but in the name of their capital city, too.

16 Since Hungarian language does not belong to the Indo-European language family, but to the Ural-Altaic language family, among the closest relatives of the Hungarians there are the Turkish. During the 14th-17th centuries there had been a constant hostility, a brother-war between the two related nations who had been socialized in two totally different religious cultures and civilizations.

17 *Polak, Węgier, dwa bratanki, i do szabli, i do szklanki* (Polish and Hungarian are two good friends who fight and drink wine together). The mutual sympathy of the two nations dates back to the times when the Hungarian kingdom was founded. The first Hungarian king's (Saint Stephen's) sister, Judith, was married to the Polish king and her son Bezprym lended his name to the Hungarian town of the queens: Veszprém. Several of the first Hungarian kings were born in Poland. A Hungarian princess, Saint Kunigunda of Poland founded the famous salt mines at Wieliczka, Poland. Louis the Great used to be a common king of the Hungarians and Polish ruling the largest kingdom in Europe of the time. His daughter Hedvig was recognized as the reigning queen of Poland. The Polish Jagello House gave Hungarian kings as well. Due to his successful wars against the Russians, István Báthory, the Hungarian Transylvanian prince had also been the most popular and prestigious Polish king. During the two world wars the Hungarian and the Polish nations could maintain mutual solidarity.

18 As it is recalled, on August 18, 1989, there was a so called Pan-European Picnic organised in Hungary in the close vicinity of the Austrian border and the impermeable "Iron Curtain". With the intercession of Gyula Horn the then foreign minister of Hungary it became possible to cross the border for a short time, even without a passport. The only condition was riding a bicycle. At that time in the heat of the summer, there were several thousand East-German tourists holidaying mainly at the Lake Balaton and when they learnt about this picnic, some 600 hundred of them drove to the border, curious to know if it is really possible to cross the "Iron Curtain" without being shot dead. All of them got across the border, riding bicycles and leaving their cars behind. In the communist times in East Germany the most popular, cheap and widespread car make used to be the Trabant, the "Paper Volkswagen," the only treasure of the East German families. It was the time when a new saying was born resembling the famous lines from Shakespeare's Richard III going like "A horse, a horse, my kingdom for a horse!" and it went like "A bicycle, a bicycle, my Trabant for a bicycle!" About a month later on September 11, the Hungarians opened the Austrian border in front of many thousands East Germans to go to West Germany via Austria. This was the most important Hungarian image enhancement action in German social consciousness, since another nation did them good, not only helped, but initiated the fall of the communist East Germany and the German Reunion.

[19] The EU leaders' pro-acceptance attitude to migration crisis can hardly be verified, since it is the European civilization to be compromised on the long run. The radical implications of the democracy export named Arabic Spring generated by economic drives of the USA, destroyed the guarding dictatorial forces of the African (in Libya) and Asian (in Syria) gateways of the European Union (and its engine, Germany). Accidently it was 2015, when the total GDP of the 28 EU countries exceeded that of the USA. The original American aim of the mass of migrants may have been to slow down the fast developing German economy. However, the German and Union political leaders may look upon this crisis as a tool to enforce a stronger European Union integration against the will of the minor nation states. Thus at the expense of receiving a few million migrants, a common EU military and foreign policy can be achieved with German hegemony. This could be a way to reverse the American "weapon" deployed against Germany, creating the United States of Europe. In this situation the minor nation states, rightly anxious about their own and the European culture, are the "bad guys," but only in the eyes of the political chess players. The average German, French, English, or Italian citizen, who votes for the good country index, agrees with the Hungarians. See the Brexit in Europe, the Catalonian crisis, or the triumph of Donald Trump in the USA and the political strengthening of the right wing in Austria at the end of 2017!

[20] Notice: in case of the Slovakians having been seeking their national identity on government level since 1993 the "Madarsko" as a country brand rather has a more oppressive and pejorative meaning than friendly. Similarly, the Serbian "Madarska" bears the dark and bloody heritage of the Serbian-Hungarian relations all throughout the 16th-20th centuries. In the neighbouring countries like Slovakia, Serbia and first of all Romania, the still existing Hungarian national minorities can contribute to the formation of a better country brand.

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Economic and Technical Factors Behind the Rise and Fall of Economic Globalization and Some Consequences in Hungary

A Historical Perspective

Summary

Although globalization has been going on for quite a time, after 1970 it took new forms. Foreign direct investments were made in increasing amounts just to optimize the value chains of large transnational companies. The activities requiring unskilled workers were outsourced to underdeveloped peripheral countries like China, Vietnam and Malaysia in Asia, and after 1990, to Romania, Slovakia or Hungary in Central and Eastern Europe. At the same time the activities that require skilled and high-quality labour were kept in Western Europe. TNCs made profits on the difference between the low wages paid in peripheral countries and high prices charged in developed ones. Although it seemed that globalization cannot be stopped, a new development, robotisation might slow down or even completely stop this process: why should a company outsource any activity to a faraway developing country and transport goods for thousands of miles if they can use relatively cheaper robots at home, close to the key markets? Robots may be considerably cheaper and more disciplined than any human worker in a cheap-labour country. Robotisation has significant economic and social consequences, as the budget revenues of governments might decline, as a large

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part of government revenues comes from taxes levied on wages. With significantly less workers the budget revenue is reduced. In Hungary the results of heavy taxes on labour (to a minor extent, personal income taxes and more importantly, social security contributions) are felt, as the discrepancy between net and gross wages is too high, and thus when the EU labour market opened up to Hungarian workers, nearly half a million Hungarians (around 10% of the active population) left the country for Western Europe.

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Definition and the various aspects of globalization

In 2000, the International Monetary Fund (IMF) identified four basic aspects of globalization:

– international trade and transactions,
– international movement of capital and investment,
– migration (movement of people), and
– international dissemination of knowledge (IMF, 2000).

We might suppose that, after the emergence of the technological, legal and cultural preconditions, economic globalization moves first and is followed by other aspects of globalizations, but it is not always true: political problems might slow down or even completely stop economic globalization. Political conditions can also be regarded as the precondition to and result of economic globalization.

How to measure the level of economic globalization?

Economic globalization is generally regarded as the rapid growth of

– foreign trade,
– foreign investments,
– international mobility of labour force.

The periods when these factors develop more rapidly than GDP can be regarded as the Tides of Globalization, and when they develop less rapidly that GDP, as the Ebbs of Globalization (Katona, Árva and Schlett, 2013).

There are different ways of measuring the ebbs and tides of globalization. There are more precise and complicated, and there are simpler but more easily measurable methods. One of the most elegant measurements of globalization was worked out by the Centre for the Study of Globalization at the Warwick University (Warwick, 2017). This elaborate system measures the economic, political and cultural aspects of globalization and creates a synthetic index (called "CSGR index") by assigning various weights to the different measurements. This index is rather complicated and has an elegant mathematical background. The value of CSGR is normalized between 0 and 1, and the higher values are assigned to the higher level of globalization. Unfortunately, the CSGR value has been computed only for a rather short period between 1982 and 2004, due to a lack of available and reliable data.

So, although we have a good and elegant globalization index, it is often useless for historical analyses as does not cover a sufficiently long period. Unfortunately, the CSGR index only includes relatively short and highly unreliable time series. More importantly, the most recent CSGR index relates to 2004, and so it is rather old. For this reason, it is more advisable to look at less sophisticated, although perhaps less perfect, indices, like the Long-Term Globalization Index of Angus Maddison, which compares the growth of international trade to GDP growth rate. A few years are also missing from these data, although Maddison made tremendous efforts at collecting long-term economic data from different countries.

When GDP grows more rapidly, than international trade, economic growth is faster than trade growth, this is an ebb in globalization, and a period when trade develops more rapidly can be regarded as a tide in globalization. The figures collected and computed by Angus Maddison (2007) suggest about 3 tides and 2 ebbs in globalization throughout economic history.

Table 1: Stages of globalization

	Average annual growth in world trade	**Average annual GDP growth**	**Annual average GDP growth to average trade growth**
1500–1820	0.98	0.32	3.0 1st TIDE (the EBB was perhaps between 1750 and 1820, but data are insufficient)
1820–1870	4.18	0.94	4.4 2nd TIDE
1870–1813	3.40	2.12	1.6 2nd TIDE (slower)
1913–1950	0.90	1.82	0.5 2nd EBB
1950–1973	7.88	4.90	1.6 A small TIDE
1973–2003	5.38	3.17	1.7 3rd TIDE
1820–2003	3.97	2.25	1.8 TIDEs and EBBs together

Source: Maddison, 2007, p. 81, with the author's remarks

Stages of globalization

According to various globalization theories, globalization takes place in consecutive stages. By the most widespread theories (Benichi, 2007, or Katona, Árva and Schlett, 2013), economic globalization started in the 16th century with the great geographical discoveries, continued during the "long 19th century", approximately between 1789 and World War I, and currently we are undergoing the third wave (Berger, 2003). In the 15th and 16th centuries, mainly rare and precious raw materials have attracted foreign trade and foreign investments and drove infrastructure development abroad (harbours, roads, etc.). It is interesting that the intensive tides in globalization slowly faded away in the 18th century, mainly because of the long and merciless wars that tore Europe: the Eighty Years' War, the Nine Years' War, the Seven Years' War, the Napoleonic Wars, and many others.

In the 19th century the picture changed drastically. According to Berger's research, the 19th century can be regarded as the forerunner of the current economic globalization, with foreign investments and even some transnational companies. Market buying investments appeared and a few transnational companies were launched before the end of "the long 19th century", as the devastating and long 1914 war stopped globalization abruptly (Berger, 2003).

Note that even a few years before the "Great War" that started in 1914, several economists considered it highly improbable to have armed conflicts in Europe. As Norman Angell, the famous columnist of *The Economist* wrote in an article, and later in his popular book entitled *The Great Illusion* (Angell, 1911) that "war is economically and socially irrational and wars between industrial countries are useless because conquest did not pay". He also added that even if there would be a war in Europe, it would be short. He argued that the "economic interdependence" of nations (in other words, globalization) is the "guarantee of lasting peace".

All we know is that this bright future has never arrived, and in 1914 not only a bloody and disastrous war started, but the glorious years of 19th-century globalization had quickly came to a long-lasting standstill.

The Great War ended in 1918, but the political and economic conditions were still unripe for a return to original level of globalization. On the one hand, small nation states were created in Europe to replace former large Germany, the Austro-Hungarian Monarchy and of the Ottoman (Turkish) empire. Russia was transformed by the Bolshevik revolution to a country moving towards economic isolation and autarchy. In addition to all these political stresses, in 1929 a great economic crisis swept over the world. With the beginning of World War II in 1939, all hopes of returning to pre-war globalization were lost.

Globalization after World War II

After World War II, the world was divided into three distinct groups of countries, each following a different way of development.

1) Developed market economies wanted to re-establish free trade and free capital movement, i.e. the traditional globalization.

2) The Soviet Union and the socialist bloc surrounding it became increasingly isolated and formed an autarchic group of countries rejecting globalization.

3) The newly independent colonies, called "developing countries", were in between the two larger groups and have called themselves "Third World, or Non-Aligned Countries", and this country group was not very enthusiastic on globalization either.

Western Europe and the globalization after 1945

After World War II, due to the losses suffered during the World Wars, there was a serious shortage in labour force in Western Europe. As a high number of men died during the wars, the manufacturing industry, which was rapidly growing after the war, was seriously short of labour.

The solution for that problem was admitting people to Western Europe from the colonies (or after 1960, rather from the former colonies) and employ them in the newly built and rapidly developing factories.

Millions of people arrived in Western Europe from Africa and Asia and were employed in the automotive industry, in manufacturing household appliances, etc. This policy worked till the end of the 20th century, when new economic, cultural and political developments started to cause serious problems in these countries. They included demands for equal pays to the recently arrived workers to those indigenous in Europe, and protests against the rejection and seclusion of immigrants, or the descendants of immigrants, by the native majority, which (not surprisingly) caused negative sentiments. Slowly but steadily, these increased tensions.

The developed countries made enormous efforts at re-launching globalization, and so this period saw the creation of the most important international economic organisations, as the World Bank Group, the IMF, the GATT, the UNCTAD, and others. This was also the time of establishing the European Economic Union, the predecessor of the European Union.

Socialist countries outside globalization

The socialist countries were nearly completely excluded from the globalization process as they blatantly refused it. In addition to distancing themselves, these countries openly rejected all forms of the market economy, especially international capitalism. Globalization was the worst idea for the politicians of the socialist countries. They wanted to develop on their own, from their own resources, and the use of foreign credit was rejected for a long time.

Globalization and the so-called "developing countries"

The underdeveloped former colonial countries (politely termed "developing countries" after independence had been won) also tended to reject globalization as they suspected the manipulations of their former colonialists in this idea. They nationalized foreign-owned assets in agriculture, industry and trade, and decided to set out on their own economic development, without strong ties with the former colonizers.

These countries followed the "developmental state strategy", elaborated in Latin America by Celso Furtado and Raúl Prebisch, the most important economists of the third-world countries, which relies on the "centre-periphery" theory and advocates "protectionist and state assisted" industrialization.

The starting point of the idea is highly rational: in the 19th century Latin America had a traditionally important trade with Western Europe. Latin American countries exported raw materials (mainly food) to Europe and they bought manufactured goods from Europe. But after 1914 this model suddenly collapsed with the war. Trade was blocked during the war by German submarines and after the war by the ensuing economic difficulties, including the Economic Crisis of 1929-1933. After 1939, World War II repeatedly halted trade between Latin America and Western Europe. As all these difficulties nearly completely destroyed trade with Europe, Raoul Prebisch maintained (Prebisch, 1950) that it was important for Latin America to start industrialization on its own. He argued that industrialization should be promoted by the state. Similar models were applied after 1960 in South-East Asia, Singapore, South Korea, Taiwan, Malaysia, the Philippines, etc. fairly successfully. Frequently, experts from even socialist countries visited third-world countries to help their industrialization efforts.

Drawbacks of state-organised industrialization

It was often maintained that state-assisted industrialization might cause corruption and a close cooperation between the political and economic elites, where only those can succeed who enjoy support from the political ruling class. This is often called "crony capitalism", a term coined in the Philippines during the Marcos regime and credited to business editor George M. Taber of the *Time* magazine, who first used it for the Philippines in an article in the April 21, 1980 issue called "The Age of Crony Capitalism" (Hau, 2017). Taber maintained that state-assisted industrialization is the hotbed of corruption and is consequently biasing the distribution and efficiency of resources. Others argued that the case was just the opposite: without active state participation and help, efficient industrialization is impossible in underdeveloped countries.

Unfortunately, convincing empirical examples or even econometric results are unavailable to support any of these opposing statements, and further research is needed in this field.

Increasing state deficits due to state-assisted industrialization in the 1970s

State-assisted industrialization efforts were generally financed from state revenues and credits, a large part borrowed from abroad. By the end of the 1960s the majority of developing countries had accumulated huge debts to invest in industrial development. In that decade no one was worried about its increase, as it was taken for granted that industrialization would create the capacities required for repayment.

However, during the 1970s, the pointless US spending on the Vietnam War, the powerful wage demands of the British Trade Unions, the oil price hikes after the OPEC crude oil embargo following the 1973 Yom Kippur war, and the declining oil supply due to the war between Iran and Iraq ran the world economy into a formerly unknown phenomenon: stagflation, which is a state of economic stagnation with increasing prices.[1] Latin America was extremely severely hit by the crisis, as these countries had already been heavily indebted: between 1975 and 1982 Latin American debt to commercial banks increased at a cumulative annual rate of 20.4 percent. External debt of Latin America rose from USD 75 billion in 1975 to more than USD 315 billion in 1983, or 50 percent of the region's gross domestic product (GDP).

The problems of these countries only aggravated when in 1979 the Fed decided to increase the interest rate. In addition to making it more difficult to borrow money, it also rapidly increased debt service. The exchange rates of Latin American currencies started to depreciate, as current account problems deteriorated. As a result of depreciation to the US dollar, Latin American governments ended up owning tremendous quantities of valueless national currencies. The contraction of world trade in 1981 caused the prices of their major export products, the primary resources, to fall. Third-world countries were thrust to the brink of bankruptcy by the middle of the 1980s.

A "solution" for the debt crisis: the Washington Consensus

Among these circumstances, the USA made an "Irresistible Offer" to the Latin American countries: this was the famous Washington Consensus, suggested by the US administration's Washington think tanks and from the IMF experts, and were edited by John Williamson, an economist from the Institute for International Economics, an international economic organisation, based in Washington D.C. (Williamson, 1989). The most important topics of the Washington Consensus were privatisation, deregulation and the liberalisation of FDIs.

The message, after a brief hesitation, was well received by the heavily indebted developing countries: these economies were opened up to foreign investors and privatisation began. Not surprisingly, in 1990 the former socialist countries were given the same advice, and followed it enthusiastically.

Globalization at the end of the 20th century

Clearly, globalization was largely driven by foreign direct investments and the rising foreign trade. The end of the 20th century saw the peak of the third tide of globalization and foreign direct investment. The major causes of a rise in globalization included the following:

– The legal conditions of FDI become free of constraints in the third world and in the former socialist countries.
– The freedom of foreign trade had increased.
– Transportation and communication developed rapidly.
– There was a relative political stability during the cold war.

During the 19th and at the beginning of the 20th century foreign direct investments was primarily made in order to purchase market shares ("market buying investments") in rich countries situated close to markets. A minor amount of investments were made in developing countries to obtain resources and raw materials (crude oil, coal, and special materials required for metallurgy or for the computer industry) ("resource buying investments"). Investments in extraction industries were generally implemented in Africa, in the Middle East or in Latin America, in relatively poor countries.

But by the end of the 20th century, new tendencies had emerged: as rich countries paying relatively higher wages were no longer competitive in low added value assembling, these activities were often outsourced from the centre to the peripheries, to developing countries with low wages. Through outsourcing companies realized competitive advantages. "Offshore outsourcing investments" had become the most important form of FDI by the end of the 20th century and contributed considerably to globalization, as modern technology and brand-new products arrived in underdeveloped countries. Transnational Companies (TNCs) made profits on the differences between the low wages paid in the countries where production was performed and the high wages, and consequently higher prices, in their markets in the developed countries.

Naturally, traditional "market buying investments", which first appeared at the end of the 19th century, and the "colonial type investments", made primarily to obtain raw materials and serve energy generation, have also survived. In addition, another type called "state subsidy hunting" investments also emerged, as governments, eager to attract as much foreign direct investment as possible, began a "race to the bottom", i.e. to provide generous tax cuts and even subsidies to foreign investors.

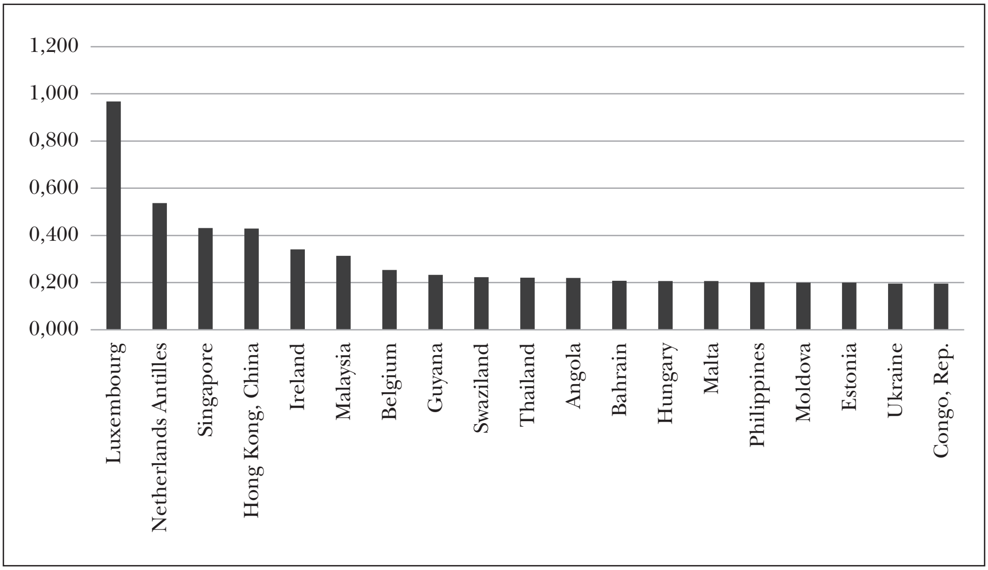
Hungary in the whirlwind of globalization

After 1990, Hungary was rapidly globalized. Privatisation included the sale of state-owned enterprises to foreign strategic investors, and in addition, greenfield investments also entered Hungary. In the CSGS Index of the Warwick University Hungary rather high. (Figure 1)

Note that in this Complex Globalization Index, Hungary ranked 14th of 135 countries in 2004. Unfortunately, more recent data are unavailable for the Globalization Index. In view of the developments of the past few years, the overall picture probably has not changed, although perhaps Hungary's Globalization index might has diminished.

As the promises of globalization, namely, rapid economic development and universally improving living standards, have not been fulfilled, a relatively strong anti-globalist sentiment has emerged in Hungary at the beginning of the 21st century. A few

Figure 1: Economic Globalisation Index (score) 2004



Source: Warwick, 2017

formerly privatised companies have been re-nationalized and the government supports local Hungarian businesses in developing their capacities. This was somewhat similar to the above-mentioned state-assisted industrialization seen in the third-world.

Factors working against globalization at the end of the 20th century

Certain factors worked against globalization towards the end of the 20th century, such as:

1) The copying of high-tech European and US products in China jeopardised the technological monopoly of companies in rich core countries.

2) Inequality increased all over the world (Credit Suisse, 2017) and triggered anti-globalization sentiments.

3) Nationalist sentiments in target countries (in Latin America and some South Asian countries) fuelled anti-globalization movements.

4) The unfulfilled or broken promises of globalization evoked anti-globalist attitudes in the former socialist countries.

5) In capital exporting countries fears also led to protectionism in the interests of the local labour force (note President Trump's measures).

However, these factors were superseded by economic interests, and offshore outsourcing has continued up to this day, although the 2008 economic crisis slowed it down (UNCTAD, 2017). Yet another factor that has put globalization at risk is technological development.

Is this the end of globalization?

Is technological development, namely robotisation, the ultimate cause of the possible demise of globalization?

Technological development has already started to pave the way to the end of offshore outsourcing and globalization. Globalization was hard hit by the emergence of robotics, as the use of robots in assembling will render offshore outsourcing pointless: robots are much cheaper and more precise than the cheapest and most precise workers in any developing country. Consequently, in the early 21st century, offshore outsourcing and foreign direct investment has become economically useless and irrational.

Robotisation also has unpleasant consequences. First of all, as lot of experts have pointed out, the use of robots reduces employment. It is a major concern who will buy the newly produced goods if workers' headcount falls. Another point mentioned by Krugman back in 2012 is that GDP would be distributed even more unequally than now, as the share of labour would decline, and so rich people will get richer, while the poor will sank into deeper poverty. A similar remark was made by labour economist Richard Freeman (2016) in his paper titled "Who Owns the Robots Rules the World", arguing that most people's jobs are at the risk of becoming robotized or otherwise automated.

The use of robots will also jeopardise the functioning of social security systems and welfare states in Europe (elsewhere we can hardly find anything similar to welfare state or social security system). Robots do not pay taxes and social security contributions. Currently, social security and welfare expenditures are financed from charges on wages, but if robots make workers redundant, unemployment will also increase in developed countries. Developing countries, the traditional targets of offshore outsourcing, are in a fare more serious trouble. Immigration to rich countries would be accelerated by the increase in unemployment resulting from the drying up of capital flows to developing countries. These problems are further aggravated by climate change in the Middle East and in Africa.

Social and economic conclusions of the new developments of Globalization: melt down of state revenues

As we have seen, Globalization has entered into a new phase after the 1970s as the answer to the new problems was offshore outsourcing. The results of this offshore outsourcing were important for the economy, as

– it has made possible to reduce costs of production,

– products and services were sold in the rich developed countries,

– the profit was realised in the industrialised, rich countries,

– tax revenues of the countries all over the World have diminished radically due to transfer pricing and corporate tax reductions provided or Foreign Direct Investors in order to attract more investments into the poorer countries.

Transfer pricing means that transnational companies are "optimizing" overall corporate taxes by modifying prices of their services and goods circulating between different units of the TNCs. Consequently, tax revenues of the states were melting down. State revenues could only be rebuilt by collecting state revenues through relatively new ("unorthodox") taxes, like VAT, as it was made in Hungary after 2010.[2]

At the same time technological development seems to destroy the very bases of globalisation. Use of artificial intelligence and the spread of robotization had made offshore outsources rather useless. But the collapse of globalisation might also cause grave problems for the states. One of the major consequences is the possible collapse of the budgetary revenues of the poorer countries, which were relying heavily on taxes charged on wages.

High wage taxes are already causing grave problems in Europe and especially in Hungary[3]

Hungary ranks 60th in the World Economic Forum's 2017-2018 World Competitiveness Report (World Economic Forum, 2017), which identifies five major causes for this disappointing performance:

1) Inadequately educated workforce;
2) Corruption;
3) Tax rates;
4) Tax regulations;
5) Access to financing;
6) Instability in policies.

Not surprisingly, taxation (including rates and regulations) is high on the list. The Hungarian tax wedge are almost the highest in Europe, currently next only to Belgium. "Tax wedge is defined as the ratio between the amount of taxes paid by an average single worker (a single person at 100% of average earnings) without children and the corresponding total labour cost for the employer. The average tax wedge measures the extent to which tax on labour income discourages employment. This indicator is measured in percentage of labour cost" (OECD).

The consequences of a high tax wedge in Hungary are disappointing:

1) Differences between net and gross wages are very high.

2) Nearly half a million Hungarian workers, approximately 10% of the active population,[4] have left the country to work in Western Europe.

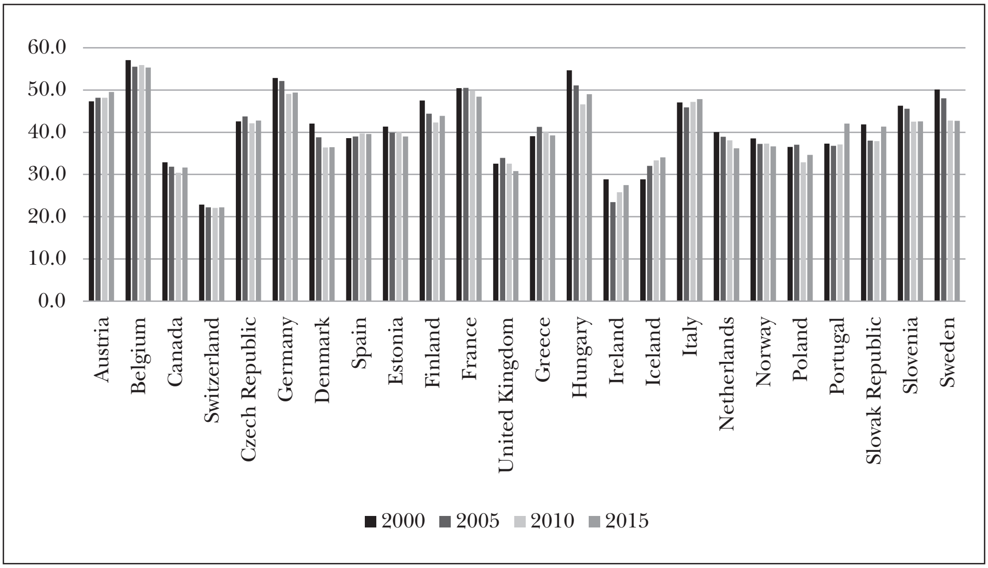
3) SMEs are in a competitive disadvantage, as foreign-owned large TNC's generally sell their products in Western Europe, where purchasing power is considerably higher, and consequently, higher prices can be charged. In Hungary social security contributions do not hinder TNC's activities.

4) SMEs are often compelled to try to evade taxes, and so they simply do not register their employees or register them at considerably lower wages than actually paid.

5) Employees unregistered for social security are frequently ineligible for healthcare.

6) Workers registered at lower-than-actual wages will not receive proper pension when they retire.

Figure 2: Average tax wedge for a single person at 100% of the average wage (AW) in the private sector (excluding children)



Source: OECD

Although in the past few years, the Hungarian government has made efforts to reduce the tax wedge by lowering certain social security charges, the outcome remains unconvincing and rather haphazard. The measures taken so far have not clarified or simplified the taxation regime as a whole.

Solution for the high tax wedges and for the disappearance of budget revenues from wages taxes: the Scandinavian method of healthcare financing

As shown above, the traditional financing of social security (when either the employee, or/and the employer pay charges to finance healthcare, pension and the unemployment benefits) causes difficulties by increasing the gap between net and gross salaries, and might incite tax evasion and/or emigration.

Fortunately, for this problem there is a solution that has worked fairly well in the past few decades in some Western European countries. It is called the "Scandinavian method of healthcare financing".

In the UK and in the Scandinavian countries (Sweden, Finland and Denmark) the healthcare system is financed from the general budget instead of taxes levied on wages. The term generally used for this method is "fiscalisation", but for political marketing reasons I suggest replacing it with the expression "Scandinavian healthcare financing".[5]

In this proposal we deliberately were not speaking on the pension system, as it would be extremely difficult and even politically counterproductive to finance pensions from the general budget. People generally would like to keep the "transformation rate" of pensions around 1 (what means that after retiring they would like to have more or less the same amount of revenue as they had before).

What about the pension system?

Employees want to enjoy pensions almost as high as their wages or salaries (i.e. at a conversion rate[5] around one). Despite the serious problems the various pension plans are facing, they are beyond the scope of this study.

Benefits and costs of the Scandinavian method of healthcare financing

Financing healthcare from the central budget might offer the following benefits:

– The difference between net and gross wages would decrease.
– The evasion of social security contributions would become pointless.
– Emigration would slow down.

Scandinavian healthcare financing is efficient: in the WHO's list of the world's health systems, in the year 2000, the UK, Sweden, Finland and Denmark ranked 18th, 27th, 31st and 34th, respectively. Hungary ranked the 66th (Boyle, 2011; WHO, 2000). This clearly shows that a different method of financing would not ruin Hungarian healthcare, provided that the government does not cut healthcare spending in the central budget but rather increase it.

Costs of the Scandinavian healthcare financing is also a factor which should be taken into account, but according to our calculations (see: Arva, et al, 2017), "only" HUF 1100-1300 billion is required for the transformation of healthcare financing. Naturally, this is not "new money", as it is also collected from taxpayers, but in a different way. As in 2016, Hungary's GDP was HUF 35,420,320 million, and in 2017 it was around HUF 36,482,930 million, the required sum is less than 3% of the country's GDP. This means that the "Scandinavisation" of the Hungarian healthcare system can be implemented within a few years, it merely requires a political decision. But this transformation might be regarded as an important step in order to save an important public service in Hungary and avoid financial crisis of the state in the coming years.

Notes

1 Naturally, it was a cost-push inflation which was impossible to cure by the traditional Keynesian demand reducing efforts.

2 In Hungary in order to obtain adequate tax revenues, after 2010 the new government has introduced exceptionally high VAT rates, in some cases over 27%, as it was rightly hope that it is relatively more difficult to avoid VAT than corporate and income taxes.

3 We already analysed this problem in detail (in Hungarian) a few months ago, in the Hungarian journal *Valóság* (Árva, Giday and Mádi, 2017). This is a summary of the major findings.

4 It is not surprising that mainly young and educated people with an entrepreneurial attitude have left Hungary and this is a rather important liability for Hungarian economic development in the long run.

5 "Scandinavia" has a positive, but "fiscalisation" a far less positive connotation in Hungary.

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Judit Sági – Csaba Lentner – Tibor Tatay

Family Allowance Issues

Hungary in Comparison to Other Countries[1]

Summary
Decline in the desire to have children is a common problem in the developed world, and it is a challenge in post-soviet countries, including Hungary. Changing lifestyles, perceptions and financial stress are the underlying reasons. The Czech, Slovakian, Spanish, Portuguese, Irish and French government interventions are analysed with focus on family subsidies and fiscal policies, in comparison to the decisions taken by the Hungarian government after 2010. Research is built on the assumption that child benefits (family allowances and housing subsidies) increase the willingness to have children.

Journal of Economic Literature (JEL) codes: D6, H2, I38, J11, J13, R21
Keywords: fertility rate, childbearing, public benefits, family subsidies, Hungary, Czech Republic, Slovak Republic, Spain, Portugal, Ireland, France

Desire to have children

In the previous decades the desire to have children has fallen significantly in the countries of the European Union. After World War II, living standards improved, people married at an early age and so the birth rate increased in the Western European countries. In Central and Eastern Europe social expectations and the uncommon use of contraception prevented childlessness. The trend started to change in the 1940s in

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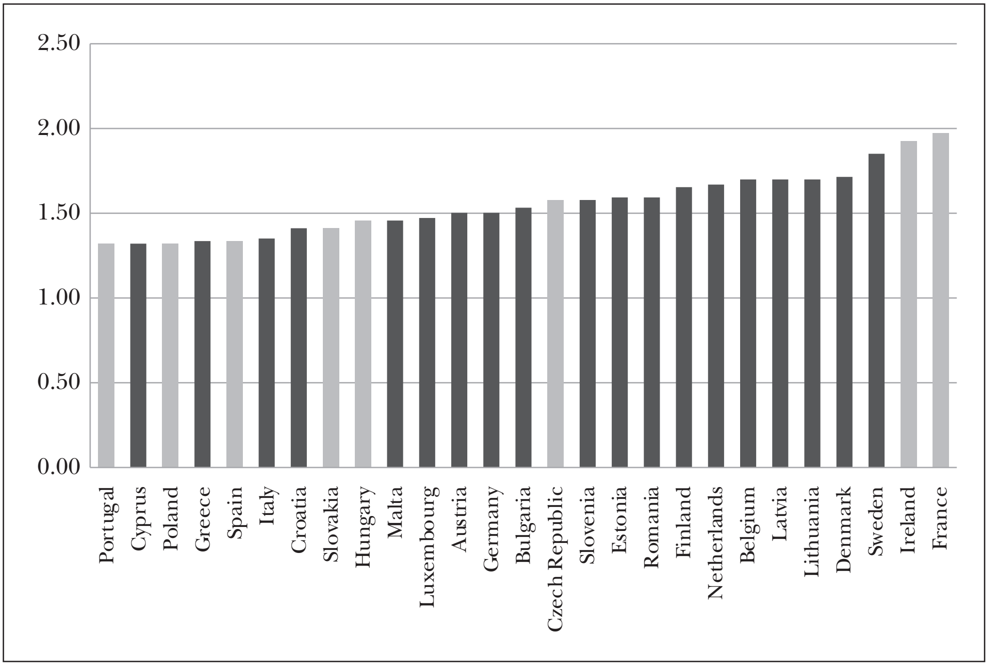
Western Europe, and in the 1960s in the Eastern Europe. Self-fulfilment, the primacy of individualism, increasing expectations at workplaces, and fall in traditional family patterns have all worked against childbearing. In the Eastern countries political and economic transition caused insecurity and led to decrease in fertility rates. Altogether in the EU Member States the population is not reproduced by birth. Fertility rates have fallen below the required level of 2.1 (Sobotka, 2017, pp. 17-53).

In several countries the demographic tendencies were tracked, and active family policy measures were introduced to promote childbearing. Developed countries have a family policy and subsidy system in place to initiate childbearing and help child raising. In a narrow sense family policy can be interpreted as the total set of government subsidies and services with a purpose of supporting families who raise children. In this respect cash subsidies and family aids are direct forms of policy tools, and the tax allowance is an indirect form of them.

In 2010, the Hungarian government re-defined its family policy and family subsidy system, and in 2011 the family tax allowance became a major pillar of the subsidy regime. Below is a description of this system and an explanation of the main elements of the child benefits in some EU countries.

The scope of the investigation was extended to the V4 ("Visegrád Four") countries, and to EU Member States with relatively high and low fertility rates (France and Ireland versus Portugal and Spain). The countries' fertility rates are shown in Figure 1.

Figure 1: Fertility rates



Source: Eurostat, 2015

Nearly all European countries have fiscal initiatives for families raising children, and in a part of them, expenditures are phased into the personal income tax regimes. In this regard, tax credits, allowances or rate reductions serve to grant social benefits to families. Below family tax benefits are analysed in the above-mentioned eight countries, with focus only on elements which provide benefits for families.

France and Ireland impose taxes on combined family earnings: partners' incomes are added up and taxed jointly. This family-based taxation does not necessarily promote child bearing *per se*, because its main target is the horizontal equity for households with different compositions of incomes. The additional element of tax regimes (whether they are based on families or on individuals) is the granting of family tax benefits.

Tax benefits can be granted in different forms: governments might allow certain exemptions from the personal income tax base, allowances that can be deducted from the taxable income, credits that can be deducted from tax liability, tax rate reductions or tax deferrals. The most common form of benefits includes various tax allowances, as they cause less distortions in the tax base.

Czech Republic

In the Czech Republic, families benefit from both tax credits and tax allowances. The previous can be used to directly reduce a person's tax liability, while the latter reduces the tax base (OECD, 2017, pp. 233-242).

Taxes normally apply to individuals, but there are a couple of family benefits. A flat-rate of 15 per cent is payable on personal income taxes; and an 11 per cent contribution on employment (including 4.5 per cent health insurance and 6.5 per cent social insurance contribution).[2]

All taxpayers are entitled to tax credit, in an amount of CZK 24,840 (approx. EUR 950[3]).[4] For taxpayers raising children, the tax credit is CZK 13,404 for the first child, CZK 17,004 for the second child, and CZK 20,604 for the third and each additional child. Since 2016, a new form of tax credit also applies to families with a child visiting nursery school (for preschool children, including those who go to kindergartens, up to starting primary school): in the amount of the pre-school facility fees, but no more than the amount of the minimum wage, per child. The adoption of credit in the amount of nursery school fees, and increase in the benefit for the second or subsequent children was included in the act on childcare in 2016.

The other form of family benefits is the non-taxable childcare allowance, which is subject to certain income criteria. The precondition of this allowance is that the family's income does not exceed 2.4 times the family poverty line, whereas the amount of the poverty line depends on family type. (It becomes higher as children grow older and with the number of members in a household.) The family income includes both parents' earnings, net of income tax, and employees' social security and health insurance contributions. Child allowance is CZK 500 per month per child until the child becomes six, CZK 610 between 6 and 15, and CZK 700 between 15 and 26 years.

Poland

In Poland taxes are imposed on individual incomes, but married couples can opt to pay taxes on their joint incomes. The personal income tax cannot be chosen by those who pay family-based taxes (OECD, 2017, pp. 453-462).

Progressive taxation applies: up to PLN 85,528 (approx. EUR 19,970[5]), 18 per cent of the tax base, less a basic tax credit of PLN 556.02 must be paid. Above PLN 85,528, the tax liability is PLN 14,839.02 plus 32 per cent of the surplus above the PLN 85,528. The social security contribution payable for employees is 13.71 per cent of the gross wage; this includes 9.76 per cent pension insurance and 2.45 per cent sickness/maternity insurance.

Similarly to the Czech Republic, there is a basic relief for taxpayers, a non-refundable tax credit of PLN 556.02 per person. Families with children are granted a further tax credit from the payable tax in the monthly amount of

– PLN 92.67 (PLN 1,112.04 per annum) for the first child, if the annual income received by the parents (married couples or single parents if they meets special requirements) does not exceed PLN 112,000. For other parents the income threshold is PLN 56,000;

– PLN 92.67 (PLN 1,112.04 per annum) for the second child;

– PLN 166.67 (PLN 2,000.04 per annum) for the third child;

– PLN 225.00 (annually PLN 2,700.00) for the fourth and every subsequent child.

Since 1 January 2015, taxpayers subject to the payment of taxes that are less than the amount of tax credit for children may claim the remaining benefit from the social security and health insurance contributions (with some exceptions).

Slovak Republic

In the Slovak Republic family benefits are not as substantial as for example in the Czech Republic or in Hungary. A minor sum of tax credit is provided for families raising children, which is automatically indexed for growth in the minimum living standard. In 2016 the monthly tax credit was EUR 21.41 per child (the annual amount was EUR 256.92) (OECD, 2017, pp. 475-486).

If the credit exceeds the tax liability, the excess is paid to the taxpayer. This is exceptional, as personal income tax regimes are designed not to discourage employment by tax deferrals. However, in order to receive the tax credit, the parent must earn at least 6 times the minimum monthly wage in a year, which was EUR 405.0 in 2016 (thus the total annual earnings must be at least EUR 2,430.0).

In 2013, the previous flat tax rate of 19 per cent was replaced by a new two-bracket tax. The ceiling for the first bracket is 176.8 times the poverty line (equal to EUR 35,022.31 in 2016), and this secures automatic indexation. The upper rate is 25 per cent. The personal income tax base can be reduced by the social security contribution paid on employment; and they are capped at the average wage level times five. The 13.4 per cent contribution comprises 4.0 per cent health insurance and 9.4 per cent social (sickness, retirement, disability and unemployment) insurance.

A basic tax allowance for all taxpayers is set at 19.2 times the poverty line for taxpayers (this amount was EUR 3803.33 in 2016). Besides, an additional allowance is given to the principal earner in respect of a spouse living in a common household if the spouse earns no more than EUR 3803.33, and, for example, takes care of children younger than 3 years.

Spain

As a general rule, in Spain tax is levied on individuals. Nevertheless, families have the option to choose tax payment as married couples or as heads of households (the latter are unmarried or separated individuals with dependents). In such cases families submit tax returns collectively, about the combined income of spouses and dependents (OECD, 2017, pp. 499-508). Personal income tax is progressive (Table 1).

Table 1: Personal income tax rate schedule, Spain

Taxable income (EUR)	Tax at the lower limit (EUR)	Marginal rate[6] (%)
0–12,450	0	9.50 (for non-residents: 10.00)
12,450–20,200	1182.75	12.00
20,200–35,200	2112.75	15.00
35,200–60,000	4362.75	18.50
over 60,000	8950.75	22.50

Source: OECD, 2017, p. 504

6.35 per cent social security contributions must be paid by employees (of which 4.7 per cent is paid to old-age pension funds or sickness and disability funds, 1.55 per cent to the unemployment and 0.1 per cent to the fund for professional training). Contributions range between EUR 9172.80 and EUR 43,704 depending on annual gross employment incomes (in the case of full employment). The consolidated tax base can be reduced by all social security payments.

Starting a family and childbearing are encouraged through several tax allowances, tax credits, and exemption from certain income parts. As the tax-free income decreases the consolidated income, it also reduces the payable personal income tax and the social contributions. As an additional effect of the exempt income is that, in the case of its result the consolidated income falls to a lower bracket, then the latter is taxed with a lower rate. The base amount of exempt income is EUR 5550 per taxpayer, and the same amount is granted for family units filing jointly.

These family benefits are the following:

– Basic reliefs: married couples filing tax returns jointly may claim an allowance of EUR 3,400 (EUR 2150 for heads of households.)

– Maternity tax credit: tax credit granted in the amount of up to EUR 1200 to working women with children up to 3 years of age.

– Tax credit for large families (with 3 or more children): additional non-wastable tax credit (up to EUR 1200 for families with 3 or 4 children, and EUR 2400 for families with 5 or more children), which may also be claimed by single-parent households with two children.

– Tax-exempt income for dependent children (under 25 years): EUR 2400 for the first dependent child; EUR 2700 for the second one; EUR 4000 for the third, and EUR 4500 for every additional child.

– Childcare allowance: an additional tax allowance of EUR 2800 is granted for each dependent child under 3 years of age.

Portugal

The standard rule is individual taxation; however, like in many countries (including Spain), families may opt for joint taxation (OECD, 2017, pp. 463-474). Personal income tax is progressive (Table 2).

Table 2: Personal income tax rate schedule, Portugal

Taxable income (EUR)	Tax at the lower limit (EUR)	Marginal rate[7] (%)
0–7,035	0	14.50
7035–20,100	984.90	28.50
20,100–40,200	2693.40	37.00
40,200–80,000	5909.40	45.00
over 80,000	8309.40	48.00

Source: OECD, 2017, p. 468

A surtax was introduced in 2012 in the highest income bracket, but only temporarily, as it will be repealed in 2018. The rate of social security contributions is 11 per cent for employees (with no ceiling).

There is a standard relief amounting to at least EUR 4104 or the social contributions, which reduce the tax liability.

The tax credit is EUR 600 for each dependent child; this sum is increased by EUR 125 for dependent children under 3. As a special relief in the personal income tax regime, 35% of general household expenses up to EUR 250 per taxpayer also reduces the tax liability (this limit is increased to 45% and EUR 335, respectively, for single parents).

Ireland

There is family taxation in Ireland: the personal income tax is levied on the combined income of both spouses. Either spouse may, however, opt for separate assessment. Family benefits are provided in different forms of tax rates and tax credits, most of them are conditional upon the income level of the household (OECD, 2017, pp. 333-342).

The standard relief (tax credit) is EUR 1650 per person (and this is due regardless of marital status).[8]

The personal income tax is progressive, but different brackets are applied with different marital statuses (Table 3).

Table 3: Personal income tax rate schedule, Ireland

Taxable income (EUR)	Marital status	Marginal rate[9] (%)
0–33,800	Single/widow(er)	20
0–42,800	Married couple (one income)	20
Up to the lesser of: 67,600; or 42,800 plus the amount of the lowest income	Married couple (two incomes)	20
0–37,800	One-parent family	20
over the limit	All	40

Source: OECD, 2017, p. 337

Part of the income is exempt from taxation, this amount is EUR 17,000 in the case of single/widow(ed) taxpayers, and EUR 34,000 in the case of married ones. These sums are increased by EUR 585 for the first and the second child, and by EUR 830 for each subsequent child.

A form of tax called Universal Social Charge is also paid on incomes on a progressive basis (Table 4).

Table 4: Social charge schedule, Ireland

Gross income (EUR)	Margin (%)
0–13,000	1
13,000–18,668	3
18,668–70,044	5.5
over 70,044	8

Source: Edited by the author from OECD, 2017, p. 337-338

Social security contributions are payable at a rate of 4 percent of an employee's gross earnings less a threshold, which is the annualised sum of EUR 352 per week.

Among family benefits, a tax credit of EUR 1000 is granted for families where one spouse works at home to care for children, but conditionally, if this carer spouse's income does not exceed EUR 7199. The amount of the former tax credit is decreasing in line with higher incomes: between EUR 7200 and 9200, the tax credit is reduced by one half of the increment.

France

The personal income tax regime in France has been based on family taxation since as early as 2004 (Spouses and children are always taxed jointly, and even children over 18 can be included if their parents claim them as dependants.) (OECD, 2017 pp. 275-288).

The "family quotient" (*quotient familial*) system takes a taxpayer's marital status and family responsibilities into account. It involves dividing net taxable income into a certain number of shares (two shares for a married couple, one share for a single person, one half-share for each dependent child, an additional half-share for the third and each subsequent dependent child, an additional half-share for a single parent, and so on): the total tax due is equal to the amount of tax corresponding to one share, multiplied by the total number of shares.

Personal income tax is progressive, and is calculated on the family members' shares (Table 5).

Table 5: Personal income tax rate schedule, France

Taxable income, one share (EUR)	Marginal rate[10] (%)
0–9,710	0
9,710–26,818	14
26,818–71,898	30
71,898–152,260	41
over 152,260	45

Source: OECD, 2017, p. 279

In case the household's income is less than EUR 1553 for single-parent households and less than EUR 2560 for couples, a special rebate is granted in a sum equal to three-quarters of the difference between this ceiling and the amount of tax before the rebate.

Since 2017, households with an income below EUR 18,500 (doubled for couples, plus EUR 3700 for each dependent person), the tax liability is reduced by 20 per cent. In case the household's income exceeds EUR 18,500, but remains below EUR 20,500 (doubled for couples, plus EUR 3700 for each dependent person), the reduction is proportionally less.

A surtax is applied to the highest income bracket: an extra 3 per cent rate between EUR 250,000 and 500,000 and 4 per cent over EUR 500,000 in the case of a single person, 3 per cent between EUR 500,000 and EUR 1,000,000 and 4 per cent over EUR 1,000,000 in the case of a married couple.

Social security contributions are paid at a standard rate of 10.4 per cent of an employee's gross earnings, and capped at a monthly sum of EUR 3218 (EUR 38,616 per year).[11]

The main form of family benefits is tax credit, which amounts to EUR 1512 per half-share in excess of two shares for a couple, or one share for a single person. In the case of the first two half-shares granted for the first child of a single parent, the maximum benefit is EUR 3566.

Hungary

On 1 January 2011, a new family tax regime was introduced in Hungary. The novelty of this regime has common roots with Western European regimes and applies a tax allowance instead of tax credits (Lentner et al., 2017, p. 42). Family tax allowances encourage childbearing. In contrast to tax credits, tax allowances reduce the consolidated tax base of the taxable breadwinner on a monthly basis. The amount of the benefit depends on the number of dependent children.

The sum of the family tax allowance benefit substantially increased in 2011: families raising one child or two children had HUF 62,500 (approx. EUR 200) monthly benefit per child, while families with three children could retain a monthly sum of HUF 206,250. The benefit considerably reduced families' tax burden: compared to 2010, the net (after-tax) income of an average family with children increased by 10-20 per cent and the majority of families with multiple children were totally relieved of personal income tax payment in 2011 (Lentner et al., 2017, p. 43).

In 2012, the family tax allowance did not change compared to the previous year, however, the amount of payable tax decreased as the so-called super-grossing taxation had been partially eliminated. (Super-grossing meant that the personal income tax base in excess of HUF 2,424,000 was increased by 27%. As a result, the effective personal income tax rate ranged between 16 and 20.32 per cent.) It is important to note that tax reduction mainly affected families with one or two children, and high-income families with more children. Fairness required reducing the differences between the respective family allowances in the personal income tax regime in 2015. Since 2016, the tax benefit for families with two children has been increasing. As the allowance, which reduces the consolidated tax base, is increasing year by year, the disposable income has grown by HUF 20,000 per child by 2018. This tax allowance is also granted to pregnant mothers from the 91st day of pregnancy until the birth of the child.

In 2015, the family social contribution allowance was added to the family tax allowance. This is granted if the consolidated tax base is eligible only for a part of the family allowance. While the family tax allowance reduces the tax base and the tax liability, the social contribution allowance reduces the payable social contribution. More precisely, 16 per cent of the remaining allowance could decrease the social contributions payable in 2015, and respectively, the 15 per cent from 2016. Eligibility for family allowances does not alter the social security benefits (pension, healthcare, transfers, etc.) nor the amount of benefits of the insured person. The extension of the benefit to individual contributions mainly affects families with three or more children and single parents with two children.

Changes in the family benefits since 1 January 2016 include a decrease in the personal income tax rate from 16 to 15 per cent, and an increase in the childcare allowance for families with two children. Since 1 January 2017 the personal income tax rate has remained 15 per cent; and the rate of social security contributions are 18.5 per cent (calculated as a total of contributions to the pension fund at 10 per cent, to healthcare at 7 per cent, and to the labour market fund at 1.5 per cent).

In 2017 the family tax allowance was HUF 66,670 per month for families raising one child. (This sum reduces the payable personal income tax by HUF 10,000.) The tax allowance is HUF 100,000 per month per child, in the case of two dependent children; and this sum equals to HUF 15,000 decrease in tax payable. Finally, the tax allowance is HUF 220,000 per month per child, in the case of minimum three dependent children; which can equally reduce the tax payable with HUF 33,000 (Lentner et al., 2017, p. 44). Consequently, the personal income tax regime grants proportionally more benefit to families raising two, three or more children. Moreover, as from 2017, family benefits have been extended to the spouses' close relatives if they live in the same household.

In 2015, a total of 1,097,000 taxpayers, i.e. 23.7 per cent of the individuals submitting personal tax returns could reduce their tax base. Family tax allowances amounted to HUF 1218.6 billion. With a tax rate of 16 per cent, this totalled HUF 195.0 billion tax allowance. Social contribution allowances were granted in a total amount of HUF 35.1 billion within the year, and a further HUF 10.2 billion was reclaimed in the final personal income tax reports (HUF 0.2 billion was unauthorised claim). Thus, the total tax liability of taxpayers decreased by HUF 45.1 billion in 2015, as a result of the family tax and social contribution allowances.

According to the report of the Ministry for the National Economy, the amount of family benefits amounted to a total of HUF 1335 billion between their 2011 adoption and the end of 2017.

Besides the wide range of tax benefits, child-related housing subsidies were introduced in 2015. These measures came into force following the fiscal budget consolidation in Hungary (Lentner, 2017, pp. 21-38).[12] The authors proved in a former research (Sági et al., 2017, pp. 171-187) that in addition to tax benefits, housing subsidies may also positively influence childbearing, and for that reason they overviewed the housing market trends after the turn of the millennium. It was empirically inquired if the subsidies alter the desire to have children among young adults. 1332 students in higher education participated in the questionnaire inquiry. According to 73.4 per cent of the respondents, housing subsidies improve willingness to have children; however, only 36.7 per cent answered that if the subsidies remained they would want to have more children. It was concluded that housing subsidies do give a stimulus to childbearing; and this is confirmed by an increase in the number of applications and contracts for housing: between July 2015 and September 2017, 59,042 applications were approved for family and housing subsidies and for interest subsidies in a total of HUF 161,991 million. Up to 30 September 2017, 42,443 contracts were signed in a total amount of HUF 131,064 million.

In 2016, approximately one-third (31 per cent) of the applications included commitments made to having a child in the near future (the requirement is that at least one of the spouses must be younger than 40; in most cases this condition is met by the mother). The remaining two-thirds of the applications referred to children already born, up until the age of 25 of the child (mostly, by couples under the age of 50).

Looking into the titles of subsidies (as the first, second or third child is to be considered) data are available for the year 2016. According to the contracts signed in 2016 for housing subsidies, 69 per cent of them referred to children already born, and 31 per cent to children planned. Regarding the latter figure, it is worth mentioning that the percentage is lower (notably 29 per cent) in the case of newly built flats, and is higher (33 per cent) in the case of used flats. The ratio of commitments to have additional children is the lowest (24 per cent) in applications for HUF 10 million to subsidise new homes; with 62 percent committed to have one child, 26 per cent two children, and 12 per cent three children. Considering the used flats, 58 per cent of the beneficiaries made commitments for one child, 42 per cent for two or more children in their applications for housing subsidies. Altogether about 7 thousand of the contracting families have made a commitment to have about 10 thousand children in the near future; this figure accumulates to an approximate 8 thousand families with 11-12 thousand children for 2016. In sum, one family has committed to have an average 1.4 child within a 6-year period.

An analysis of the regulatory background of housing subsidies shows that the budgeted figures of family subsidies were HUF 277.0 billion and HUF 316.0 billion in 2017 and 2018, respectively. These figures also include marital allowances, withdrawn in the amount of HUF 0.5 billion and 2.2 billion in 2015 and 2016 respectively, which predicts growth for the years 2017 and 2018. Increase in subsidy disbursements correlates with the increased tax allowances for families with two children (HUF 20,000 per month per child in 2015, HUF 25,000 in 2016, HUF 30,000 in 2017, HUF 35,000 in 2018, and HUF 40,000 in 2019, and so on). This means that subsidies for families with two children increased by approximately one-third (31 per cent), amounting to HUF 23 billion, from 2015 to 2016. Further growth in family subsidies might also be expected for 2019.

Summary and conclusions

The countries included in our investigation have different family policies. Since the correlation between the influencing factors and the desire to have children is unknown, there is no obvious ranking among the initiatives of the eligible tax regimes. However, the aim is clear: to improve the age structure of the society via promoting childbearing.

Based on their research the authors believe that improving the desire to have children via tax policy benefits takes time. As the obstacles to childbearing are often associated with young couples' burdens of having a flat of their own, the Hungarian government has launched a housing subsidy scheme to facilitate the purchase of flats. Besides the financial status, the initiative to increase the number of babies born depends highly on the living standards and the ethical norms of young married couples, both in Hungary and internationally. Permanent substantial changes can only be achieved by improving the economic conditions and by regaining values, mostly through education and focus on the family.

Notes

[1] The authors express their special thanks to the leading representatives of the Ministry of Human Capacities Youth and Family Affairs Cabinet, and of the Central Statistical Office for the release of statistical data.

[2] The maximum annual amount of social contributions is capped at the sum of 48 times the national average monthly wage.

[3] 1 EUR = 26 CZK www.xe.com XE; Currency Converter: EUR to CZK.

[4] Besides, the spouse living with a taxpayer in a common household is also entitled for the additional same amount, provided that the spouse's own annual income does not exceed CZK 68,000 (OECD, 2017).

[5] 1 EUR = 4.28 PLN www.xe.com XE; Currency Converter: EUR to PLN.

[6] Tax rate on taxable income in excess of the lower limit.

[7] See above.

[8] There has been an additional tax relief on the interest paid on housing loans, but only until 2017.

[9] Tax rate on taxable income in excess of the lower limit.

[10] See above.

[11] For pension, 6.9% is payable up to the ceiling, and an additional 0.35 on total earnings. For illness, pregnancy, disability and death, 0.75% is to be paid on total earnings. For unemployment, 2.4% contribution is disbursed, on earnings up to 4 times the ceiling. These rates are supplemented for pension in the case of workers (differently whether they are managers or non-managers).

[12] The authors believe that the period of the downturn (crisis) or upturn highly influence the willingness of childbearing. See also Lentner, 2011, pp. 2-9.

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András Giday – Szilvia Szegő

Towards the "Child-to-Parent" Based Pension Allowance ("C2P")

Proposal for the Reduction of the Population and the Finance Twin-Deficit[1]

Summary
Our basic assumption is that the pension reform, paid employment and child rearing (including housework) are inextricably interlinked and a policy for one "life stage" cannot be reformed without consideration to the entire family life. The proposed child-to-parent based pension allowance ("C2P") aims at remedying the worsening interconnectedness of two different deficit types: population and financial deficit in the pension regime. The demographic basis of a sustainable population and pension scheme necessarily includes children. We discuss a model which can improve interaction between child-rearing and the pension scheme. The current pension schemes typically allocate only a minimal allowance (about 2-3 per cent of the total pension budget) to those who raise children. We propose that the "regular" pension should be supplemented with a child-to-parent based ("C2P") element. This would be a fixed amount of about HUF 20,000 per month per child raised by the parents. This extra allowance would be financed from contributions paid by working children to the central budget. Parents would be entitled to this pension element if their child has worked a sufficient number of years and has paid contributions.

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Pre-hypotheses of the analyses[2]

Approximately two-thirds of state expenditure are spent on a special type of financing for a human lifespan as a redistribution of a part of the income produced during the productive lifespan in favour of the non-productive lifespan.

According to the definition articulated by Mária Augusztinovics, the four phases of human lifespan are: childhood, the so-called gestation period, the productive period and old age (Augusztinovics, 1996).

– The central budget can be viewed as the nationalisation of certain parts of these redistribution processes: family allowances, education, the pension scheme, and in some respects, the healthcare system, too.

– The investigation presented in this study does not rely on an abstract concept of a human being, as do the investigations of Augusztinovics, but on the specific social reality:[3] the family and the economy of the family.[4]

– This study relies on a life stage investigation of family economies.

– Life stages in family economies have been determined on the basis of the investigation of elementary data of Hungarian households (HSO statistics, 2000). As this year's data was also available for us, the processes we have observed in a very sophisticated database have current relevance.

Interaction between the two kinds of deficit (population and financial)

For the purposes of this study,[5] population deficit is a substantial and deepening gap in generational reproduction. Population deficit is characterised by the following:

1) A significantly curtailed childbirth period: it begins late and ends soon.

2) A significantly curtailed employment period. The negative effects of the conflicting timing of the reproduction and employment periods are aggravated by a considerably difficult employment period. This means that while families with small children are often overburdened by employment, mature families (families with teenage children) are more likely to be underemployed, although they are less constrained by family duties.

3) As a consequence, there are sharp conflicts between the demographic and employment life stages of families. The number of employed parents is the highest in the stage when families have small children, and thus in this stage parents are typically overloaded: reproduction, childcare duties and intensive career duties all take place at the same time, in the same period.

4) Increasingly extended child-rearing and training period, which conversely, decreases the working stage. Young adults do not begin work before 20 to 30 years of age, in the life stage when we would traditionally expect young adults to start reproducing. So any "year gained for productive work" as a result of curtailing the child-bearing period is offset by the delay in entering work. At the same time, the pressure to have a sustainable job is increasing, as the new parents are expected to provide for their

children for up to thirty years. In fact, what we see in many cases is that because of this conflict, parents are made redundant shortly after they give birth to their last child.

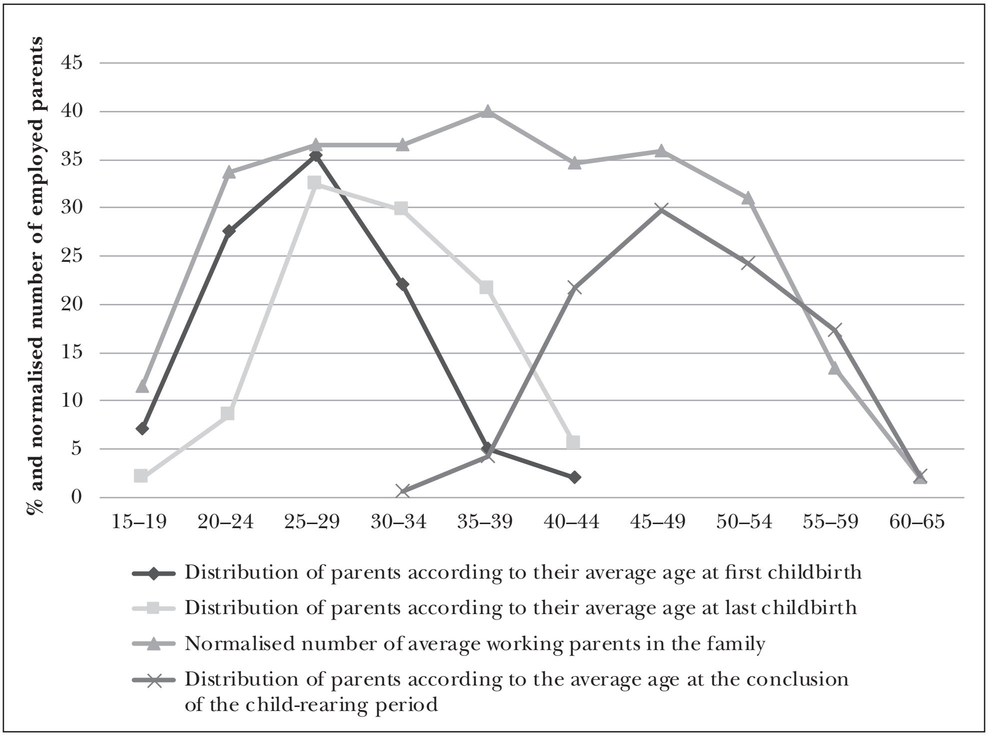
5) A sharp decrease in successive generations, compared to sustainable generational reproduction (shown later in our narrowing population pyramid in Figures 3 and 4).

6) An increasing dependency at both ends of the life stage, with "child" dependents up to 30, and "pensioner" dependents between 60 and 90. If this coincides with low, insecure, and low-paid employment in the working population segment in between, the situation is doubly unsustainable.

Characteristics of the curtailed childbirth period of families in Hungary

The end of the childbirth period is to a major extent determined by parents' increasingly shorter period spent in work. The childbirth period depends to a large extent on the period of work. (In our investigation we follow the lifespan of the parents together,

Figure 1: Correlation between the duration and timing of childbirth and child-rearing periods and the termination of the working period

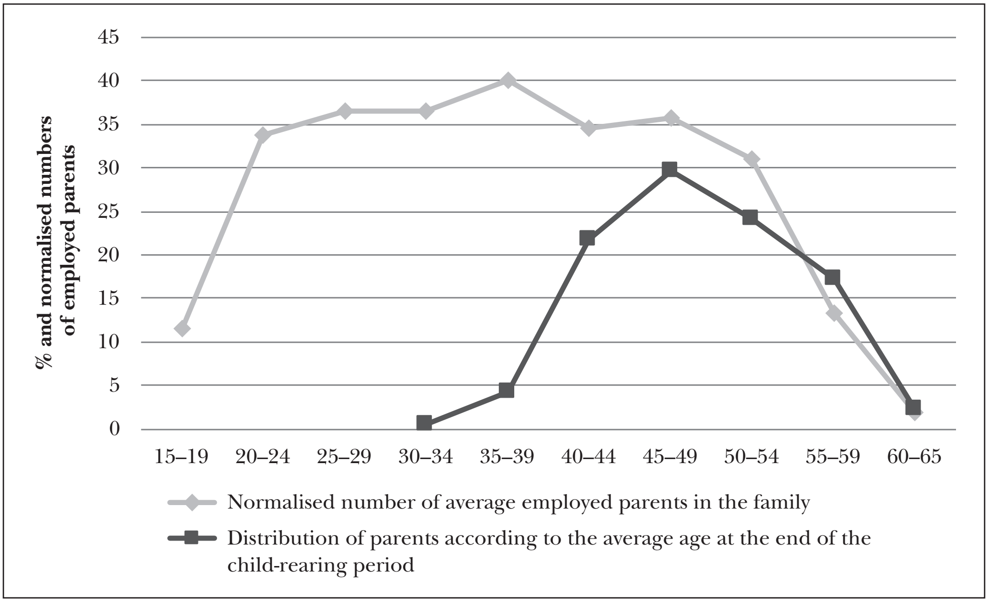


Note: The figure is devised from the elementary database of the Central Statistical Office of Hungary's survey of households made in 2000. A basic (elementary) household database was needed to monitor family life stages, and the 2000 household survey was found suitable. The trends showed in the figures are long-term. Source: HCSO Household Survey 2000, elementary database own calculations as the family lifespan is more connected to interdependent family functions than to individual functions.) The Figure 1 shows this strong correlation.[6]

The first two lines in the figure show the spiked distribution of parents at the age of having the first and last child. The average distance between the two lines is very small, indicating a significantly curtailed childbirth period, not caused by biological or health constraints. The third line is the job line, slightly more arched and slightly less spiked than the lines denoting the childbirth period, but the shape broadly echoes the other two, with a similarly significant peak. The peak on the job line is very short.

The Figure 2 shows that the fall of the work distribution line along the age of the parents is also very similar to the fall in the reproduction lines. This means that the last child, the youngest one in the family, is typically dependent when the parents are often made redundant from the workplace in a very sudden way. (Recently, the conflict between demography and work has become considerably milder than it was in the beginning of the 2000's, but there are signs of a new conflict evolving between a more intensive female career life stage and childbirth timing.) Figure 2 shows the distribution of parents according to child-rearing age.[7] This is the age at which the youngest child reaches 20. The line shows that the number of parents in child-rearing age is still growing when they are made redundant from the workplace.

Figure 2: Parents' employment intensity falling despite declining child-rearing burdens



Source: HCSO Household Survey 2000, elementary database own calculations

Thus, the period of childbirth, although very short, is still "too long" in terms of workplace demand. Paradoxically the child-rearing period would need to be cut even further in order to align with the line of the working period.

This shows that reduction in the childbirth period is highly determined by the decreasing period spent in work by parents. *The length of the childbirth period depends greatly on the length of the period spent in work and with a career.* The birth of the first child is delayed, on the one hand, by work-related needs, and the childbirth age is pushed towards younger ages by the fact that earning ends sooner. Families undertake the last child even earlier so as they can expect a solid earning status until their child is dependent on them.

Effects on the pension scheme

The shorter childbirth and working period have the following consequences on the pension scheme:

1) An unbalanced population structure and consequent disintegration of intergenerational social cohesion, due to successive generational population decrease.[8] The situation is deteriorating so badly that no reform performed in the state redistribution systems are able to remedy the resultant structural deficits. As a consequence, the reduced productive period cannot finance the gestation and elderly periods in life.

2) The devaluation of housework compared to paid work has many side effects. Reductions in family time require the outsourcing of necessary family functions: unpaid housework is replaced by paid work. Consequently, families must earn even more to pay the costs of outsourced housework. Thus the encroachment of "paid" employment on family life has paradoxical effects: increase in the intensity of the active phase in the productive period at the expense of housework might lead to growing financing burdens of families. On the other hand, this concentration overvalues paid work and undervalues housework, i.e. self-directed activity, over the whole life stage.

As a consequence, the whole life stage becomes ever more dependent on paid work and the income earned from it. In other words, even though employment is growing, the demand (and cost) for outsourced services of caring and rearing the family is growing simultaneously. Thus the deficit would be reproduced even under the mask of higher employment rates. (Note the trade-off between housework and job. In general, paid work replaces self-directed structures, and the nursing of children and care for the elderly are increasingly less performed within the family).

Consequently, despite higher employment rates, the dependency of the family life stage on paid services increases, and moreover, it increases more intensively than work: dependency on services (in this respect it is indifferent whether public or private) is growing faster than income in many cases. As a consequence, paid work presses out housework, including child-rearing.

3) Deterioration in the balance between paid work and housework in the low-income strata. The heavy focus on paid work and career causes another distortion in lifestyles: paid work reduces the status of non-paid work, not only in families with good jobs but also, and paradoxically, often more so, in underemployed and low-income families.

In the low-income strata, it is observed that less money/employment does not translate into a higher status for, or more time dedicated to, housework. Rather, members of these strata *lose their motivation to work* and become ever more dependent on the redistribution (Wallace, 2002).

The impacts of unsustainable population growth on financing old age population needs

In a modelled population pattern of four generations living together, a mother born in 1919 is considered as the "null" generation, giving birth to her first child in 1934. From that year we calculated the normalised population headcount, in other words, the age-specific birth and the mortality rates of male and female members of the newly born generation. Thus the normalised numbers of the first generation is obtained, and is presumed to give birth to children at the age of 15. The actual size of the population decreases according to the mortality rate. The Figure 3 shows that the emerging population achieves balance by the second and third generations. So the size of the co-existing generations remained the same, although the living population experienced birth and death events every year (calculated by the specific statistical birth and mortality ratios for the year 1934). The population pattern is thus depicted as it would be today if the birth and mortality rates have remained at the 1934 levels. In a sustainable population the outflow and inflow processes of the successive generations are in equilibrium, as if the population were a river.

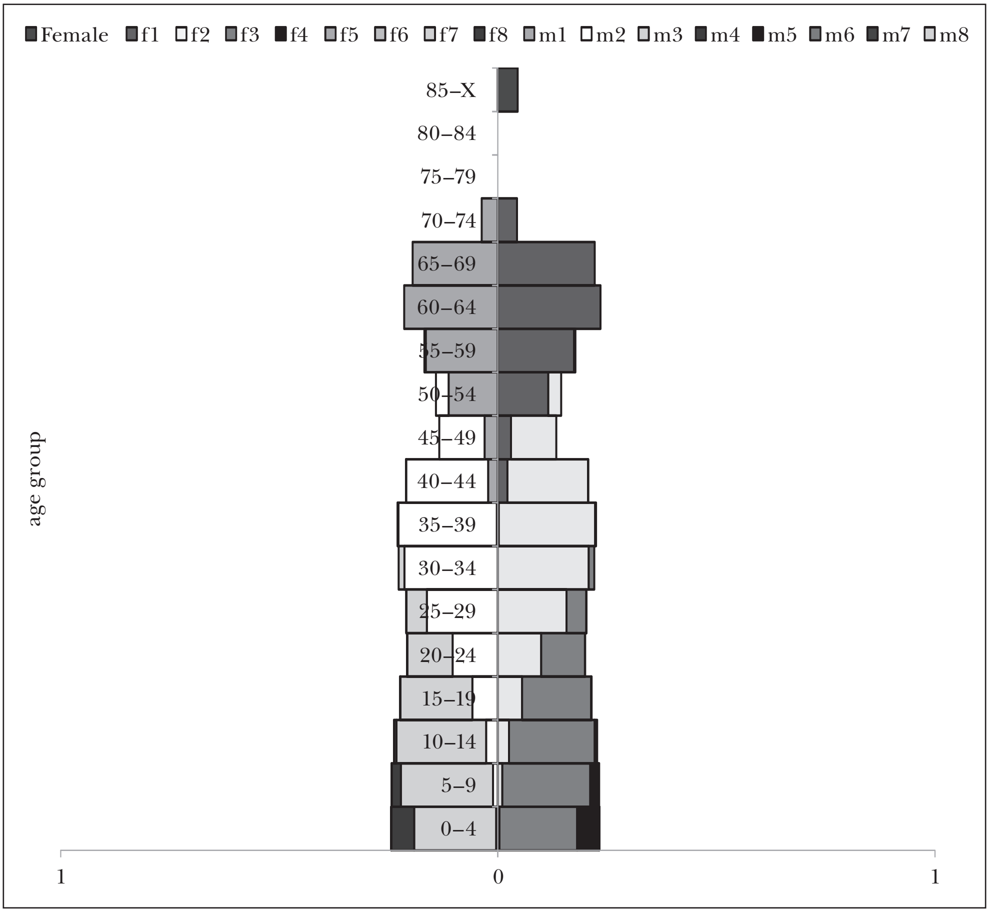
The figure shows a sustainable *population structure* (with the population movement characteristics from the year of 1934). The model shows the four generations marked as f1, f2, f3 and f4.

This pyramid (Figure 3) shows a sustainable population: the size of co-existing generations becomes and remains nearly identical. The first generation is seen at the top of the pyramid: the children of the first mother. In the middle of the pyramid four co-existing generations are seen. In this case the four-generation population shows a strong sustainability in time: the size of the population remains roughly the same in the successive generations. This means that decrease in the size of one generation is offset by increase in the size of the successive generations.

The 1970s and 1980s show a rather different picture in Hungary. The Figure 4 shows an unsustainable population structure. The population pyramid shows the change in the structure and an even greater change in the size of the population. (To some extent the structure of the population hides the full significance of the change because the elderly generations with their more extended numbers have a greater weight in the size of the population.)

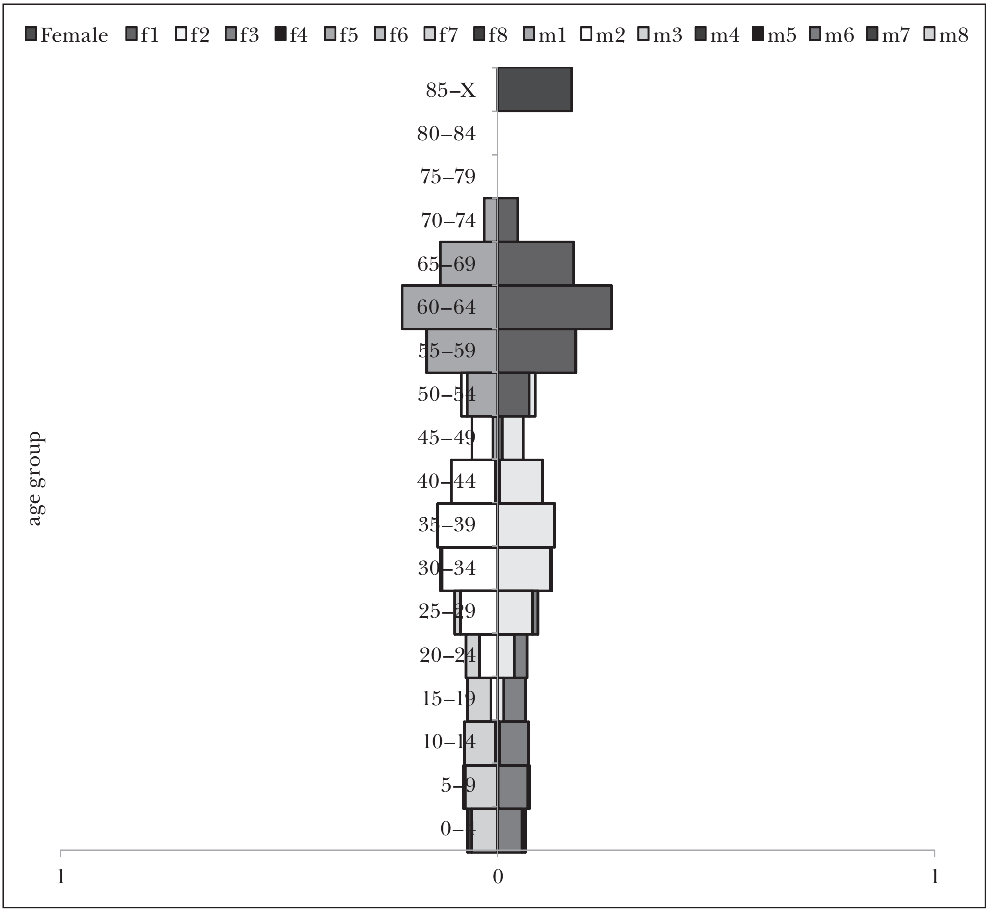
This pyramid (Figure 4) shows a very unsustainable population. The size of the co-existing four generations decreases sharply. The successor generation can no longer offset decrease in the size of the older generations, and the life expectancy at birth does not increase at a pace comparable to the population modelled in the previous figure. The uninterrupted decrease in the size of the successive generations cannot then be offset by an increasing size in the older generations, so the population begins to decrease and this process accelerates. Faster population decrease is not the only negative effect in this process, as there is a general population ageing. This structural change is not merely a transition from one stage to the next, but actually a population decline with a growing deficit in terms of care for the elderly.

Figure 3: Population pyramid according to the birth and mortality rates of the year 1934. (Sustainable population model: Population pyramid of 4 successive co-existing generations, counted according to the age-specific birth and mortality rates of the male and female members of the 4 generations. Mother born in 1919, beginning to give birth to children in 1934.)[9]



Note: The left side of the pyramid shows the relative extent of female population in 5-year periods born to the ancestor (who began to give birth to children at the age of 15 and ended fertility at the age of 50). Three generations born to the children of the "first mother" follow. The relative number of the population depicted in the figure were counted by the age-specific birth and death probabilities. The right side shows the male population.
Source: HCSO Demographic Yearbooks own calculations

Figure 4: Population pyramid according to the birth and mortality rates of the year 1987 (Unsustainable population model: Population pyramid of 4 successive co-existing generations, counted according to the age-specific birth and mortality rates of the male and female members. Mother born in 1972, beginning to give birth to children in 1987.)[10]



Source: HCSO Demographic Yearbooks own calculations

The impacts of the unsustainable population growth on financing the old-age population needs to be analysed

The population change in the late 1980s was characterised in Hungary by a sharp decrease with a deteriorating structure. The labelling of this process as "an ageing population" is misleading. First of all, population ageing is less a result of growing life expectancy and far more a consequence of the rapidly decreasing number of births. Secondly, long-term population sustainability depends far more on birth rates than on the life expectancy of the elderly. The effective "relay race" of the successive generations depends absolutely on the inflow of births. The correlation between living longer and having children can be described by a surprising formula: *senior generations do not live long enough to compensate for decrease in the number of new births.* Consequently, relationships are distorted, which in turn results in further distortion in the complex reproduction process.

Thus deficit in financing is reproduced (no matter how well the pension schemes are reformed) as long as the population structure remains deteriorating: when an increasingly deteriorating population structure is reproduced. In other words, pension reforms, paid employment and child-rearing (and housework) are inextricably linked and the policy of reforming one "life stage" can not be efficient without consideration of the entire life course.

Remedies of the population deficit and the resultant unsustainable pension scheme

Remedies can only be effective if they serve the followings:

1) Improvement in the *entire working life stage of families* (in addition to the number of employed also the harmonised timing of work).

2) Improvement in the trade-off between paid and unpaid work, to ensure considerably higher prestige and compensation for unpaid work (for example in family economics and in the national performance (in GDP) (see Jager et al., 2003).

3) Improvement in the harmonisation of work to better fit the population and the working life stage and with it the reproduction of the population.

4) Decrease in the high dependency of overloaded families on "imported" services and their high expenditures caused by the sharply decreasing housework and hometime.

5) Improvement of work done by families without undervaluing housework, in other words, preventing paid work from displacing housework.

Summary

1) The characteristic features of population deficit and the correlation between the population and the structural deficit in financing the pension scheme result in conflicts regarding the working stage and in a deterioration in the population structure.

2) Deterioration in the population structure is the core cause of underfinancing the reproductive life stages and the resulting deficit in the central budget, while the state remains an important actor in financing the human life course.

3) Due to the sharp conflicts between work and the reproductive life stages, improvement in the conditions of work for the active age population can cut both ways. The underemployment of mature and low-income families is accompanied by overwork done by working young families.

4) The population structure and the central budget deficit cannot be improved by increasing families' workload if it goes hand-in-hand with a growing dependency on family economies in terms of monetary expenditures and monetary inflows.

5) If paid work displaces housework, the deficit in the financing of the life stage will be reproduced and so the deficit of the central budget as well.

6) Harmonised life stage financing represents a better combination of paid and housework. A solution must be found for changing the costly way of life for both families who work too much and those who do not have sufficient work. How to change the way of life to better balance paid and unpaid work in family life?

Towards the child-to-parent based pension allowance ("C2P")

The demographic basis of a sustainable population and pension scheme necessarily includes the child. Below, we propose a model which can improve the connection between child-rearing and the pension system. The currently applied pension schemes typically allocate only a minimal allowance (about 2-3 per cent of the total pension budget) to those who raise children. This rests on the following two false assumptions:

1) The pension scheme can function independently of child-rearing.

2) A balanced and static generation structure exists across the total population.

The incorrectness of these assumptions is easily evidenced by the aging populations seen across the developed world and the growing deficits in pension schemes that have resulted.

Remembering that a cure lies in the nature of an illness, we suggest a pension scheme based on the expenses of child-rearing families. The proposed child-based allowance amounts to 12-13 per cent of the total amount of pensions (about 17 per cent of a parent's pension). The financial resource for this scheme can be an earmarked and clearly defined by the ratio of children's contributions to their parents' pensions, paid for 4 (5) years, until the child reaches 25 or 29 years of age, according to the time when the child completes education. Parents reaching the retirement age can obtain the recommended amount of pension supplement (approximately HUF 240 thousand per year per child).

As the pension allowance paid in this system would be obtainable only after decades, we also propose a temporary child-based pension element to be introduced from 2019. In the financial balance of our scheme, the net effect on the public pension budget would amount to a net deficit of HUF 145 billion in 2018, increased to HUF 220 billion by 2026. The total net amount of the pension fund, including the changes concerning parents, would amount to about 12 percent of the total pension budget (according to our forecasts). Such a structure clearly favours families raising children and could have a highly positive impact on the social preferences of the population.

Modern pension schemes reward child-rearing by no more than 2-3 per cent of the pensions. This lack of incentive arguably contributes to a low or negative fertility rate and thus to the aging (and even decline) of the population. In the above-described model, this situation would be corrected by the contributions paid by children to their parents' pensions as presented below. In our proposal, the main difference is that we require adult, working children to contribute to the provisions of their parents' pensions. The economic performance of contributors, importantly, should cover the preceding generation's needs. We have developed a model adjusted to the Hungarian demographic and public finance conditions, with approximately *one eighth of the pension expenditures spent on parents financed by their employed children.*

Contribution to parents' pension by working children

The total cost of raising a child in Hungary is approximately HUF 60 million. The family directly contributes HUF 36 million and the government contributes HUF 4 million indirectly, in the form of tax credits. HUF 20 million is financed directly from public funds, of which HUF 2.7 million is the family allowance and HUF 16 million is the cost of education.[11]

The above-specified family contribution was calculated using the data of the Time Use Survey (HCSO) for parents with 2 children. The hours spent by earning activities was multiplied by HUF 1350, and work done at home by HUF 1200. (The first is the average hourly net wage of the employees; the second is the net wage paid to women per hour in 2018).[12]

Accordingly, two parents with two children facilitate future production and make an additional investment ("added" to their accumulated pension claims) of HUF 72 million to the Hungarian "pension economy" of the future.

In our opinion the pension scheme should reward child raising and the help provided to children to ensure they are healthy and trained for the labour market as a form of value creation and pension investment. The modern two-generation family model evolved via family strategies that adjusted first to industrial structures and later to the rise of the global economy. Thus there is a great need to reconfirm intergenerational family ties, in a way that is relevant to the current needs, with a pension scheme facilitating old-age provision.

Traditional pension schemes focus on the individual (without family reproduction) and on financing from contributions in proportion to earnings, with limited redistribution on the basis of social standing. The challenges posed by the rapidly aging populations and the related deficit in budgeting pensions, and reduction in the value of subsequent pensions press for responses and only allow limited modifications (higher retirement age, changed systems in establishing the value of the pension, etc.).

Currently, the majority of European countries are making efforts at rewarding child raising and the value it adds to pension schemes. However, the scale and effect of these efforts is very modest: a 2-3 per cent adjustment of pensions towards families raising children undervalues much of the performance of these initiatives.[13] We think that a pension scheme which places a considerably higher emphasis on family reproduction (via taxpaying children) can reduce the financial deficit as well as the population deficit.

C2P, the child-to-parent based pension allowance

We propose a system partly supported by working children who contribute to the pension allowances of their parents. The main point of the proposal drawn up in this article is that, for each child raised, a child-to-parent based element should be added to a person's regular pension. This means that a specified amount of the parents' pension would be covered directly by their working children, as part of the children's public budget contributions. In other words, parents who have raised taxpaying citizens would receive provisions from their children's accounts. The child-to-parent based pension element would reward child-raising with a monthly fixed amount in the parents' pension (after their child has worked for a specified number of years). The allowance would be adjusted to the number of children and to their working years. Parents would be entitled to the pension element if their child has worked a sufficient number of years and has paid contributions.

The characteristics of the child-based pension element are as follows:

1) It would be a pay-as-you-go type element.

2) The claims in the child-based system should be separated.

3) The resource would be the earmarked contribution paid after the working children to the state budget. The total sum should amount to about HUF 4 million, enough to finance the parents' child-to-parent based allowance for about 18 years (which corresponds to their life expectancy at the age 65).

4) These contributions should be paid to a special "parental pension fund" account in the central budget.

5) Children must have spent 4 (or 5) years at work, following the completion of secondary education until their 25th year or following higher education until their 29th year of age.

6) This pension element should be a fixed amount (the recommended amount is about HUF 20 thousand per child, per month).

7) The monthly sum would be divided between the parents (HUF 12 thousand to the mother, HUF 8 thousand to the father). This distribution corresponds to their burdens with the child-rearing.

8) The paid-up amount should be guaranteed by the state to ensure credibility and security.

9) The amount should be adjusted for inflation.

10) There is a need to make special rules for people in special life situations, those unable to have or raise children, or those whose children are ill and unable to work.

In the current critical demographic situation (frequently referred to as the "demographic time bomb"), there is no time to waste. We suggest launching the system in 2020. As we know, a pension scheme can only start functioning about 10-20 years after the first deposits. Inflows would begin in 2020, pension payments begin in 2030. For this reason we suggest the provision of a temporary, transitional child-to-parent based system along the same logic but with an interim inflow and outflow.

Contributions to the proposed child-to-parent based system

In the first year of the child-based pension scheme, the accumulation to the children-to-parent based pension fund would start. All the taxes and social contributions for the first part of the monthly earning (until HUF 220,000) of young adults would be allocated to the parents' pension fund called "C2P". The taxes and social contributions after the second part of earnings (above HUF 220,000) would be allocated to the central and social security funds as usual.

Details of the scheme

Working-age children are expected to work for minimum 4 (or 5) years to authorise their parents to access the pension element. Allocation to the fund would begin after leaving education, immediately when children are first employed.

Table 1: Period of contribution to the C2P Fund

	Without vocational school	Having completed vocational school	Tertiary education
Required minimum time spent in work	5 years	4 years	4 years
Time spent in work and required for access to the fund	25 years	25 years	29 years

Source: Edited by the authors

The allocation period and the taxes allocated to the fund are crucial elements of the system. Within 4 or 5 years the child would contribute HUF 4 million in the "C2P" Fund after each child. This will enable later a pension outlay of 20,000 HUF/month/child during an 18 years pension period for the parents. Parents would be eligible for the parental pension only if their child fulfils the 5 (4) years employment prescribed. For those with tertiary education, 29 years age would be the limit, until which time they have to amass 4 years employment. For the others, the age of 25 years would be the limit.

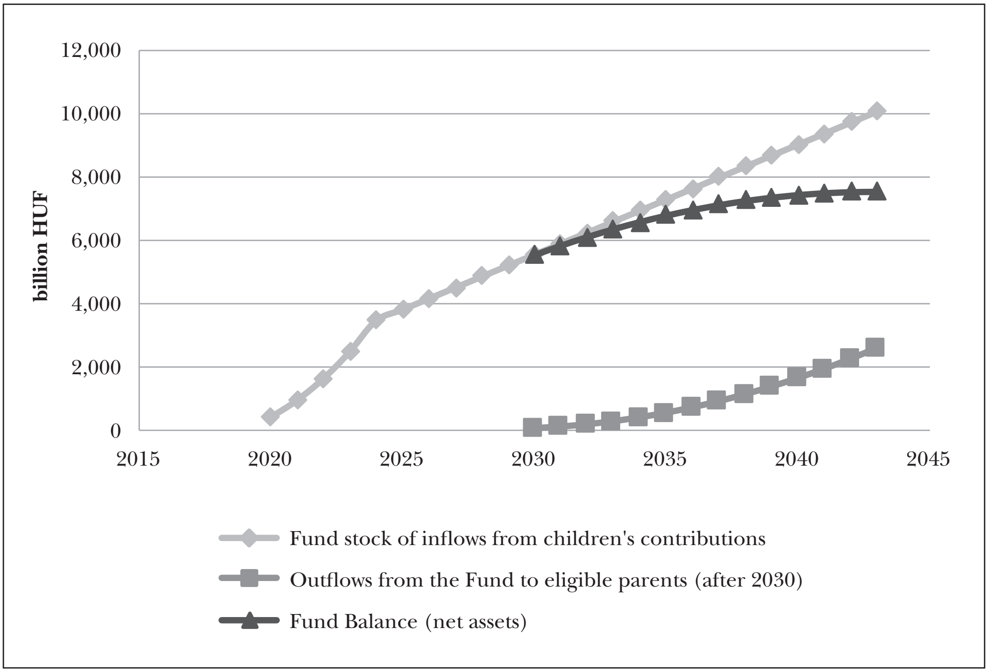
For about 10 years, the funds would function only with accumulating more and more contributions. The first pension expenditures would be due from 2030, when the first entitled parents would reach the 65 years age.

With the above periods, youngsters would be urged to find employment after leaving school. At the same time the adult "children" (and their families) would be motivated to begin their working career in Hungary.

In the first 5-6 years, contributions from the mentioned 8 cohorts (i.e. 560,000 employees that is 560,000 = 8 * 70,000)[14] would increase the assets of the Fund. From the year 2026, the number of the contributors would be stabilized at around 400,000, as the number of those leaving[15] would be the same as those newly entering into the system. After 2026 a stabilized number of cohorts (5) of youngsters would contribute to the Fund.

Figure 5 shows substantial increase in the assets of the Funds. This is the usual characteristic of all kind of pension Funds. In case of a newly introduced system it only collects contributions without spending on pensions, for about one or two decades. In the long run, the contribution and the expenditure sides would be balanced, as the contributions by children (4 million HUF/child) will be enough for about 18 years extra pension of his/her parents.

Figure 5: The "C2Parent" Fund: inflows and outflows (outflows from the year 2030), HUF in billion

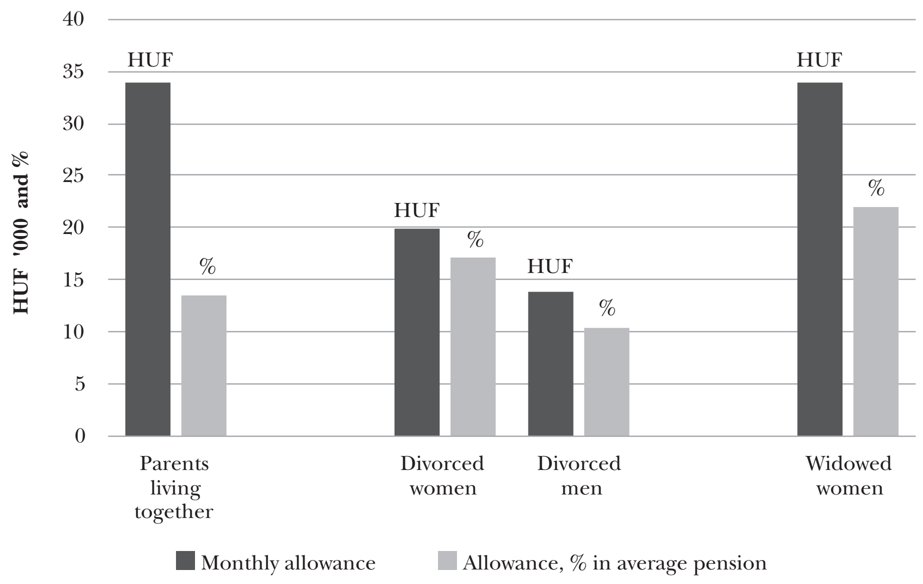


Source: Edited by the authors

Figure 6 shows the income effect of the proposed new system in case of the affected pensioners. By way of demonstration, we have chosen the year 2024, and a pensioner with 2 working children.[16] The increase in income is most substantial for widowed pensioners; their income would increase by 22 per cent. For pensioner-parents living together the income would increase by 12.5 per cent, also a significant increase.

The number of parents eligible for the extra pension would remain stable for 10-12 years (1.3 million for 1.7 million children). Reduction would start in 2030, as at that time a large number of new pensioners will enter the C2P allowance scheme. After 2030, the C2P and the transitional system would exist parallel for some time. After 2050, only the C2P would remain in operation. In the figure 6 we can see that the divorced parents get shared allowance. It is also important that the relative weight of the C2P allowance is the highest in the case of widowed women. This underlines the positive redistribution effect of the proposed C2P pension in favour of the most vulnerable strata among pensioners.

Figure 6: The monthly sum of the C2P allowance in case of families with 2 children and its relative weight (in thousand HUF and in % of the regular pension receivable in the year 2024)



Source: Edited by the authors

Transitional child-to-parent based pension element

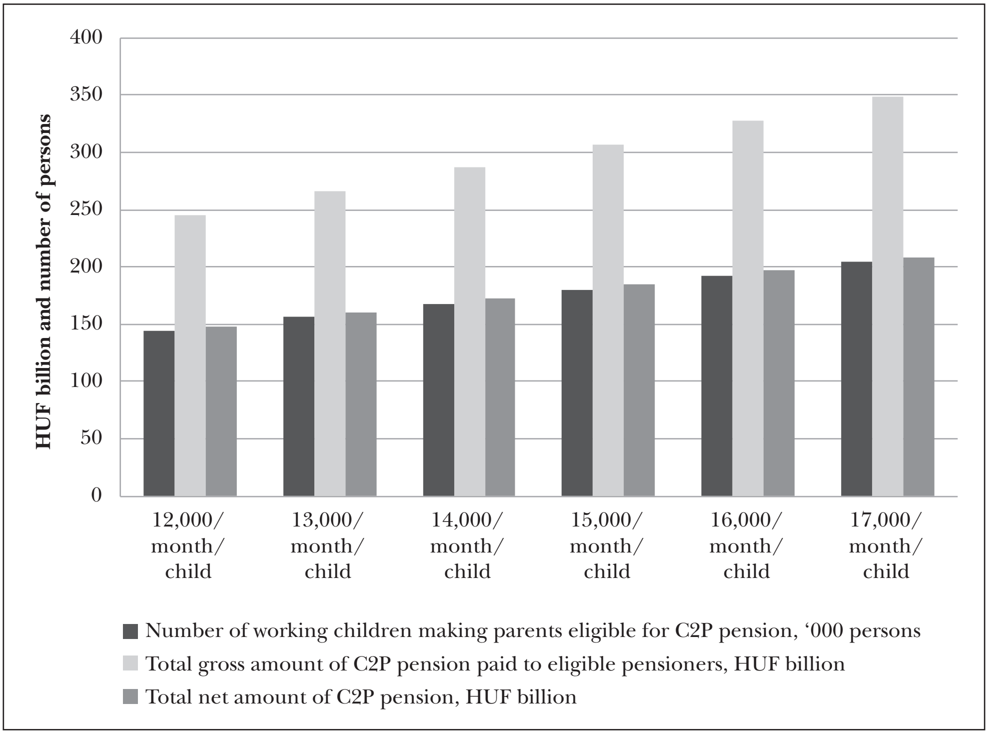
Parents would receive an extra pension allowance of HUF 12,000 per month per child in 2019. This amount would be increased annually, until it reaches HUF 17,000 per month in 2024 (an additional HUF 1 thousand every year).

Parents in the transitional system would be entitled to receive extra pension allowance if their children have worked for 10 years before 2018. If the child was not employed for 10 years, a possibility should be given for correction during the period 2019-2027. In this temporary period, parents would get half the amount given to parents with 10 years employment.

Figure 7 shows the temporary extra pension, the number of children, the outlay for extra pension, as well as the effects of the system. For the state, the increase in the deficit would only be 60-65 per cent of the amount spent, as the consumption taxes and the increased GDP would lead to substantial receipts.

The aim of the two different models for the child-based pension element is to fulfil the needs of a sustainable population with a balanced entry of new generations. Due

Figure 7: Total amount of C2P pension paid to eligible parents, changing year to year. Number of working "children" making parent eligible for C2P pension, 2019-2024



Source: Edited by the authors

to the aging population, there is a great need for a correction of the pension scheme, requiring not only financial provision but also a successive generation flow.

Summary

As the current pension scheme takes barely child-raising into consideration or not at all, there is a significant demographic distortion, frequently voiced in the unfortunate opinion that "it is not worth" having children. This message, associated with the current pension scheme on both an anecdotal and a statistical level, urgently needs to be reversed. For this reason, we propose a "child-to-parent based pension scheme" that would be fairer financially and more efficient demographically. As demonstrated, the proposed system would also considerably reduce old-age poverty, particularly for the highly vulnerable strata of widowed women who have raised two or more children and have a very low pension income due to their historic lack of contributions as a result of their years invested in child-rearing.

Notes

[1] This study uses the results of the following research projects of the author Szilvia Szegő: OTKA 29858, OTKA 18390, Hungarian Academy of Sciences.

[2] In this paper the effects of the different financial positions of the various generations in Hungary, which significantly differ from the Western scheme, are not analysed.

[3] On the social reality see Vass, 2005.

[4] See the large number of publications on family economics in the last 40 years.

[5] About population deficit see Szegő, 2002.

[6] Families' life stage conflicts were demonstrated by Szilvia Szegő as a result of investigation OTKA 18390 (Hungarian Academy of Sciences) and described in Szegő, 2006.

[7] The notion of parents child-rearing age is worked out by Szilvia Szegő in the research projects OTKA 29858 (Hungarian Academy of Sciences).

[8] One of the reasons of the declining birth trend is that children are no longer viewed as labour supply for the family economy.

[9] This pyramid was modelled by László Radnóti in the research project of Szilvia Szegő (OTKA 29858). The method of the model is based on the publication Arriaga, 1994.

[10] Ibid.

[11] The average educational cost/pupil/year multiplied by the average years of education.

[12] According to statistical methods the cost of one child is the 18.75% of the total cost of the 2+2 family type. This stems from the statistical methods used in calculating consumption, where one adult is 1 consumption unit, while one child is 0,6 consumption unit.

[13] The methods used for taking the parents' performance into account in child-rearing resulted in an added allowance in an amount of about 2-4 percent to their pension (3-8 percent in case of two children).

[14] Yearly 70,000 young people begin working carrier.

[15] Having worked 4 (5) years.

[16] For 1 child, the amount or the percentage is the half of the above, for 3 children, the amount or percentage is 1.5 times more as the figures presented.

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Bence Balassa – Tamás Bezsenyi

The Organisation of Accelerating Economic Offenses During the Change of Regime

Summary

In his book titled *The Shape of Time. Remarks on the History of Things,* George Kubler criticised the nature of chronologically and linearly approached and explained historical concept. He claims that applying biological metaphors to the periodical changes in history results in the adverse consequence that it presumes repetitious life cycles in different eras of the past. Shaping a new criminal method or trick is mutatis mutandis an initial sequence-starter object, just like a painting projecting a new, original approach. However, not only the existence of the original work of art is necessary, it must be subject to reliable verification, we cannot always identify the first perpetrator of the given criminal method.

Keywords: sociology of time, organised crime, change of regime, financial funding of political party

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The change of regime, including a political, economic, social and socio-cultural transmission that luckily took place without bloodshed in 1989-1990 in Hungary had its effects on the structure of criminality and on the structure and dynamics of law enforcement as well (Mátyás, 2017).

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Both earnestly "considerable" organised crime and the accumulation of vast never-before-seen assets originating in underground economy and illicit activities represent a series of special challenges for the Hungarian law enforcement bodies, resulting in an overall change in criminal investigations, and in the transformation and reinventing of all the related fields (criminalistics, criminology and criminal sociology). This study is an outline of the events of law enforcement in the 1980's, in 1989 and the rather infamous 1990's, and somewhat paraphrasing the title of a study by Professor Csaba Lentner, an answer is sought to the question who actually paid the price of this transformation (Lentner, 2005). In his book titled *The Shape of Time. Remarks on the History of Things,* George Kubler criticised the nature of chronologically and linearly approached and explained historical concept. He claims that the application of biological metaphors to periodic changes in history has the adverse result of presuming recurrence in life cycles in different past periods (Kubler, 1992, p. 23). Kubler emphasises the unique and singular quantities instead of the cyclical approach in a teleological comprehensive frame, expecting a targeted approach from actors of historical processes. His synthesis is somewhat undermined by the fact that the matters of focus or strategic thinking cannot be defined in such an easy manner without the aesthetic definitions of an art historian. According to Kubler, "purpose has no place in biology, but history has no meaning without it" (Kubler, 1992, p. 22). In a historical perspective, it is just as easy, or just as impossible, to discover realistic or plausible targets in the activities of the one-time actors of the past on the grounds of our knowledge of the particular period as in the seemingly never ending biological cycle. We may agree with Karl Popper that some species face problems similarly to people, caused by changes in their respective environments. The experimental theory created as a solution to the initial problem is followed by the correction of errors until the nature of the problem changes in an extent that we no longer consider it as a problem, unless, due to some of its unforeseeable consequences, we face it again as a different problem on a different level (Popper, 1998, pp. 20-23).

In Popper's approach, human theories or problem solving that serves more pragmatic purposes represent the same evolutionary changes, however, they cause physiological mutations in most the organisms, and "extra-skin" (exoderm) mutations in humans (Popper, 1998, p. 23). Such exosomatic mutations often represent a heuristic explanatory potential and practical advantages in the beginning of a period, but due their specific nature, they also tend to create difficulties when it comes to responding to changes. In this respect We believe that biological metaphors are more useful than Kubler's physical approach, for example, energy transmission, resistance or transformers in electrical circuits, which give a mechanic reading to changes but fail to pay attention to the path-dependence detectable in historical changes. Unlike electrical circuits, the used parts of the present cannot be unplugged from the historical past, although they may be atrophied or starved, as it happened with the institutional and economic systems after the Hungarian change of regime, affected in vain by decisions similar to mechanical changes, as the actors of these mechanisms could adapt to the new eco-system with the help of their previously accumulated capital, just as it is the case with any other organism. On the other hand, we may entirely agree with Kubler's argument that we are only able to know time indirectly, by deduction from things that have happened (Kubler, 1992, pp. 29-30). We cannot agree with András Szekeres's argument that Kubler's approach and the physical metaphors are more enlightening than the biological definitions that have long been incorporated in different languages (Szekeres, 2000, p. 144).

American art historian George Kubler focused his research primarily on the pre-Columbian era, aiming to compare his own topic with European eras considered as hegemon, and introduced the problems of time and duration in his book titled *The Shape of Time*. Historians may also benefit from and also alter George Kubler's historical time approach in accordance with their own fields of research. He extended the definition of art to every object created by humans, thus practically even bureaucratic documents representing no invention or artistic value whatsoever may be filled with creative mentality, but in Kubler's view they give account of the objective world and its changes in the frame of time in a rational order.

By an artistic analogy, official documents, whether corporate deeds, other official or even confidential files and reports of the state administration or enforcement bodies, copy the material world surrounding the members of a society, and also mirror the actions and changes indicated by individuals. The significance of the research lies in understanding that the pieces of the material world are not the results of coincidence, in Kubler's words "every man-made thing arises from a problem as a purposeful solution" (Kubler, 1992, p. 23). Pursuing a criminal action as a rational satisfaction of a demand or as a problem solving technique can be easily detected among the individual purposeful solutions (Szabó, 1979, pp. 319-329).

From the perspective of a governmental judicial system, he interprets the actions of the members of the society as the actual recapitulation of the original goals and as a specific interpretation according to the judicial system's viewpoints. Consequently, the phenomenon of organised crime is not shaped by its presumed actors, but by the policing bodies and other law enforcement entities.

In Kubler's interpretation every historical perspective has a temporal structure just like the cracks and sequences in a grandiose fresco. The uniform picture made from the interpretation of sources is fragmented on the basis of the chronology of the various developments, and this is exactly what gives rise to its complexity. "In this perspective the cross-section of the moment, the integrity of a given moment at a given place shows a mosaic of sequence at a different stage of development and age, and not a structure of beam reaching to each component" (Kubler, 1992, p. 50). The law enforcement and judicial sources made of crime in a period reflect the development of perpetrators' techniques, the acceleration of criminal actions, and the problem of delayed law enforcement responses is often an issue (Girhiny, 2015).

Although the law enforcement bodies experienced an accelerating spread in organised crime, its interpretation suffered serious delay (Mátyás and Sallai, 2014). Experts of criminology tried to dissolve the duplicity of the problem. “From the early 1980’s, criminal actions started to increase as a result of the incorrect political and economic decisions made in the previous decades” (Déri, 2000, p. 136). For the first time in 1978, several police officers published studies on the trend of increase in the specific forms of crime and on the surmountable delay of law enforcement in *Belügyi Szemle* (Journal of Internal Affairs), addressed to law enforcement professionals (Mérges et al., 1978, pp. 34-40). Home affairs professionals thought that in that year “consultations on the actualities of law enforcement raised several significant issues, first of all, in relation to the fast and effective investigation of criminal acts. It was pointed out during the consultations that the police received a vast amount of information and data that would be useful for fast and effective criminal investigation if properly evaluated” (Dobos, 1978, p. 66). The euphemistic description of actual questions might have been underpinned by the absence of an accurate definition of the practical problems. The effectiveness of law enforcement closely correlates with the speed of investigation conclusion, while the extra information relevant for law enforcement activities became available with the adoption of new media surfaces, and the national coverage and acceleration of mass media. The challenge of our time is the acceleration of criminal acts, and the growing difference between the response time of law enforcement bodies in comparison to the previous periods. Structural changes and the appearance of new participants (i.e. perpetrators) were no longer simply a generational issue, but suggested a change on an overall level in law enforcement. The first to call the attention to the presumable launch of criminal organisation was János Dobos in 1978 (Dobos, 1978, pp. 66).

How did Hungarian law enforcement bodies react to the new forms of crime? How did they discover and define it for themselves? How did they have others see their combat against it? While answers are sought to these questions, crime is considered as a special form of race against time.

According to the general interpretation typical after the change of regime (even in professional criminology research), Hungarian citizens did not know the phenomenon of organised crime. “8 to 10 years ago the population only saw and heard of organised crime through Western movies, and more specifically only about trade in drugs. Moreover, only a few professionals recognised the preliminary signs of organised crime, and even their arguments were controversial” (Déri, 2000, p. 137). An extremely difficult labour preceded the birth of organised crime. According to the above example concluded from a statistical study by Pál Déri, the society was not aware of and had not experienced the issue of the evolution of the organised crime. Its preliminary signs were not obvious even for professionals. In this approach the state was depicted as suffering from premature birth, while the new-born, controversial to its presumable age, seemed to have some sort of antecedents. In this interpretation, the decomposition of the former regime undermined the ethical dimensions of social and economic relations, moreover, staying with this metaphor, criminal actions burst their banks and penetrated new areas, beyond the control of the authorities. This conclusion leads to the impossibility of the theory of seeing crime as a special form of race against time. "The truth is that no matter how hard the law enforcement bodies may work, their efforts are worth no more than trying to find a needle in a haystack" (Déri, 2000, p. 137).

Accelerating crime

The temporal nature of objects or material culture may be interpreted through chronological sequences. The individual historical sequences result from the primary objects and their replicas (Kubler, 1992, pp. 131-132). The spread of copies suggests that a given form or object has spread on a broader scale and an increasing number of people use it. However, the actual consumer or user responses to changes are ambivalent: while precursors focus on future opportunities, the majority of people forming the public opinion may only cope with the actions it has actually met in some form.

The elaboration of a new criminal method or trick is *mutatis mutandis* an initial sequence-starting object, like a painting projecting a new, original approach. However, while the existence and reliable identification of the original work of art is considered invaluable and assigned a high significance, we cannot always identify the first perpetrator of the given criminal method. Breaking in homes using lock picking by breaking up cylinder locks spread in some of the post socialist countries in the 1970's, and all we knew is that the idea of the method originated from Poland. However, the inventor of the trick and the first suspect of this crime, in other words, the first criminal actor using this method are not necessarily the same persons. In addition, Hungarian criminalistics were only aware of the fact that Krzysztof Rybitwa was the first Polish perpetrator who committed several burglaries by picking cylinder locks in Budapest (Csiba and Bodor, 1983, pp. 3-9). After the "Polish method" had spread widely and the significance of protection was recognised, criminals needed to find new techniques. One of these was "bolt pulling", when the perpetrator reach in through the already opened door with a screwdriver in order to pull out the fixed bolt and open the door. After the damaging methods previously used during burglaries, the invention in non-damaging methods was that the injured party only noticed the illicit intrusion subsequently. Authorities suspected that the locksmithing tricks were related to criminals from the Czechoslovakian Republic. In this case, the inventor of the method was certainly the first perpetrator known for the authorities. For this reason, the arrival of the man known as Smolski in Hungary in the middle of the 1980's caused serious problems to the authorities (Lukáts, 1990, pp. 46-47). The geographical borderlines and the scope of applicability limit the historical sequences of criminal offenses against property far more than the temporal changes related to objects of art. These methods proved to be effective primarily on locks produced in the Elzett Factory founded in 1901 in Sopron, since besides Hungary, these type of locks were used in most of the Eastern-European countries during the socialist era. Research done by Valér Dános pointed out that criminals first started to get organised on a larger scale to conduct burglaries (Dános, 1988, p. 16).

Ironically, the concept of organised crime re-appeared in the first half of the 1980's, right after the acceptance of the National Planning Office's proposals by the

Hungarian Socialist Labour Party's Political Committee on the secondary industry and their submission to the government (Sik, 1996, p. 710). The material gained publicity and generated enormous debates and fear. Many were concerned that "socialism has thrown up the sponge" (Germuska, 2008, pp. 76-77), but then on January 2, 1982 the act on small enterprises entered into force. In the same year, the Criminal Department of the National Police Headquarters of the Ministry of Internal Affairs took over and unified the investigation of the serial burglary cases previously investigated by several different police organisations in Pest County (Pintér, 1983, p. 96). In addition to the presumable mutual effects of the two events on each other, the act specified certain aspects of the investigation.

The investigative phase of the case called Prestige Case was concluded on 1 November, 1982, and 85 offenders were found guilty by a final and binding order in the next few years. Prosecutors proved their guilt in 170 cases, establishing 147 cases of burglary, and in relation to the above, the forgery of documents, illicit travelling abroad, stealing cars, weapon abuse and receiving of stolen goods (Tonhauser, 1983, p. 48).

One of the investigators of the case, Sándor Pintér clarified the actions of the investigation for the *Belügyi Szemle* (Pintér, 1983, pp. 96-103). Besides, the chronological explanation allowed the reader (primarily, the professional reader) understand how huge wealth could be accumulated in socialist Hungary by outwitting state control. In compliance with the legal terminology of the era, the classification could only be "criminal conspiracy", however, in the course of the relevant debate, the possible existence of organised crime was mentioned for the first time ever.

According to the memoires of László Tonhauser, chief investigator of the group responsible for the case, the number of criminal acts against personal property, especially burglaries against private properties started to increase from the end of the 1970's. "Crime scenes were short in evidences. The value of the damage caused also multiplied, the loss of HUF 4, 5 or even 10 million was not infrequent per burglary. Clearing up became impossible. Even if we could produce a suspect for a singular case, he closed up, retired into his shell and did not communicate with the police" (Tonhauser, 1999, p. 100). In Tonhauser's interpretation a new type of criminal method set foot in Hungary. Perpetrators were well prepared and worked on the basis of reliable information. Clearing up became impossible because of the improvement in criminal networks. When a party to a crime or any other person partially related to the network was arrested, the organisation supported his family with money or packages. They kept influencing them through their relatives by giving them money and other assets. They supported every member or affected person with highly qualified lawyers at any hours the day (Pintér, 1983, p. 101).

Between 1957 and the change of regime in 1990, the secretary of the Hungarian Socialist Labour Party's Central Committee responsible for administration, the head of Governmental and Administrative Department, the minister of judicial affairs, the chief prosecutor, the minister of internal affairs and the chairman of the Supreme Court operated a commission beyond public notice, with significant power based on their positions. It was acknowledged as a practical solution that the heads of different governmental institutions, like the representatives of judicial and law enforcement authorities and the representatives of the state party, would cooperate through this forum.

The Coordination Committee had monthly sessions in relation to actual criminal and judicial issues. According to the second topic of the agenda of the session held on February 7, 1983, Jenő Szilbereky, chairman of the Supreme Court at the time, made an informative report on "the experiences regarding the obstacles of pursuing timeliness in cases involving multiple offenders [*sic*] and in priority criminal cases [*sic*]".[1] The informative report was prepared because of the Prestige Case, as according to the Tonhauser's memoires, the leaders of internal affairs had supported the ideas related to combating organised crime only until the conclusion of the investigation, and the investigative group established for the case was dismissed at the end of the case (Tonhauser, 1983, pp. 48-52). Accordingly, the informative report even avoided to use the term "criminal conspiracy", although this meant organised conduct of criminal acts even in the statutory provisions of the time.[2] The chairman of the Supreme Court used the most legally neutral phrase "involving multiple offenders" to interpret his theory on "pursuing timeliness" using his special bureaucratic terminology. This concept aimed to accelerate the investigative and court sequences of the criminal cases (Bezsenyi, 2015).

The committee approved the report and enlisted future plans in four steps. According to the first step, cases "involving multiple offenders" should be divided into separate cases already in the investigation phase, and heard by court separately. In the Committee's interpretation this served to secure that the procedure is not impeded by other difficulties. No further details are given, but practically political considerations may lurk behind the instruction. Due to the segregation of cases, cooperation between the members of the criminal organisation and the community of interests become relative similarities of interest on the level of legal perception.

In step two, all sizeable cases that cannot be divided must be heard by a committee of five judges. The actual aim of this provision was closely connected to the third step (C), which provided that the Ministry of Justice must examine the opportunity to simplify courts' sentence drafting practice and methods. In other words, if a court hearing related to a large criminal organisation could not be avoided, the case should be heard and concluded by a court ruling as soon as possible. Thus, the media had considerably less time to deal with such cases.

The fourth and final step was phrased in a highly enigmatic way. "The heads of the proceeding bodies should monitor the hearing of voluminous [*sic*] cases and should secure timeliness"[3]. In case there is a logical connection between the two parts of this sentence: "monitor" should be the aim of the control, presumably including the ensuring of timeliness. This is nothing else but cutting criminal cases committed by criminal organisations, although legally only termed only "criminal conspiracy"[4], as short as possible.

At the end of the agenda, the participants expressly state the measures leading to the desired result: time consuming investigations, namely, the evidentiary procedure must be shortened. Basically, this also leads to cutting extensive bills of indictments short, considering that authorities "tend to overprove each single case".[5] Presumably the author of these provisions was not aware of the fact that his critical instructions appear as implicit compliments for the readers. The author further states, that defence attorneys also tend to delay cases, and this, of course must be stopped, as there is no need for "indictments of thousands of pages or court rulings of several hundred pages"[6] either.

In the early 1980's Tonhauser was one of the experts regularly appearing in the television show "Kék fény" (Blue Light) that explored criminal cases. Some of the more interesting segments of the Prestige Case were presented to the broader public, for example, burglary using rented cars or tricks worth ten million forints. With this Hungarian cultural policy-makers classified the stories of the Hungarian underworld generally consumable for the wider public, without an explicit acknowledgement of its existence. However, the presentation of the establishment criminal organisations to the viewers in the mass media was not allowed in any form.

For the most part, the criminals involved in the Prestige Case knew the victims working in the second economy, or if not, they could obtain information about them through their informants or contacts. Why would the investigating authorities want to disregard the asset accumulation of these individuals of second economy? The most probable answer may be found in an anthology compiled of private conversations by Ervin Tamás, police captain of the city of Siófok, about individuals employed in the underground economy of accommodation and catering. "As for the shops with contracts, one more thing must be taken into consideration: receiving. Stolen goods quickly exchange hands, and – due to the less stringent practice of supplies – the risk of exposure is considerably less than in the case of shops with a free cash register or shops with itemized accounting" (Tamás, 1988, p. 109). Presumably, the investigation of the malpractices of injured parties who fell within the scope of the act on small enterprises effective from January 1, 1982 would have raised serious political issues.

System in slowing

The change related to time in organised crime may become particularly important if we focus on its historical aspects during the change of regime. Although in criminal actions the acceleration and/or slowing trends show a closer correlation with changes in social conditions and environment than in the case of art, the following analysis is based on the theory of an art historian.

In Kubler's sense, innovators and rebels open up future opportunities for a change in the historical sequence. Kubler thinks that social transformations do not necessarily coincide with periods of artistic innovation. However, in the case of crime there is a rather obvious correlation between political and economic changes and the mechanism of crime and criminal behaviour. The typology of artists' lives (Kubler's typology is used with the inventor and the rebel) play a significant role in shaping historical sequences, while the social pressure may alter historical sequences but cannot define them. This may apply in part to precursors, but it is completely ruled out in the case of rebel criminals, since they act under social pressure. The various types of criminals appear as a consequence of the prevailing social and economic environment, contrary to artistic autonomy, which can successfully lead to the artist actualizing himself against the given art schools. Inventor and rebel art has a longer period of time than is available for inventive or rebel criminals.

Kubler notes that while "the precursor shapes a new civilization, the rebel marks the borders of a dissolving one" (Kubler, 1992, p. 140). As a result of the precursor's actions "new areas of knowledge are revealed" (Kubler, 1992, p. 139). The inventor creates new shapes and forms on the grounds of the prevalent practice, while the rebel definitely departs from the existing opportunities so he is no longer limited in following his own imagination. The precursor never becomes scandalous, and he is not supported by fans, while the tone changing activity of a rebel triggers radical changes attracting a group of followers, which makes him easier to imitate.

Criminal precursors are primarily individuals who are able to make use of the opportunities generated by their current social and economic environment until the applicable statutory provisions manage to meet the new challenges. A Hungarian entrepreneur, later killed in the second half of the 1990's, built a profitable business in video tapes after the change of regime. As copyright infringement and the infringement of related rights was only granted statutory protection by Act LXXVI of 1999 on Copyrights, he became one of the wealthiest persons in Hungary by buying a huge number of empty video tapes and renting or selling copied movies through his chain of shops or various other places, like markets.[7] It was extremely difficult or impossible to prove his activity, as using statutory gaps, he could perform indictable acts (like fraud) unverifiably due to the lack of appropriate statutory provisions and judicial background.

By the 1990's T-K Kft. and L-C Kft. had become serious competitors to the "number one" cargo company of the socialist era. As the borders opened up with the change of regime, significant profits could be realised on the import and lease of used Western-European motor vehicles.[8] In the absence of the required statutory background, the conclusion of "prompt" lease agreements was allowed until the coming into force of Act LXXXVI of 1991 on Corporate Taxes at the end of 1992. The basis of this type of leasing was that the lessee paid most of the leasing fee simultaneously with the execution of the agreement. As these were short-term agreements, the lessee could acquire ownership of the vehicle after paying only a few installations of the leasing fee. The payment terms show that the lessees could have paid the total purchase price, but the parties concluded a leasing instead of a sale contract, as in the early 1990's, a leasing contract was more advantageous since the seller (lessor) could enjoy the benefits of accelerated amortisation, while the actual buyer (formally the lessee) could account the total amount of the leasing fees paid for the leased instrument under the legal title of costs, thus reducing the contributions and affixes otherwise payable on his enterprise (Varga, 2009).

Act LXXXVI of 1991 terminated this statutory loophole, and only acknowledged agreements with a term exceeding one year as lease contracts. Nevertheless, the conclusion of lease agreements remained profitable to cover up illicit actions. Act LXXXI of 1996 on Corporate Taxes and Dividend Taxes essentially changed the situation by considering agreements concluded for a term less than one year as lease contracts again, but prohibiting the accounting of leasing fees as costs. Lessors were also granted better options for recognising amortisation (Varga, 2009).

Criminal organisations were not the only groups that could acquire significant volumes of assets by trading vehicles before the entry into force of stricter statutory regulations in the second half of the 1990's. State properties were easily transferred to private possessions under the legal title called "privatisation leasing" if the buyer was insufficiently funded, as the seller remained legally protected by keeping the ownership title.

Although the inventor criminals and wheeler-dealers comparable to Kubler's inventor artists marked out the directions of a new system, they are not the inventors of the emblematic measures characterising the new world. They are not surrounded by groups of imitators, first of all because they are very difficult to criminalise, and secondly, a substantial informal network needs to be built (for example, for the transfer of vehicles). These criminals are rebels, who set the legal boundaries of the newly evolving market economy, and can clearly be considered as deviants using considerably more characteristic and accessible methods that are easier to imitate. The government understandably considers them people society needs protection from.

In order to apply for state subsidies, in his double-entry books businessman József Stadler included higher than actual sales prices for the products he had previously purchased or produced. Thus he could apply for higher export subsidies from the state on his sales. In this tax fraud system based on virtual purchases, he reclaimed taxes never paid on purchases that never happened, receiving 25 percent value added taxes on amounts he had never paid.[9]

Péter Tasnádi granted mostly short-term loans to undercapitalised entrepreneurs during the change of regime, at interest rates calculated by himself. In most cases, his debtors were unable to repay the loans by the deadline, so he used force to collect multiples of the sums borrowed. From the early 1990s he even went on to collect the debt claimed by others, before statutory regulations were adopted on private bailiffs and executors. Actually, he continued this activity even after the judicial gap was closed (Tasnádi, 1994).

The rebel criminals mentioned above mark out the boundaries where a newly established system may decompose, as instead of exploiting deficiencies in the new system, they rather reinterpret the existing regulations in a way that infringes upon the effective statues and regulations of the prevailing social order, making them look virtual, apparent and pointless (Bezsenyi, 2015, pp. 135-158). Criminal acts like tax fraud are given considerably more publicity than the inventors' tricks, and due to the mass reproduction and imitations, it is much more important for the actual system in the new sequence to depict them as criminals.

Prior to the change of regime (for which Hungarian law enforcement bodies were basically unprepared) (Balassa, 2009, p. 83), the so-called TT departments (established for the protection of collective property), which had investigated delinquencies and criminal offenses against public or collective property, had nearly been eliminated by the time of the change of regime, and by the introduction of market economy in 1989-1990 several chief officers of the police motioned against the transformation of TT departments and teams into the bodies engaged in the protection of public property. Brigadier general Ernő Kiss spoke about this in a report to the Oil Committee in 2000: "Some of chief officers of the police insist that there is no need for protection of the economy and economic law enforcement activity in the frame of a market economy".[10] The above quotation reflects a far too optimistic statement that reduces Scottish economist Adam Smith's "invisible hand" doctrine to a vulgar economic theory, as if building a capitalist market economy and the self-regulatory nature of the market made the conduct of economic criminal offenses, previously committed against state property and public monopoly, pointless.

This incorrect perception was related to another issue of the time. 5 January, 1990 prominent politicians of SZDSZ and Fidesz brought charges for the abuse of power. The State Security Service of the Ministry of Internal Affairs had misused confidential methods and means to survey persons in the opposition parties and civil organisations of the time, despite the fact that such activity was considered as breach of the Constitution in accordance with the amendment of the Constitution that entered into force on 23 October, 1989. Report No. 219. BM III/III-7 of 10 November, 1989 submitted by József Végvári, an employee of the Department Internal Security, was attached to their police report. A press conference was held in a film theatre in Budapest, where the opposition parties revealed the reports made on 6, 20 and 22 December, 1989. Most of the information included in these reports had been obtained by Ministry of Internal Affairs through secret surveillance (phone interception, checking mail, network methods). This series of events stirred such a political storm that Minister of Internal Affairs István Horváth was forced to resign at the end of January, 1990.

The "agent case" put such a pressure on the chiefs of police that nearly all the informants, called "social relations", were dismissed at once, not only those employed in state security but also those working on criminal cases.[11] This made operative work terribly difficult. Especially in the protection of public property, where infringement on the interest is not and cannot be as obvious as in the case of a report by an injured party for criminal offenses against property. Foremost in these cases the protected legal subject was state property itself, especially during the change of regime.[12] Naturally, the subsequent amendments of Chapter XVII of the Criminal Code made it clear that contrary to the previous general perception, in cases of crimes against public property, the injured party was not necessarily the state or any of its enterprises, but also the representatives of the private sector (investors and creditors). Nevertheless, informally the state was still considered as the injured party for the most part. On the one hand, the newly established private sector could only have access to fixed assets through privatisation,[13] in other words, by taking properties formerly in state ownership. On the other, the state managed to preserve its status through the criminal protection of the payment of taxes and other contributions. At that time, the National Police Headquarters as a managerial body did not have its separate department for the protection of public property. The Budapest Police Headquarters had a separate department for collective property protection, which functioned as an operative body, but the investigations based on the submitted reports were assigned to the competence of a different investigative authority. At county police units, the public property protection teams performed both operative and investigative work. However, the dismissal of informants nearly completely terminated operative projects, as information indispensable for criminal investigation became extremely difficult.

As the police management considered it unnecessary to transform public property protection departments into economy protection teams adaptable to the new economic environment, and the mentioned decisions made operative actions ineffective, the number of offences falling within the competence of the economy protection units, such as fraud, embezzlement and misappropriation, skyrocketed.

Ernő Kiss, in agreement with retired police colonel László Tonhauser emphasised that the decisions hindering investigation hit economy protection most. The chances to find witnesses in homicide or robbery cases are higher, and moreover, the media can provide more reliable assistance. However, in a business-related offense,[14] witnesses having insider information in the closest circles may be useful in exploring the offense. Not to mention the missing role of the media. It is always more difficult to reveal a subtle and elaborate business offense to the consumers of mass media.[15] It is a commonplace that thrillers and other shows frequently discredit the true value of expose investigation.[16] Economy protection efforts are not presented at all.[17] In the past twenty years, numerous organs and investigative journalists have made serious efforts to change this trend, nevertheless, economy-related offences intertwined with politics are far more frequently shown than perpetrators who are not politically exposed but are often transnational.[18]

The above outlined considerations shed a completely different light on the analysis of the statistical data set forth in the preamble to Mihály Tóth's study about market economy and criminal law. The number of criminal offenses increased from about 100,000 over to above 400,000 between 1974 and 1994. This significant increase was parallel to the adoption of market economy. Between 1986 and 1988 the total number of known annual criminal offenses fluctuated around 180,000, it rose to 225,393 by 1989 and then to 341,061 in 1990. By 1991 this number exceeded the 400,000 limit and culminated at 447,215 in 1992 (Tóth, 1995, pp. 4-5).

Meanwhile, the number of criminal offenses remained essentially unchanged, at an average of 8000 most of the time. Not even Mihály Tóth could explain stagnation. He thought that traditionally more than two thirds of the criminal offenses against the economy comprised customs offenses and offenses related to foreign currencies, while "their number was unchanged (or at least the capacity available for their investigation was set)" (Tóth, 1995, p. 5). The question why the annual number of offenses against the economy stagnate while, for example, offenses against life do not casts doubts on this argumentation. Moreover, all the other law enforcement bodies also work with a set capacity. Tóth's argument points more to the fact that decrease in economic offenses by 1994 is more likely related to border opening, change in the economic infrastructure and customs regulations. At the end of his argument, Tóth also refers to insufficiency of his own interpretation and to the probable delay of law enforcement units behind criminal groups, writing that the police was unable to detect any actual criminal groups involved in economic offenses at the time. He mentions the 1994 criminal statistics, profiteering and illicit overpricing are still listed as high-priority offenses, even though the first had already been deleted from the Criminal Code years earlier, while the latter was significantly modified.

The above-mentioned factors, which impeded the investigative efforts of the economy protection units may offer a more plausible explanation for the low statistical data. The conceptual and terminological approach manifest in the criminal statistics quoted by Mihály Tóth is the textbook example of loopholes and inefficient professional methods, as it apparently disregards the change of regime.

Even Mihály Tóth did not believe that the aforementioned decline in 1994 would represent an "impressive progress" (Tóth, 1995, p. 5), an expression he explains by the economic abuses frequently published in the printed media. Since many offenses remain latent, he only used the presumable weight of economic offences to estimate if they increased or decreased. Based on, among others, the information found in a press material issued by the chief criminal director of the National Police Headquarters,[19] he thought that such kind of criminal offenses had grown in significance. According to the police records, in the first half of the 1990's the number of criminal offenses against the economy declined, while according to the chief police officer cited by Mihály Tóth, and the management quoted in this study, the number of such offenses grew on an unprecedented scale.

In 1996, deputy minister of state of the Ministry of Internal Affairs, Antal Kacziba already spoke of an "explosive growth" in fraud and fraudulent bankruptcy offences, since in 1994-1995 legislation approved the acts on public procurement, fraudulent bankruptcy and copyright protection. These changes finally room for the protection of the economy and "the facts... previously rarely referred to gradually came to life" (Kacziba, 1996, p. 61).

Actually, it is beyond the scope of this study to list all the reasons for the initial latency, but the most important ones are worth mentioning. An outstanding reason was the transformation of the economy into a capitalist one. In an area once falling under soviet influence, a capitalist state or government cannot be established overnight, a transitional phase needs to be inserted. Based on empirical research, Iván Szelényi's theory of "manager capitalism" explains that during the undercapitalised early 1990's, in addition to the political elite, technocrats and business managers also increased their power, and instead of the small businesses and sole traders capitalising on the reforms of the socialist period, the professional business managers who direct the successor companies of former large state-owned corporations but do not have any share in them may not build a capitalist system representing stable market conditions overnight. They could not set it as an immediate goal either as instead of actual capital they only had an informal social network as an investable and convertible value. Szelényi cited the contemporary joke that it was more or less clear how fish soup (the socialist state) is cooked of the fish in an aquarium (the capitalist state), but the question was how to make fish again from the fish soup (Szelényi, 1995).

It is important to highlight the question of law and morals. This expressly concerns business morals, as its absence allowed certain media to depict József Stadler as a kind of a folktale hero (Sinkovics, 2007). Péter Imrédy summarized the life of the entrepreneur in a book of five columns (Imrédy, 2008). The terminology of the writing was somewhat folksy, imitating Stadler's lingo and dialect, as seen in his video-interviews.[20] Mihály Tóth also mentioned the absence of the intermediating and orienting functions of morals, but he thought it was due to the paternalistic world of state socialism. The preponderance of regulation in writing allowed that by the 1990's the "principle that 'you can do anything not prohibited by law (naturally, the latter only included written regulations!)' was assigned an unfettered and high-handed interpretation" (Tóth, 1995, p. 23). Thus the legal loopholes due to delay in the regulatory response to the economic changes and the unclear language used gave room to economic activities on the borderline of legal and illicit.

Our temporal errors

On the basis of the Tárki Social Research Institute's research, György Csepeli, Mária Neményi and Antal Örkény analysed the value choices in the Hungarian society in the early 1990's. 86 percent of the respondents did not categorically confute the assumption that nowadays one cannot really know the truth, 69 percent of them agreed that there was no point in engaging in an argument about the issue of the truth, as there was no chance to change things. Researchers were shocked to discover that 62 percent of the respondents could not recall any injustice they had suffered. Although they were presented with a list of eight different fields of injustice, such as religion, gender, region, race, age, political affiliation, etc., only one of them, namely financial injustice exceeded 10 percent (Csepeli et al., 1992, pp. 335-357).

The findings of the above-mentioned analysis give us an important guidance for understanding the social ideas related to organised crime. In the researchers' opinion the scepticism to the existence of justice and the apathy to the experienced injustice are presumably due to the sufferings the Hungarian society underwent previously. The researchers looked for an answer in society's past. They presumed that during socialism the respondents had numerous vicissitudes and sufferings. They did not even consider the almost obvious reason that if the members of the society think that there was no telling what is fair and what is not, this means that there is a considerably wider scope of actions an individual to obtain or achieve something for themselves or for their families, or to make decisions. If this is accepted, it is considerably easier to understand the argumentation included in a public letter written by prominent Hungarian celebrities opposing the raising of charges against Péter Tasnádi: "what can justify… making a successful businessman's businesses impossible, such a retaliation against a Hungarian intellectual widely known for his critical thinking" while "smugglers, oil-bleachers and drug dealers are allowed to plead at large until the conclusion of the criminal court procedures pending against them" (Index.hu, 2000). In the economy and society that transformed as a result of the change of regime, simultaneously performed criminal offenses had different time frames. But they were criminalized differently. The organisation of burglaries that started in the socialist era resulted in an acceleration in the spread of information among criminals the authorities could not handle. Just as in the case of cross-border criminal behaviour. As socialism was coming to an end, the increasing number of criminal offenses related to tourism and to foreign exchange management, customs, and smuggling put an enormous pressure on the police and the customs authorities, which had already been struggling with arrears with their duties anyway. In terms of law enforcement, the change of regime entailed a slowdown in the system. In the 1990's, criminal activities could take to a new level. Delay in the regulatory response allowed the present to function as part of the past in the arguments of academic researchers, while the above analysed new type of criminal behaviour preceded the above mentioned official "present", and according to the arguments presented by the interviewed persons performing policing at that time, it practically assumed the role of the present time.

Notes

1 *Emlékeztető a Koordinációs Bizottság 1983. február 7-i üléséről* [Memorandum made at the session of the Coordination Committee on 7 February 1983]. MSZMP KB, 1983, w3.osaarchivum.org/files/fa/999/4/1/koordinacios/1983/koord_biz_83_02_07.pdf.

2 "Criminal conspiracy shall mean when two or more persons are engaged in criminal activities under arrangement, or they conspire to do…" Act IV of 1978 on the Criminal Code, Chapter IX, Interpretative Provisions, Section 137 (7).

3 *Emlékeztető a Koordinációs Bizottság…*, op. cit.

4 Dogmatically, the difference between organised criminal group and criminal conspiracy is that the organised criminal group is set to conduct several offenses providing regular income to the offenders. The latter is set up and organised to conduct only one or two offenses.

5 *Emlékeztető a Koordinációs Bizottság…*, op. cit.

6 *Emlékeztető a Koordinációs Bizottság…*, op. cit.

7 Interview with police lieutenant-colonel Sz. F. 22 August, 2013, reporter Tamás Bezsenyi.

8 Interview with police colonel P. Cs. 7 November 2013, reporter Tamás Bezsenyi.

9 Interview with police colonel B. M. 24 February 2013.

10 *Jegyzőkönyv az Országgyűlés az olajügyek és a szervezett bűnözés között az esetleges korrupciós ügyek feltárására létrehozott vizsgálóbizottságának 2000. október 30-án megtartott üléséről* [Record made at the session of the Parliamentary Committee examining relationship between oil cases and organised crime to reveal any corruption, held on October 30, 2000]. www.parlament.hu/biz36/olaj/v006-021.htm.

11 Interview with retired police colonel N. L. 17 April 2013.

12 Interview with police colonel B. M. 24 February 2013.

13 In Act C of 2000 on Accounting expressly stipulates the basic accounting scheme of balance making upon asset side and liability side.

14 For the sake of simplicity, in this study criminal offenses against property defined in the Criminal Code are also called "economic offenses" as fraud and embezzlement are investigated by economy protection detectives and departments, regardless of where in the Criminal Code they are defined.

[15] The TV series entitled “The wire”, made by criminal journalist David Simon on Baltimore’s combat against crime is a refreshing exception among movies.

[16] It is enough to remember the frequent complaint of police officers that citizens often demand the techniques, measures and speed they see in movies (http://nol.hu/lap/hetvege/20091128-nyomkeresok).

[17] One of the most important characteristics of the image given of crime in the media is that only violent, rude and cruel offenses is given intensive media attention.

[18] We may find positive examples in both written and electronic media, like in *HVG* and *Átlátszó.hu.*

[19] *Népszabadság*, 9 January 1995, p. 2.

[20] Stadler válasza az Armanira [Stadler’s response about Armani]. *Index.hu,* video-interview, 4 November 2007, http://index.hu/video/2007/11/04/stadler_valasza_az_armanira/?s=tag percent3Astadler.

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Tamás Prugberger – Hilda Tóth – Andrea Szőllős

The Development of the Hungarian Labour and Public Service Laws After the Regime Change

Summary

The first Hungarian government that took office after the change of regime was also the first in the post-communist region to codify regulations similar to the West-European labour and public service law. The intent of the new Hungarian codification was to reconcile employers' and employees' interests. Hungary joined the European Union on 1 May, 2004. In the course of the accession negotiations, many labour law directives were incorporated into Hungarian law and order. Therefore, our labour law regulations could be regarded as EU-compliant. When the legislature re-codified labour law in 2012, the aim was to confront international economic challenges so as to make labour law regulations more flexible and increase employment and economic growth. Meanwhile, significant modifications in the public sector directly served this goal by establishing a new life and career model for civil and public servants.

Journal of Economic Literature (JEL) codes: K19, K31, K40

Keywords: labour law, law for public servants, law for civil servants, labour law relations, collective labour law

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Historical background

Prior to the 1990 regime change in Hungary and in the subsequent year, Act II of 1967 served as the Labour Code, which regulated only the individual labour law and labour relations to include not only the regulations of economic life, but also those relating to the labour relations of civil and public servants. The main reason for this was that most companies were owned by the state and according to the prevailing ideology at the time, the lowest level of economic administration was the state company (Ficzere, 1970, p. 87). Therefore, state company employees were actually civil servants, as well. Only employees of worker cooperatives did not belong there. Their membership was regulated by Chapter VIII of the Act III of 1967 on Agricultural Cooperatives. In the case of industrial cooperatives, the "Employment Rules" were prepared by each industrial cooperative, based on the sample employment rules. Such regulations were issued by the National Association of Industrial Cooperatives and approved at their general meetings. The general theory upon which cooperative membership was based consisted of three elements: membership in the organisation, financial membership, and membership according to personal capacity, which could manifest in the member's work performance (Hegedűs, 1973, p. 34).

Returning to the formerly operative Labour Code: it did not regulate collective labour law, but rather, included only a short chapter summarizing the status and tasks of trade unions. The trade union's position depended upon the state, since the National Council of Trade Unions functioned partially as a ministry, and its president was a member of the Council of Ministers. Therefore, trade unions did not protect employees' interests, but rather, supervised the degree to which employees performed the state's economic expectations in place for companies and their employees. The fact that there was no need for the protection of employees' interests was supported by the Soviet jurist, Venediktov's theory of dual collectives. According to this principle, all state companies are owned by all nationals on the one hand, and by the collective of employees of the company on the other. Theoretically, therefore, no conflict existed between the company's management and the employees' collective (Venediktov, 1948, p. 24). As the official labour law theory disclaimed the existence of a labour fight, an act on strikes in socialist countries like Hungary did not exist. With the establishment of alternative trade unions one after the other in the last two years of the communist era, the theory was refuted. Employees resigned from trade unions under the supervision of the National Council of Trade Unions, which they should, in fact, have joined before (by law).

During the two years preceding the regime change, in the spin of events, the government could not foster the introduction of workers' shares by a separate legal act to entice employees' interest in economic management. Legislation was passed on the collective framework agreement, which was provided for a longer period of time and foundation on which collective agreements would be made annually, depending on the economic and wage conditions. At this time, alternative trade unions already operated effectively (the Act VII of 1989 on Strike), which was not very successful, was also created (Kenderes et al., 1989; Prugberger and Tatár, 1994).

The evaluation of the first legal codification of labour and public service law after the regime change

As the first government, led by József Antall, assumed power after the change of regime in 1990, the Minister of Labour and the Minister of Internal Affairs immediately started the re-codification of labour and public service-related legal relations. Act XXII of 1992 on the Labour Code, Act XXIII of 1992 on the Legal Status of Civil Servants (hereinafter Ktv.) and Act XXXIII of 1992 on the Legal Status of Public Servants (hereinafter Kjt.) took effect on 1 July, 2012. This regulatory system of labour and service relations was actually different from the West-European solution: labour law regulation of service relations, while the public service law governed state (public) service relations. According to the Hungarian trichotomy, the public service was divided into two areas: the public servants, who worked for public institutions not exercising authority, fell under the regulations of Kjt., and those who worked for public institutions with authority as officers were within the rubric of Ktv.

The system of labour relations

The Labour Code, which took effect in 1992 and followed the West-European solution, regulated both areas of collective labour law: the law of interest reconciliation (also known as "coalition law"), involving the rights and obligations of trade unions, the national interest reconciliation and the corporate collective agreement, and the law on labour relations in the workplace, pertaining to the system of works councils and the works council agreement. By these collective labour regulations, the Hungarian labour law legislation took the lead in Central and Eastern European post-communist countries, since these states incorporated such legal regulations into their labour codes only later on.

On the other hand, the Hungarian collective labour regulations were rather deficient and mixed in nature. They were imperfect, due to the fact that they regulated only the national interest reconciliation system, but did not involve the sectoral and regional interest reconciliation, the national sectoral and regional collective agreement and the accession criteria to the national interest reconciliation council, operating with a tripartite character (interest representatives of the state, trade unions and the employers). However, they regulated the conditions of concluding corporate collective agreements, namely the representativeness, very democratically. Pursuant to the regulations, if one or more trade unions together (if there were more trade unions, they formed a confederation with the similar ones) had ten percent representation at the works council election alone or altogether, and the candidate of the trade union received more than half the votes in the workers' council election alone or jointly with the candidates of similar trade unions, the collective bargaining agreement could be concluded. However, if only one of the trade unions operating at a company wanted to conclude a collective bargaining agreement, its candidates had to receive more than sixty-five percent of the votes at the workers' council election.[1]

With regard to the development of the national interest reconciliation system, the following facts merit consideration. The predecessor of the Interest Reconciliation Council regulated in the Labour Code was established by a decision of the Council of Ministers in 1988 (1081/1988. (X. 1.) MT (in Hungarian: *Minisztertanács,* MT) under the name of National Interest Reconciliation Council (*Országos Érdekegyeztető Tanács,* hereinafter OÉT), which was the first tripartite forum of the Hungarian social dialogue. So began the Western type (among independent organisations) institutional dialogue among the government, trade unions and the employers' interest representatives. Trade unions could join the OÉT upon the invitation of the government.

After the regime change, the name of the OÉT was changed. The new government regulated the Interest Reconciliation Council first by its decision No. 3240/1990 as of 12 August, 1990, then the government decision No. 3356/1990 ensured the materials, equipment and staffing resources of the Interest Reconciliation Council (hereinafter ÉT), on the basis of which the ÉT operated without separate statutory legitimacy until the establishment of the OÉT.

The Labour Code of 1992 did not legitimize the ÉT either; it only referred to the settlement of issues relating to labour relations and employment, and the interest reconciliation functions in connection with them relating to the competence of the ÉT (Act XXII of 1992 Section 16). The competence of the ÉT involved three compulsory areas: the minimum wage and salary, the establishment of maximum work periods, and the laying down of rules of collective redundancy different from those of the Labour Code. The ÉT gained general power in deciding national labour law issues. On the other hand, the conditionality of representativeness necessary to join the ÉT was not resolved.

On 21 April, 1999, the ÉT was transferred, unaltered, into the National Labour Council (*Országos Munkaügyi Tanács,* hereinafter OMT). The new government, coalition of the Alliance of Young Democrats (*Fiatal Demokraták Szövetsége,* Fidesz), the Independent Smallholders, Agrarian Workers and Civic Party *(Független Kisgazda-, Földmunkás és Polgári Párt,* FKGP) and the Hungarian Democratic Forum (*Magyar Demokrata Fórum,* MDF), wanted to place interest reconciliation on new grounds. Government decision No. 2301/1998. (XII. 30.) comprised the professional concept of the system of social dialogue. The membership of employers' and employees' interest representatives was attached to representativeness in the national industry by the statutes. Thus, the issue of membership seemed to be resolved. The government introduced a two-level interest reconciliation system. Therefore, in 1999, the Economic Council was established (1999-2004), which took over the OMT's tasks of conciliation relating to economic policy.

The new government was formed in the spring of 2002, the left-liberal coalition, the Hungarian Socialist Party *(Magyar Szocialista Párt,* MSZP) and the Alliance of Free Democrats *(Szabad Demokraták Szövetsége,* SZDSZ) decided on the re-start of interest reconciliation by the government decision No. 1094/2002. (VI. 8.). The agreement on the re-establishment of OÉT was concluded on 26 July, 2002, which declared the dissolution of OMT, as well. The name of OMT was altered to OÉT in the Labour Code as of 1 September, 2002. The OÉT (as the ÉT before it) appeared in many legal regulations. Moreover, the new government even gave the right of understanding to this consultative, advisory body, which still had no statutory legitimacy. The Constitutional Court (*Alkotmánybíróság,* hereinafter AB) declared this competency of OÉT unconstitutional (40/2005. (X.19.) AB ruling). Therefore, the National Assembly promulgated and passed the Act on the operation of OÉT on 11 December, 2006. The act was not published because the President of the Republic asked for a preliminary ruling from the AB. The President of the Republic regarded the public authority power of the organisations which were members of OÉT unconstitutional, since their authorisation could not be traced back to the majority of voters or even to that of the parties to employment relations. The Constitutional Court ruled the Act unconstitutional and remanded it to the National Assembly for revision. The National Assembly took an extraordinarily long time to set forth the new regulation. Governments did not manage to settle the macro-interest reconciliation on a statutory level for twenty years after the regime change. Therefore, Act LXXIII of 2009 on the National Interest Reconciliation, which took effect as of 20 August, 2009, was a milestone. Though this act was in effect only for two years, it can be regarded as significant in defining the legal frameworks of interest reconciliation.

According to the standpoint of the right-wing, Christian-democratic government with the Fidesz and Christian Democratic People's Party (*Kereszténydemokrata Néppárt,* KDNP) established in the election results of 2010, the OÉT represented only a narrow social layer. In order to achieve a wider social dialogue, it decided to set up a new board and Act XCIII of 2011 established the National Economic and Social Council, which has operated as a multilateral consultative forum ever since.

Concerning the works council, its unique form was introduced by the Labour Code of 1992 on the basis of the German model. However, there is a significant difference between the two models. Whereas the German works council had a comprehensive right to interfere in the employers' decisions (co-decision authority) relating to developing working conditions, determining wages and salaries, safety in the workplace and occupational health, pursuant to the Labour Code of 1992, the co-decision authority of the Hungarian works council is comprised only of the management of the welfare works institutions and it determines the share from the social fund. The works council has had (and until this day possesses) only the right to consult on all other issues, although the employer is not sanctioned for holding to its position. In the works council's electoral system, the system without the participation of trade unions was mixed by the Belgian, Holland, French and Spanish models, where candidates were appointed not by the nomination committee elected by the resigning works council, but by trade unions. The Hungarian regulation introduced a mixed system, where primarily trade unions could nominate directly, though fifty employees could also directly nominate a person (Act XXII of 1992, Section 49 Subsections 3 and 4).

Regulations relating to individual employment relationships

As far as the individual labour law rules of the 1992 Labour Code are concerned, they were in line with the Western European regulatory system that was infused with the concept of the welfare society and state and the social market economy system. The original text of the 1992 Labour Code provided employees with nearly all social minimum safeguards which were ensured by Western European countries for their own employees. However, these labour-related social rights have progressively weakened or narrowed in the course of the amendments of the Labour Code.

The first major modification took place in 1995, when the smaller amount of "absence allowance" was introduced instead of the average wage allowance for all legitimate absences of the employee from work (leave, sick-leave, fulfillment of civic duty, etc.). At the same time, the general rule protecting employees (which provided that, in the same work week, overtime could not reach four hours and was limited to two) was abolished.

Then, with the comprehensive amendment of 2001, it became possible for an employee to have unusual work hours more than forty-eight hours per week, if this was justified by technology or economic interest. The weekly overtime limit was abolished, and limited to two hundred fifty working hours per year, which could be raised up to three hundred hours by a collective bargaining agreement. "The framework of working time" (frame of reference), which could be a maximum of six months pursuant to the EU directive, was introduced by the amendment of 2001, such that without a collective bargaining agreement, the working time limit could be four months. However, it could be extended up to six months, if a collective bargaining agreement was concluded. In contrast, the old EU Member States limited the framework of working time to one month.

Another deficiency in Hungarian labour law regulations occurred because according to the Hungarian Labour Code, only twenty percent of normal pay should be tendered for standby and forty percent for on-call duty. In contrast, the European Court of Justice ruled on numerous occasions that on-call, onsite work (NZA, 2000, pp. 1227-1228; NZA, 2004, pp. 164-170; Prugberger and Nádas, 2014, p. 230) (which, in some cases, involved standby, as well) constituted normal working hours with normal remuneration (Zaccaria, 2013, pp. 131-140; Fodor, 2016; Sipka and Zaccaria, 2016).

Unlike the Franco-Latin states, but similar to the German labour law, the Labour Code of 1992 did not permit the unilateral final amendment to the employment contract. However, the employer had the opportunity to transfer his employee to another company in a long-term ownership or in the case of an economic merger with him, and to assign him to a different job, plant or plant section within his own company, as a substitute employee. Alternatively, the company could outsource the employee within his own company or to another company. Each of the employees could not exceed forty-four working days per year, and altogether one hundred and ten working days a year. Moreover, the code provided the employer with the opportunity to lend out his steady employee to another employer for two months maximum, in case of a reduction order, for example, thus avoiding termination of employment for that individual. However, Hungarian employers could abuse their position, since Hungary did not adopt the Western European States' requirement that an employment contract exceeding the period of one month required the approval of the labour office or works council.

Regarding the employer's termination of the employment relationship, the Labour Code of 1992 took over the Western European solutions of protection against dismissal (reasoning for termination, period of notice, redundancy payments). There is only one worrying restriction relating to collective redundancies, which is not typical of the old Member States, despite the adoption of interim constraints introduced by directive amendments. Prior to the amendment to the directive, if the employer had planned to dismiss five persons from a plant with ten major employees, a collective redundancy case occurred. After the amendment to the directive, it changed so that if an employer dismissed ten persons from a plant employing twenty workers, the collective redundancy criterion became valid. In this case, the employer had to invite the works council to join a thirty-day negotiation period before the planned termination. If a works council did not exist, the trade union having representatives at the company and the representative of the labour office would be involved.

Pursuant to the directive, this negotiation period was thirty days, which could be extended by more than said time in more complex cases, while in easier cases, it could be shortened by fifteen days. In Germany and France, it is stipulated that the employer must prepare a social plan for this negotiation and he can only dismiss a worker in a socially justifiable case. The majority of the continental Western European states use this rule without its stipulation, and did not take over the fast-paced "seniority" principle suggested by the IMF, according to which those who became employees later would go first in case of redundancy (Birk, 1997). The IMF and the EU wanted to extend this principle to the new Central European Member States. However, ultimately, there was a compromise, according to which the period of negotiation was determined in fifteen days in accordance with the amendment to the directive, which could be extended up to thirty days, during which period, efforts had to be made in the course of the negotiations to send as few workers as possible (Prugberger, 2008). However, contrary to the Romanian *Codul Muncii* (Labour Code) (Kokoly, 2006, p. 758), the Hungarian regulation does not state that if the company is economically restored and there is a need for hiring employees, the dismissed employees have a priority right to employment within a year.

It is also necessary to mention that the original text of the Act of 1992 stipulated that as a sanction for unlawful employers' dismissals, the employee must be paid an average salary from the redundancy until the final reassigning judgment was made and in addition, the employer must pay compensatory damages to the employee, resulting from the unlawful dismissal. In case the employer or the employee did not want reinstatement, in addition to any severance pay, the employer could redeem it with an amount equal to twelve months' severance pay. However, an amendment to the Labour Code later modified this rule, and the extent of severance pay was determined by judicial discretion in the amount of two to twelve months' severance pay.

Regulations applying to the public sector

As mentioned earlier, the public service in Hungary was regulated by two separate acts since 1992. All employees of public institutions not exercising authority, regardless of whether they were administrative, case management or physical workers, were regarded as public servants. In this respect, the Franco-Latin effect is emulated. Originally, in a similar way, everyone who worked for an authority was a civil servant. However, the first government of Viktor Orbán (hereinafter Orbán government), following the German-Austrian model, wanted to keep only the administrators in the status of civil servants under the effect of Ktv. Therefore, the legislation placed case managers and the physical personnel under the effect of the Labour Code from 1 July, 2001. During the administration of Péter Medgyessy (hereinafter Medgyessy government) following the Orbán government, the case managing staff was placed back within the scope of Ktv. Regarding their basic structures, Kjt. and Ktv. resembled much and they still resemble each other. Both legal relationships are established by an appointment. The only differences are that in case of the latter, an oath must be taken, and the personal conditions are different. One could become a civil servant only if one met the requirements of age, Hungarian citizenship, and at least secondary education. In addition, an application system and apprenticeship must be fulfilled, along with the requirement of passing a public administration examination. Today, however, the service relationships of public servants in a higher status are established in the same manner. Originally there was, although not in the Western-European extent,[2] a relative degree of status security in both cases. If the institution or the job at the institution was abolished, both the public servant and the civil servant had to be tried to be moved to a suitable service place of employment and could only be relieved as a last resort. In this case, both Kjt. and Ktv. stipulated a significantly longer notice period than the Labour Code, and provided a larger amount of severance pay with more favourable conditions. Status security also meant that the service relationships of public servants and civil servants could be terminated only in the event of a serious disciplinary offense with disciplinary proceedings similar to public and civil servants of the Western European countries.[3] At the same time, however, in the case of reorganisation, both acts allowed the collective redundancy completely unknown in the Western European public sector, although the working conditions were much more favourable for public servants and civil servants than in the labour law (as already occurred in case of five persons' dismissal, the labour law stipulations of collective redundancy shown earlier had to be applied). However, it should be mentioned as a criticism concerning both public sectors that pursuant to both acts, the appointment of a leader could be withdrawn at any time without cause, later had to be demonstrated upon the public or civil servant's request. This could easily lead to arbitrariness and status uncertainty (e.g. if the relieved leader could not be classified and transferred, he was removed from the public sector).

Considering the differences, in the public servants' sector, the rules of working hours and those of overtime, together with allowances, coincided with the provisions of the Labour Code. The situation was the same as far as rest periods and leave were concerned. Whereas, Ktv. strictly defined the beginning and the end of the daily work hours, it did not, however, reward overtime, either with an allowance or time off in proportion to overtime. Every year, only some holidays were provided by Ktv. together with "recreational" leave, both of which were abolished later.

The first Orbán government introduced the so-called "chief official" system on a temporary basis, and the civil servants who belonged to this staff received a higher salary as confidential officials, and could be transferred anywhere as required. This institution, however, was eliminated by the Medgyessy government, which replaced the first Orbán government. The leave schemes of the civil servants depended on the classification. Civil servants had two types of classification, one for subordinate civil servants and another for senior civil servants, and the leave of the subordinate and senior civil servants was according to these two categories. The extent of rest leaves was determined by the classification title in case of a subordinate civil servant, while regarding senior civil servants it was defined by the leadership level. All this has not changed fundamentally.

In both the public servants' and the civil servants' sectors, the classification (and accordingly, the salaries) depend primarily on the degree of the qualifications. Second, however, the time spent in public service is taken into account. Nevertheless, the classification system is totally different in the public servants' and the civil servants' sectors. The former resembles the Franco-Latin and the Austrian system, to some extent.

As in the Austrian system, the classification (payment) classes are defined in alphabetical order according to the degree of higher qualification levels, and each class has seventeen (salary) grades, depending on the seniority in grade (Veszprémi, 2012, p. 35).

On the other hand, pursuant to the Ktv., similar to the German solution, civil servants in the position of administrators, have two classification classes, each having eleven (salary) grades, according to whether they have upper or secondary level of qualification (Peine and Heinlein, 1999, pp. 42-60, 105-117). The classification grades and the sub-grades within them are defined by the seniority in grade. Within the classification class of case management there are seven grades. Although there is a significant difference between the two classification systems, an approximation could be made. As regards both public authorities and public institutions without authority, the civil servant classification system could be used in the administrative sector, and as far as the case management and the physical staff are concerned, the public service classification system would be suitable. The classification system for senior officials is essentially the same in both sectors. Only the classification of civil servants should be simplified slightly. In this way, the obstacle to unify the two spheres would be eliminated (Prugberger, 2010, p. 45).

The evaluation of the second legal codification of labour and public service law after the regime change

The Labour Code of 2012

In 2008-2009, the worst financial and economic crisis of the last eighty years emerged in the world, one of the consequences of which was the rise in unemployment. After the crisis, interest reconciliation and search for consensus became more important. A great emphasis was placed on participation in labour relations and cooperation between the social partners and the state (Lentner and Parragh, 2016). Interest harmonization, realised in line with EU legislation, is an essential basis for stable state operations and sustainable development (Lentner and Parragh, 2017).

The so called "Flexicurity" programme[4], which includes the need for flexible and reliable contractual provisions, lifelong learning, an active labour market policy, the need to create more flexible social security systems as far as both the international and the national rules are concerned, appeared in the EU's employment literature already prior to the crisis (Tóth, 2017, p. 620; Jakab, 2017, p. 213). This programme set in motion the debate focusing the issue of the development of labour law, and the birth of the so-called Green Paper is also connected with it (EC, 2016). This was a public debate on how to achieve sustainable growth, more and better job creation in the EU through development in law. The study was published in 2006, and it covered the challenges of the 21st century, too.

In the elaboration of the concept of the new Labour Code, one of the fundamental goals was to incorporate the Green Paper's recommendations into the internal legal order, to create flexible working conditions, while to safeguarding the social security of workers. Thus, the new Labour Code took into account the international social and economic changes, and moved labour law legislation mainly toward dispositivity. This gives the agreements between the employer and employee, as well as between the trade union and the employer, a more important role in determining the content of the employment relationship and thus, the intervening role of the state is pushed into the background. In general, it can be stated that the legislator's intention was appropriate for managing the consequences of the emerging economic crisis. However, the social partners see the greater role of dispositivity as a violation of employees' and collective labour rights.

Significant changes to the new Labour Code, can be noted in the provisions of the Civil Code (*Polgári törvénykönyv,* hereinafter Ptk.), which took effect in 2013, clearly appear in the labour law regulations, and this is particularly apparent in the circle of the general provisions and the rules relating to labour law liability.

The new act gives greater scope to the parties' agreements, and in the individual section, comprises mostly framework provisions relating to the content of the employment relationship, with the stipulation that the parties may deviate from these rules in the employment contract or the collective bargaining agreement.

The system of legal consequences of unlawful termination of employment has also undergone significant transformation. One of the changes is that the employee can only ask for restoration of employment in five cases of extremely flagrant breaches (Gyulavári, 2015, p. 227). In the case of unlawful termination, the employee may claim damages, which means much less compensation than before. In the case of damages, the employee may claim a loss of income, but the amount of damages is limited and may not exceed 12 months' payment for periods of absence. The new rules have also taken over the Ptk.'s compensation provisions, according to which an employee is required to seek a new job after his termination of employment and has to present justification in court, as well.

The employer's liability for damages to the employee was amended by the new Labour Code, which partially placed it on new grounds. It introduced the institution of exculpation incorporated in the system of civil law liability in the labour law. This institution also comprises the predictability clause, which may result in the employer's partial exemption from compensation if the damage was not foreseeable at the time when the damage occurred. The other rule, which also facilitates the reduction of the employer's liability for damages, is the regulation which introduces the institution of "control circle", instead of the institution of "operational circle".

The latter is a much wider and objective category, and according to the essence of the regulation, the employer is exempt from liability if the damage was caused by a circumstance outside his control circle. Some authors argue that these amendments may also be a disadvantage for workers in a labour lawsuit (Prugberger and Kenderes, 2013, pp. 393-395).

In the field of labour relations, the essential change relating to collective agreements is that the act restricts the parties' collective bargaining capacity to the smallest extent. The new act substantially amended the rules concerning the conclusion of collective bargaining agreements, according to which the collective agreement can be concluded by the trade union whose membership reaches ten percent of the employees who are employed by the employer. Previously, trade unions' measure of contracting capacity was their success rate at the works council's election.

According to the ministerial reasoning, the legislator hopes that these amendments will significantly increase the activity of interest representation agencies in shaping the world of work, while reducing the unjustified state interference and limiting it to the use of market-based solutions.

Regulation of the legal relations of the public sector after 2010

Following the change of government in the spring of 2010, the new government (2010-2014), which replaced the left-liberal government led by Gordon Bajnai, created the Act LVIII of 2010 on the Legal Status of Government Officials. With this, basically, it negated the civil servants act of 1992 (Ktv.), which was applied only to civil servants employed at local governments afterwards. Subsequently, barely within a year, simultaneously with repealing both the act on government officials and the civil servants act (Ktv.) as of 1 March, 2012, the Act on public servants in public service (Act CXCIX of 2011, hereinafter Kttv.) was completed and took effect. The new act, having incorporated the act on government officials, comprised the status, rights and obligations of government officials and (parliamentary, president of the republic's, etc.) civil servants employed by "self-governing" institutions independent of the government, and municipal (county and community) civil servants.

Compared to the laws of civil servants of the Western European states, the problematic deviations that have already been mentioned in relation to the Ktv. still remained. Moreover, the status security of civil servants continued to weaken and their dependence on their superior strengthened. Because the new Kttv. stipulated that the civil servant was obliged to be loyal to his superior, however, at the same time, the superior could dismiss the civil servant by the right of "loss of confidence", which might lead to the suppression of constructive criticism and adverse selection. It also weakened the status of the civil servant that the possibility of initiating a disciplinary action against the civil servant at his request by means of which he wanted to clarify unfounded suspicion was left out of the Kttv. At the same time, the position of all civil servants was weakened by the fact that the effective interest reconciliation with the participation of trade unions, the collective civil service law present in Western European countries, was dropped from the Kttv.

In addition, if we compare the rules of Kttv. with the rules of the continental European countries, we can see that the regulation in the Kttv. is not consistent at the level of principle. In continental Western European countries, though the individual levels (central, regional, district and municipal) are regulated by separate acts, the principles of the regulations are uniform. The same cannot be said about the Kttv. Following the general provisions, the Kttv. regulates the status of government officials almost casuistically, after which come the regulations related to the civil servants employed by autonomous institutions, then the legal regulations pertaining to municipal civil servants. However, while the regulations relating to government officials are too detailed and fundamentally based on the previous Labour Code of 1992 (which is advantageous), the stipulations pertaining to municipal civil servants are rather superficial and defective. Therefore, if there is a legal gap in the latter area, the legal practitioner is obliged to apply the rules of government officials on the basis of "internal analogy" (Prugberger and Nádas, 2014, pp. 1-8). In order to avoid recurrences and shortcomings, and for better clarity, it would be appropriate if a part of the general provisions of Kttv. comprising the general rules relating to government officials was created and it would include the general rights and obligations of civil servants, supplemented by the trade unions' interest reconciliation and participation system in institutional councils. After it became the part of special provisions consisting of chapters, including the rights and obligations of government officials, the civil servants employed by national autonomous authorities and special issues concerning municipal civil servants.

Act LII of 2016 on State Officials taking effect as of 1 July, 2016 (hereinafter Áttv.) further divided the regulation of the public sector. The scope of the new act affected government officials, and was extended to them in three steps. First, from 1 July, 2016, employees at the lowest level of public administration: capital city district and county district officials were taken out of the meaning and purpose of Kttv. and these persons became state officials. Secondly, as of 1 January, 2017, the legal status of employees employed in capital city district and county government offices was converted into state officials' legal status. And finally, the scope of the act will be extended to employees in ministries and central administrative organisations as of 1 January, 2019, thus the Kttv. will practically be a nullity and it will probably be repealed.[5]

According to the ministerial reasoning of the act, there is a need for a new career model in public administration, in which the remuneration is largely based on the quality and efficacy of the official's performance.

The most important and undoubtedly the most striking institution of the new career model is the new pay system, in which promotion depends primarily on performance and not on the time spent in public service (seniority). Officials within the scope of the new act are entitled to higher remuneration than employees of other public administration bodies. However, the rise in the national guaranteed minimum wage and salary in 2017 increased the salary of officials under the intent of the other public service act, so the difference is no longer significant.

With regard to remuneration, taking into account the salary of officials under different laws, the principle of equal pay for equal work may be uncertain according to the opinion of some researchers (Mélypataki, 2017, p. 370).

This new act also includes an in-service training system for officials, essential to the performance of their duties at a high level, on which the remuneration system also depends. This aspect of the act is also a novelty. The aim of the legislature to create customer-friendly public administration and to help everyone to handle their affairs related to public administration as close to their place of residence as possible seems to have been realized. The horizontal growth of tasks and high expectations require the establishment of an extremely well-trained and competent staff, capable of being rehired. This is a challenge for the professionals dealing with the development of public administration.

Regulation relating to public servants after 2010

Kjt. which took effect in 1992, and remained in force even after the change of government in 2010, with certain amendments. However, the comprehensive amendment of the Kjt. in 2012 (Act LXXXVI of 2012) did not address the regulation of the public servants' legal relationship to that of civil servants but to the regulation of the Labour Code.

This is demonstrated by the fact that the comprehensive amendment left out the disciplinary procedure from the Kjt. and instead, it introduced the institution of extraordinary release. On the other hand, it is a positive, and at the same time, significant approach to the Labour Code that the modification of the public servant's employment relationship related to the change in the person of the public employer, similar to the employer's succession in the labour law, and the establishment of employment resulting in the termination of the public servant's legal status were incorporated in the Kjt., too. At the same time, the new act moved away from the Labour

Code when it left out the "collective redundancy-like" special regulation which had to be used in the case of the dismissal of five or more public servants by the employer or in the course of reorganisation of the position, thereby weakening the existential security of public servants.

Notes

1 Act XXII of 1992 on Labour Code Section 33.

2 In the Western European states, public servants and civil servants can only be deprived of their jobs by disciplinary proceedings. Cf. Veszprémi, 2012, Chapter 3; Peine and Heinlein, 1999, pp. 109-110.

3 Ibid.

4 See the Commission Communication on the development of common principles of flexicurity: COM(2007) 359. The aim of flexicurity is to ensure that all citizens of the EU can enjoy a high level of employment security, that is, they have the ability to find work and have prospects for employment in a rapidly changing economic environment at all stages of their life until retirement. The aim of flexible security is also to assist both employers and employees in exploiting the benefits of globalization.

5 Section 37 of Áttv. stipulated that the scope of the Act would apply to government officials of central government departments as of January 1, 2018, however, in September 2017 the legislator changed the target date for January 1, 2019.

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Stephen Count of Bethlen

The Role of Calvinism in the Development of Modern Economy

Summary
In 2017 the world has celebrated the 500th anniversary of Reformation, for this occasion countless events and publications commended the significance of this historical event, thus the work of Martin Luther and of course John Calvin as well. Surprisingly, the economic aspects of Calvin and Calvinism have not been stressed, although it seems that the national economy literature, but from other point of views in the scientific world, such as theology, political sciences and history has been controversially working for over more than a century about this topic. This study seeks to fill this gap after the jubilee year. It is achieved by colliding the two extreme positions that Calvin has no effect on the economy or, on the contrary, they see him as the forerunner of capitalism. While the ulterior is also a widespread comprehension, especially in the last century, mainly in German and Anglo-Saxon language areas, is completely exaggerated, because Calvin is not at all identifiable by the so-called "adventurous capitalism" (Max Weber) from the beginning to the present day in its determining practice, but at most can be defined by the strong religious affiliation of Puritan capitalism, which means Calvinism indeed has an effect on the emergence of modern economy. Not only does it have an effect on liberal, also called classical economy system, but has an influence on social market economy, the most successful economic order of all times, as well as the developing Hungarian economy policy, which the author does not conceptually call "unorthodox", instead he calls it "New Economic Order in Solidar-

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ity". Calvin's influence from the definition of fair interest to his comprehensive work ethos, which includes modern provisions such as "work instead of aid programme" or support for establishing companies can all be observable nowadays.

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The focus of the economy is man, not mechanical events

First of all, we need to clarify what we mean by "modern" economics. For liberal economists worldwide, it is clear that the birth of it is related to Adam Smith's famous and epoch-making work, *The Wealth of Nations*, published in 1776 (Smith, 1776). Of course, this is an arbitrary date, and from the beginning it is intended to make Adam Smith the intellectual father of a modern, New Age economy. This aspiration coincides with raising liberalism and freedom above all, which leads us to turn this idea into an ideology and raise it to the core of worldly article of faith, it should only be forced on individuals as a "redeeming" worldview, as a way of national thinking and so used only as a guide for different areas of life: from economy to political and social structure and to culture especially within education.

This definition of time is, of course, completely arbitrary and does not cover the long process of economic history. Long before Adam Smith, in the 1500s there was a very well thought-out, theoretically well-founded, and in practice it was a very successful economic system, some of its' elements are still present in the national economic processes of our time. Later on Adam Smith created a name for this, the concept used today: "mercantilism". He led this word down from the name of the god of trade, Mercury, given that this economic trend has placed particular emphasis on foreign trade and regulation. When John Calvin was born, in his homeland in France this economic process was already emerging, which appeared to be a part of the state idea that served the richness and glory of the ruler and the state, which wanted to achieve this goal by the powerful developing of the economy and by creating a centrally supported foreign trade that produces huge surplus. The first well-known representative of the already functioning system was Jean Bodin[1] who was an outstanding personality of state theory. He is known by political sciences as Johannes Bodinus according to the custom of the scientific world with his Latinized name at that time. John Calvin will have a debate with him later on about his view on ("res publica") which leans toward the republican idea. This trend had a significant impact on the later stages of the economic history, and even nowadays as well. Much has been contributed by the so-called "modern", that is to say, modern economic ideas, especially to the practices, thus the development of international economy, well before the emergence of the Smith kind of liberalism. Much later, they called it colbertism after the most famous representative Jean-Baptiste Colbert,[2] the finance minister of the "Sun King"[3], King Louis XIV. Domestic Liberals consider it as one of the theoretical bases of Hungarian governmental measures and therefore speak judgmentally about "a new mercantile economic policy".

At the same time, in the 16th century, in the time of Calvin, another economic system emerged more and more strongly alongside mercantilism, later called capitalism[4] or, at least early capitalism. After it was presented that the formation of the so-called "modern economy" is not a result of liberalism that is related to Adam Smith and its foundations on the theoretical level, but mostly on a practical level was already evolving, we must point out what is economy exactly. The meaning of this constantly used concept seems to be quite clear due to its common everyday use. Everyone believes to know based on their daily experiences what economy is. At the same time, if we ask people what they mean by economics, there are many kinds of answers, partly conflicting answers. If we turn to economics, two definitions seem to be generally accepted among many others. The first is that: "The economy is a sum of activities that aim to balance endless human needs with finite goods." This definition that is basically the same age as "classical" liberalism first led to the so-called "advanced world" and then later on almost led the whole world to irresponsible environmental destruction. Namely because the concept of goods was linked to their alleged value (Smith, 1776; Dobb, 1975), which is expressed in the market price according to liberalism. Unlimitedly available goods have no price, therefore have no value. The perception that the value of goods can be objectively determined by the cost of means of production and can be quantified in price, following Marx, the Socialists have also taken over (Marx, 1859; 1905).[5] Even in the 1950s and 1960s, in the vast majority of the economics departments of Western universities and colleges leaning towards and teaching theories of economic liberalism, as well as in the so-called "socialist camps" air was classified as unlimitedly available goods. Based on this common perception, nature could be destroyed in capitalist countries just as well as in socialists without effective legal limitations. In the liberal (and socialist) point of view air as a basic foundation of living belonged to the category of unlimitedly available goods and as such was not a subject of economy. Logically thinking through this approach, we get to the result that air having no price, therefore has no objective value, because that is reflected in the market price.

According to another common composition: "The economy is the total sum of all economic activities and related processes as a system of social production." The common feature of both definitions is that it views economy as a display of mechanical and regular functions, such as economic activities, material needs, production systems and economic processes. They form the object of economy while the subject is human. The subject of economy is indeed human, but it is also the object of it. Economy is not about means of production, processes, indicators, mechanism or "market laws", but about man, in his complete uniqueness, in his three-sided manifestation: his will, his evaluation, his choice. These can not be objectively defined, but only a small part can be subordinated to the guiding principle of rationality and reasonableness.[6] There is no such thing as the "homo economicus" (Smith, 1776) of liberals, the economic man who wants only the greatest achievement at the lowest cost, who is the subordinated subject of economic mechanisms and laws.

Man in his fullness with his three-sided characteristics is the subject of economy as a thinking, sensual and intentional being. It can not be confined by mathematical formulas, it is unpredictable in its behavior and in its manifestations. Bowing with great respect for the wonderful economic models, complicated matrix calculations, complex and yet so vulnerable algorithms, economy is not "exact" science. Especially not when the best representative, so-called "classical exact" science pay attention to the subjectivity of their discipline while advising their colleagues who believe in the omnipotence of science for more humility and modesty.[7] This demand applies in particular to economists. Because of its human focus, beyond the recognition of the importance of mathematical preparedness, the philosophical, theological, and psychological basics should be given greater scope. This is the only way of avoiding the increasingly common crisis getting deeper made by incorrect theories and the practical use of them. That is why it is so important to deal with the impact of faith and religion on economy and not only for the 500th anniversary of Reformation.

These reflections may seem evasive, but they are important, because they help to understand the central importance of the connection between faith and economy. In the light of this recognition, we return to the ever-growing trend in the time of Calvin, capitalism, which's one-sided, individuum-focused way of seeing people is in sharp contrast to Calvin's point of view. The way of seeing man from Aristotle's[8] point of view through scholasticism[9] and reformation and within that especially Calvinism[10] to the Christian Social Teaching[11] shows a way of developing a human-centered economic order. Man is an individual being *(ens individualis*), a community being *(ens collegialis*) and a transcendental being, that is open to beyond itself and the world, to God.[12]

The economic environment of Calvin's life: mercantilism and capitalism

Capitalism, in particular, is different from other economic systems, because the means of production are privately owned without exception and that economic coordination is governed by the market. Both features sharply separate capitalism from the mercantilism prevailing in France at that time, where the means of production are mostly in the hands of the king himself or by his "grace" was owned by courtiers. Economic governance was centrally carried out by the King's ministers. The constantly growing number of manufactures, and the increase of their importance, which will later on grow into capitalist large corporations, were the property of state ownership. The purpose of capitalism and at the same time the guiding motive of the market is gaining profit for the capitalist and not for the ruler or state. These key features distinguish capitalism from later economic trends, such as socialism. This is the economic environment John Calvin[13] lived in. In his homeland, in France, mercantilism reigned, aiming to increase the king's riches and glory with the means of the economy. He served Francis I of France,[14] who was not only accepted by Calvin as the ruler, but also whose grace he sought, so he could acquaint him and the most influential courtiers with the original biblical doctrines he focused on. He hoped that he could convince his majesty that they are unfairly persecuting these doctrines and its followers (cf. Huszár, 2011). Reformation is not aimed at overthrowing his authority or the Church. That is why Calvin recommended the first edition of his, in Basel published chef d'oeuvre the *Institutio Christianae religionis*[15] to his anointed king. His intentions failed, the king's anger could not be calmed down and so he had to flee.

He headed to Strasbourg from Paris through Lyon, also reaching Geneva. In Geneva, in 1536, Guillaume Farel[16] pleaded him intensively to stay and even threatened him with a curse, if he would deny the preaching of the true doctrines to citizens of Geneva and would not help organise the city's life in this spirit. Anteriorly in Geneva they successfully got rid of the Prince of Savoy's reign and expelled the bishop. Rich citizens took control of the city. The ownership of everything in the economy now belonged to them and of course the significant benefits that came from it. Without even knowing it, they created first capitalism with laboratory purity. In fact, these economic reasons were in the background of their rebellion against their former masters, and not the brave upholding for the teachings of the Reformation; they picked up its forms. In Geneva, therefore, the conditions of capitalist development materialized, but the institution of the Church to teach Reformation was not built up. This is why Farel begged for the help of Calvin. Skipping the reason of failure of his first visit to Geneva,[17] it is enough to mention that the "brave" citizens of Geneva were satisfied with their total independence and the enormous economic advantages they had gained in the name of Reformation, and did not ask for Calvin's strict Church organisational provisions arising from the Reformation.

Calvin's practical view on economic issues

After his exile, Calvin in 1541, now at the request of the whole city, permanently returned to Geneva.[18] As a preacher of the city, he was responsible for determining religious and secular issues with the help of the consultative and decision-making bodies that he had established, in religious as well as in secular matters. Within the four professions he admitted, deacons dealt with helping the sick and the poor and handling church goods. He formulates thoughts and encouraged the practical implementation of helping the poor, which seem to be incredibly "modern" and seems to be addressed directly to us. To avoid accusation, the author examined Calvin's work from an economics perspective and confirm his effect on economy by forced explanations of texts, by referring to an unimpeachable authority, Professor Pál Huszár, the secular president of the Hungarian Reformed Church: "It is known about him (Calvin) that he opposed begging." Later on the quote goes on as: "With his indisputable authority, he sought to reach at the City of Geneva's magistrate that they could bring those who suffered of needs to a better position, to give them community jobs and a decent income and a dignified livelihood." How familiar these phrases are in 2018 in Hungary? But the continuation is even more surprising: "He encouraged, for example, the city could even help them with recovery loans, to create decent businesses, or to provide the opportunity to start a new life" (Huszár, 2011). At this point, further investigation of whether or not there is, and if there is what is the effect of Calvinism on "modern" economy might seem almost unnecessary. It is as if the Hungarian government's economic policy programme echoes Calvin's demanded from 500 years ago: "work instead of aid (public work) and decent income, a dignified livelihood; loans to start a business, start-up loans".[19] Would it be true that Hungary has a Reformed/Calvinistic Government? Of course, this is not the case, but the economic and social policy guiding the government programme to work-based society is indeed very inspired by Calvin.

The "modernity" of the previous thought can be surprising, but what is not surprising is that Calvin deals in detail and insistently with the question of loan interest. He who called for the return to the Bible, in fact he admitted it as the only basis of Christian faith (*soli scriptura*, only the writing!) he examined the smallest details of it, almost from letter to letter, so obviously he did the same with the Old Testament. God's chosen people know the devastating effect of interest, and within that the interest rate. Therefore, it is forbidden for Jews to charge interest on loans among themselves: "If thou lend money to my people, the poor with thee, thou shalt not be to him as a usurer: ye shall charge him no interest" (Exodus, 22:25). Moses also affirms this command in other places: "Thou shalt take no interest of thy brother, interest of money, interest of victuals, interest of anything that can be lent upon interest" (Deuteronomy, 23:19). However this does not apply to members of other nations: "Unto of a foreigner thou mayest take interest, but of thy brother thou shalt not take interest; that Jehovah thy God may bless thee in all the business of thy hand in the land whither thou goest to possess it" (Deuteronomy, 23:20). Here the ban on the taking of interest is a principle of power, not only to prevent the torture of the poor and the ones in need, but also to prevent the domination of money (Mammon), called nowadays the decisive power of plutocracy.[20] This threat that has been identified for more than three millennia seems particularly timely nowadays.[21]

Since interest leads to power, members of the Old Testament are obliged, according to their religious order (Halacha) to lend with interest to people of other nations in order to rule over them, rather then to be ruled over by. "For Jehovah thy God will bless thee, as he promised thee; and thou shalt lend on pledge to many nations, but thou shalt not borrow; and thou shalt rule over many nations, but they shall not rule over thee" (Deuteronomy, 15:6). For Israel, this is a religious law (Mitzvah), which if they do not fulfill, they will be struck by a divine curse, they will not be the first, but the last (Deuteronomy, 28,38:41). "But it shall come to pass if thou wilt not hearken unto the voice of Jehovah thy God, to take heed to do all his commandments and his statutes which I command thee this day, that all these curses shall come upon thee and overtake thee" (Deuteronomy, 28:15) And the sequel sounds like this: "The sojourner that is in thy midst shall rise above thee higher and higher, and thou shalt sink down lower and lower. He shall lend to thee, but thou shalt not lend to him: he shall be the head, and thou shalt be the tail" (Deuteronomy, 28:43-44). The ban of taking interest was coupled with another very wise command to release it in the Sabbath year.[22] This meant that in every seventh year, the accumulated debts had to be released.[23] This regulation if not completely, but at least partially could give guidance how to solve some of the burning problems of our days, let us just think of the foreign-owned banks, which enormously damaged their Hungarian clients by putting them in the so-called Swiss franc-denominated loans.

The fair interest in Calvin's perception and the "Golden Rule of Banking"

Calvin, the greatest and most respected scholar of the Old Testament, did not know and did not even want to embrace these Mosaic commands. The mandatory laws for Israel were no applicable in the 16th century, in the era of mercantilism under a Geneva circumstances, where the capitalist system completely prevailed. Calvin with his enormous biblical and theological preparedness he was able to distinguish between the true Divine revelation, such as the Ten Commandments, the divine inspiration that appears in the scriptures of the biblical prophets, and general truths belonging to the given age, but should not be followed in every detail as guidelines of the changing times. Besides of the teachings of interest, the reign over other nations is one of these, which at that period was a response to the danger threatening Israel from a ring of powerful nations. Calvin therefore recognizes the word of God in the New Testament, in the teachings of Jesus. He does not just only interpret the dialogue of talents as the command, and it is a duty to take care of our talents from God, our talents, our abilities, our skills and we should give account of them one day. In addition to the metaphorical, transmitted intellect, it literally follows the words of the Lord Jesus Christ. Contrary to the partial interest ban the Old Testament, which only concerned the relationship between the chosen people, Calvin had considered it permissible under certain circumstances and within limits. By this he was opposed to the full interest ban of the Middle Ages' canon law, which strictly forbid the people of the New Testament from taking interest in full, that is from non-Christians as well (Calvin, 1559).[24] He found the interest rate acceptable for a maximum of three percent for personal loans and five percent for business loans. But why is it three, and five percent?[25]

It is well-known that numerology plays a significant role in the Old Testament, as it is later in the Talmud, as the letters also mean numbers. The number 3 and 5 have priority positions in numerology. The number 3 is the letter "Ghimel", which among others, represents the gifts of God to the people, and the merciful man's gift, which he shares from his love for God. In mathematics, the third derivation means a good deed if the three percent is much lower than what is generally required and is a reasonable consideration for the loan provided. The number 5 is the letter "Che", which especially means gap, but in this case it is not the major symbolic meaning of this number, but a very much mundane and common practice in the Middle Ages, according to which the financier or merchant would legally and publicly be beheaded if he should charge interest above five percent.[26]

Even fifty years ago, some Western European universities not one-sided committed to liberal dogmas taught on finance lessons, that according to the "Golden Rule of

Banking" developed from the guidelines of Calvin, two and a half, up to three percent is the amount of fair interest, that banks and bankers can charge on a yearly basis with the "acting as a decent merchant". This practice first became widespread and accepted in the banks of the Protestant countries and then later on in the most of the banking world. In some countries this legislation appeared at the levels of law, not even in the special economic regulations, but in the Civil Code, such as in Austria and Germany (Allgemeines österreichisches..., 1853; Bürgerliches Gesetzbuch, 1899). The author was convinced about exactly how reasonable this was from Calvin's age up to the 1980s, as a practice of banks and merchant houses with good reputation, by being a board member of a German bank with decent tradition and ranking in "top 30" of the world. This financial institution kept itself to the "Golden Rule of Banking" when it came to transactions, taking into account the amount of inflation in the current period. Nevertheless, even with this fair interest they fully achieved the annual profit of their expectations. Not even thirty years later the media was filled with the loud protest of every Hungarian subsidiary of foreign financial institutions, when they were protesting against the Hungarian National Bank, which returning to its fine tradition provided liquidity for zero percent, encouraging them to stimulate their lending activity under the reservation that they can charge "only" 2.5% interest to Hungarian companies. "You can not make a living out of two-and-a-half percent, it's a loss making business" they shouted out for the world to hear! Yet after this they still stood in line for the generously given resources. It seems a miracle happened because these banks did not go bankrupt! The "Golden Rule of Banking" can still be applied in the present, the only thing to be achieved is a comprehensive financial policy concept and an appropriate will to implement it to support economic development, as did the Hungarian National Bank, led by Dr György Matolcsy. On the contrary there are some immeasurably greedy foreign financial institutions working in Hungary, which manifested itself in the alleged Swiss franc-denominated loans banned in their own country, or in fact, when inflation was just above zero percent, they were offering in their advertising campaign 11.5% personal loans as a uniquely favourable "service". Today it can be available for 9.7%, and this is "just" slightly more, than three times the so-called "Golden Rule of Banking" 2.5%.

The emanation of Calvin's universal spirit into the "modern" world

Why did John Calvin go up against the Mosaic Order of the Old Testament as well as the canon law on the issue of collecting interest? He who at the University of Orleans earned a baccalaureate, then a licentiate, and eventually a doctorate, and in his studies he dealt with church law in the most profound way? The total prohibition of interest of canon law comes from the scholastics morality,[27] which goes back all the way from Augustine to Aristotle.[28] The theory of interest rested on two pillars, especially in the drafting of St. Thomas Aquinas. On the one hand, those in need mainly took loans for satisfying personal needs, such as food, protection against the vicissitudes of the weather, clothing and heating, building and/or maintaining a simple shelter. That is, the loans were took to bridge the state of poor conditions. However, taking advantage of others in need is an immoral action. On the other hand, interest is linked to a time difference. Nevertheless, time is a gift of God. To gain profit from God's gift is morally unacceptable. Calvin does not even question these moralistic reasons neither as a lawyer, nor as a theologian. However, he lived in the so-called New Age in Geneva, in a city of wealthy citizens, loans came into view, because they were needed to start up or build a business with promising high profits. Calvin encountered on a daily basis with such business loans in his fatherland, the acropolis of mercantilism, with flourishing trade, and within that foreign trade being supported by all means. After his flee, he comes to an environment, where the new economic system based on money capital emerged in front of his eyes, which its followers call "classical".

Calvin came to the conclusion that the loans borrowed for business purposes in the hope of large profit would be acceptable that the money owner, such as a wealthy citizen of Geneva, to claim interest on the money he had made available to the borrower in the given timeframe. At the same time, while economy was developing rapidly, he strived to obtain a bridging loan with a more accessible "price", that has affordable interest rates for the growing amount of those in need of it, caused by the speedy development of economy. Hoping that by using it well would allow them to recover from their difficult situation. That is why he hoped in such cases that interest rates up to 3% would be more accessible (Calvin, 1559, Book 4). In the case of business loans, he considered the 5% (Calvin, 1559) upper limit important, following the practice of centuries-old, medieval secular authorities in how to overcome the widespread usury.

The economic and social impact of Calvin's notion of interest was significant not just only of his reasonable considerations, but he takes into account the reality of his time, and the acceptable interest of the increasingly growing bourgeoisie. In the Middle Ages as a result of the interest ban of the Canons, Christianity could not deal with financial affairs, if anyone would ever break the rule a serious punishment would be imposed on them. At the same time, the still enormous income was not enough for rulers, courtiers, and last but not least for the Church's power aspirations. There was a need for loans, even more and more. Therefore, it was necessary to allow the secular authorities and, not to much in the background, the Church that someone should deal with finances that were profoundly downgraded in a wider social circle and banned for Christians. In the beginning they were mostly Arabic and non-Arabic Islamic believers, who were called Ismaelites[29] in the Middle Ages, who's religion banned the charging of interest as an Israelite, but likewise, loan affairs were allowed with strangers.[30] Soon the Israelites took more and more part in this business as well. In fact, they did not have many other living opportunities, such as "business", trading and financial transactions, since they could not own or rent land, military and public services were just as closed to them as guilds, and every craft job. The majority of the population was contempt about the Jews who were earning from lending transactions. This general phenomenon was particularly strong in Luther's time. This can be tracked back to many of Martin Luther's multiple manifestations that condemn the Jews. That is why later ages accused him of anti-Semitism. In the festive year of the 500th anniversary of the Reformation, resolution on the charge of anti-Semitism against Luther were largely concerned, especially in Germany and the United States. In Calvin's writings, such manifestations can not be found.

Calvin freed the Christians from the interest ban of the Canons, thus opening their way to making financial assets and investment, and toward financial trails. The fast spreading reformation brought tons of people to take part in economy in the time of Calvin's life, and progressively after his death, when Calvinism itself and some other congregations referring to and formed by its doctrines rooted in much of the western hemisphere. Of course Calvin did not think in this perspective, but proclaimed: "Everything in heaven and an earth is created for the glory of God" (Calvin, 1559). As a good pastor, however, he carefully paid attention to the everyday concerns of his followers. He knew it was important to concentrate spiritual forces on religious life so that balanced financial conditions would help overcome the disturbing worldly influences. The influence of his activity in the community of Geneva had an effect during his life, and later even more far beyond national boundaries, beyond faith, extending to other areas, such as economy. Another important area related to this was the government system he elaborated. The church constitution Calvin had established in Geneva had an influence on both religious and secular affairs. While the effect on economy is still disputed today, the opinion is broadly the same through denominations, nations, political affiliations to science camps, that Calvin's universal spirit has contributed significantly to the development of the so-called "modern" world, and the emergence of modern democracy (Biéler, 1959). And this indeed influenced the controversial area, the economy. One of the important, but not necessary and in every case indispensable factor of the emergence, empowerment and broad geographical distribution of capitalism was the emergence of the bourgeois democracies. This economic trend prevailed much later, and much more difficult in the absolutist monarchies, see Russia and Japan.

In this context, the right of resistance, which Calvin reinterpreted should be mentioned (also called the tyrannicide). In rebellion against tyranny ha saw the "legitimate call of God" (Calvin, 1559), but he wanted to prevent murder by expulsion by all means. The leaders and the bourgeoisie forming the main body of the 16th century Dutch Revolt and after that the 17th century English Civil War fought their combats referring to Calvinistic ideas. It would be a difficult task to doubt the relationship between the exercise of the Calvinistic interest liberation, the republican thought, Calvin's explanation of "res publica" and the right of resistance in the words of Calvin "by the lawful calling of God", as well as the armed uprising that took place there, and between the total expansion of capitalism in those countries.

Calvin's effect across economic systems and orders

With the rapid extending of Calvinism came that its descendants had created partially different trends. From a national economic approach, the subjects of our investigation are those who consider themselves the followers of Calvin or those whom referred to him and without a doubt had an effect on economy. Regarding its influence on economics, puritanism must be listed here in its Presbyterian, synodic form.[31] The followers of this direction held most of the uninterrupted economic work as a visible manifestation of following Calvin's command "For the glory of God you have to stand in the world for gratitude" (Calvin, 1559). At this point, it unavoidable to be concerned with Max Weber's famous volume *Die protestantische Ethik und der Geist des Kapitalismus* (Weber, 1904/1905). Weber's thesis can be summarized as the following: Protestant ethics which he primarily means by Calvinism and, in particular, by puritanism had such a permanent and profound influence on the Western rationalism and the faith in mind with its worldly ascetic appearance, that the religious, essentially Calvinist entrepreneurial bourgeoisie became the carrier of the capitalist spirit. Max Weber makes an emphatic difference between the "adventurous capitalism", the capitalism of speculators and between those who established an ascetic rationalist system and work organisation based on a strong religious affiliation, the civilian capitalism following the work ethics of Calvin (Weber, 1904/1905). This difference is most pronounced in the so-called "original capital accumulation" process. Weber describes in detail the methods of adventurous capitalists from the early beginnings, while comparing history and geography (Weber, 1904/1905). From a perspective of a hundred years, the crosstalk was shocking of the full breakthrough of neoliberalism compared to the financial world in the 1980s when the speculators, so-called "adventurous capitalists" gained almost unlimited power with their "business techniques". On the contrary, the religious entrepreneurs described above, who returns again and again to his business the fair profit he achieved with his hard work and with a high level of self-restraint, thus forming and increasing his fund.

In summary, Calvin and Calvinism had a great impact on the development of modern economy. But this can not be confined by an economic system, Calvin "the great reformer of Geneva can not be proclaimed as a forerunner, or perhaps founder of capitalism, of civil society" (Huszár, 2011). However, for the glory of God to stand out in this world with incessant work, the work ethics of Calvin, the high degree of self-restraint, which is the most important basis of fair capital accumulation, Calvin's personal example of taking responsibility for the community, the liberation from the full canonical interest ban and with opening investment opportunities, and financial paths for Christians: all which contributed to the fact that, besides "adventurous capitalism" as Max Weber said, a new economic system was able to emerge, which implemented fair capital formation, and organisation of rational factories and work. Calvin's effect, however, is much later still tangible in the emergence of new economic orders.

385 years after Calvin's death, the social market economy was introduced in the Federal Republic of Germany. The *Wirtschaftslenkung und Marktwirtschaft* written by Alfred Müller-Armack in 1943, which could only appear in 1946, after the collapse of Hitler's empire, gave the German economy its basis and direction (Müller-Armack, 1946). The author is honored to be a fatherly friend of Müller-Armack, whose ancestors were Calvinistic, but were declared to be evangelic after Bismarck's forced unification.[32] The Calvinistic origin, however, lived vigorously on in the family, and Müller-Armack developed his theory following this tradition and in an ecumenical spirit.[33] Social market economy is the successful combination of the Calvinist work ethics and

its social approach, the so-called evangelical social ethics, most part of which has Calvinistic roots, and formerly Catholic, now called Christian Social Teaching education system. Social market economy is the most successful economic order of economic history; and it is not a system (Graf Bethlen, 1978; 2005; 2012).

Calvinism's continues influence in Hungary

The teachings of Calvin spread early in Hungary, where in the time of his life the Calvinists came to a huge majority. At the same time, from the beginning, ecumenical thinking became a Hungarian tradition, which Calvin sought to refer. In Transylvania, the religious peace[34] was accomplished in 1560, after that the first comprehensive Edict of Religious Tolerance was proclaimed in Torda in 1568, far ahead of other European countries. Thus, in 1604, Prince István (Stephen) Bocskai forced the Habsburgs with weapons at arm to admit the freedom of religion in the whole of the Kingdom of Hungary. Gábor (Gabriel) Bethlen, the "Great Prince", who participated in the Thirty Years' War on the Protestant Party, also achieved in three peace treaties the compliance and widening of the agreement made with Bocskai. At the same time, he actualized complete religious peace in his homeland, which for centuries has been an example for the world's ecumenical existence. The effect of Calvinism on the economy unfolded during the time of his reign, so successful that: "Bethlen in economic aspects, also created a model state in Transylvania, to which under the storms of the Thirty Years' War sorely tried old Europe looked envious to…" (Beregi, 1930).

After the Habsburgs extended their power in the whole of Hungary by 1690, there was a big downturn in economy as well, because the Imperial leadership degraded the country into a cheap raw material colony. After the "Austro-Hungarian Compromise of 1867", which restored Hungary's autonomy, at least in dealing with internal affairs, was then a huge boost for the economy as well. This economic soaring in European dimensions is associated with the names of two prime ministers committed, and the followers of Calvin's teachings: Kálmán Tisza and his son, Count István (Stephen) Tisza, where the embodiments of the Calvinist work ethos (Horánszky, 1994). In the central focus of their economic policy was an ascetic civil capitalism, which creates a rational plant system and work organisation, that grew out of Calvinism according to Max Weber.

The Trianon Peace Dictate of 1920 demolished Hungary in a way history has not known before by taking away two-thirds of the country and one-third of the native Hungarian population and had a catastrophic impact on the economy as well. The unanimous opinion of internationally recognized experts, was that Hungary has become economically unviable. Count István (Stephen) Bethlen accepted his nomination as Prime Minister in this seemingly hopeless situation. Over ten years of governance, the country that has been sentenced to death has not only recovered economically, but besides growing in all areas, including workers' living standards to a Central European level, has created an "excellent" social security system (Macartney, 1975; Schmidt-Pauli, 1931). To his great predecessor, Prince Gábor (Gabriel) Bethlen, and the the two Tiszas, Count István (Stephen) Bethlen, also expressed his statesman activities by his deeply rooted creed in Calvinist doctrines and in terms of ecumenism.

The Second World War, the German occupation, then the following 45 years of Soviet occupation (Graf Bethlen, 1989) and the communist dictatorship forced on Hungary also blocked the country from the huge economic prosperity from 1945 to 1990 in the free part of Europe (C.S. Bethlen, 1985). The so-called "Regime change" in the 1990s did not bring the rightfully expected economic recovery for the adverse effect of the dictate of IMF. The decisive turning point came in 2010 when after his landslide victory, the Orbán government freed the country from the overbearing wardship of the IMF, and built up a new economy coordination practice developed by Dr György Matolcsy secretary of economy, later on the President of the National Bank. The author calls it a "New Economic Order in Solidarity" instead of "unorthodox", because Hungary developed in the last seven years an autonomous conception for the organisation of economy and society significantly differing from other economic systems of our time. As a result of this process Hungary joined the group of countries with best annual basic economic indicators within the European Union, strongly reflecting the centuries-long impact of Calvinism and according to Hungarian tradition in an ecumenical manner (Comte Stefan von Bethlen, 2010; Graf Bethlen, 2014).

From a perspective of 500 years, in the age when neoliberalism's rule seemed to be unlimited in the western hemisphere, the concern of Calvin's teachings tells our time that the economy is only a slice of the worldly life and not even the most important, as the false prophets of the so-called "consumer society" proclaimed. Education, instruction and tuition, the democratic organisation of society, participation and taking part of responsibility in public life, social commitment to helping the ones in need (the deaconess) are all areas that appear strongly emphasized in Calvin's teachings as they continue to effect economy.

Notes

[1] Jean Bodin, lat. Bodinus (1530-1596). In this context, his most important work is Bodin, 1756.

[2] Jean Baptist Colbert (1619-1683), Louis XIV's chancellor, the outstanding individuality of mercantilism.

[3] Louis XIV of France (Louis Quatorze), "the Sun King" (Le Roi du Soleil) (1638-1715), his long reign meant the high-point of absolutism.

[4] Louis Blanc (1811-1882) and Karl Rodbertus (1805-1875) in Marx's disparaging rankings they were both "utopian socialists", whom both independently named in 1850 and later on in 1854 the liberal economic system as capitalism.

[5] Karl Marx (1818-1883).

[6] Rationalism, also referred to as natural law, in its vast literature in this context: Locke, 1689.

[7] With this question both Werner Heisenberg (1901-1976) Nobel Prize Physicist and Carl Friedrich Freiherr von Weizsäcker (1912-2007) who was a nuclear physicist, researched and thoroughly dealt with the connections between philosophy and the so-called "exact" sciences.

[8] Aristotle (384-322 BC) looks to God as a "pure thought", who is the driving force of the world. He had a great influence on the medieval scholasticism.

[9] The philosophical theology in the medieval 11th-14th century, built primarily on Aristotle and the Fathers of the Church, developed Christian personalism.

[10] Calvin also saw the man in his three sided nature and besides his individual existence and to be a great creature of God and emphasized his characteristic devotion to the community much more than Luther.

[11] The main pillars of Christian Social Teaching, earlier in its time called Catholic Social Teaching: besides the Bible, the doctrines of the Fathers of the Church, the medieval scholastics, the papal social encyclicals, more increasingly the intellectual treasury concerning the society of universal Christianity.

[12] The Scottish moral philosophy positively assessed egoism as a determining force of social development.

[13] John Calvin (1509-1564) was born in Noyon, France with the name Jean Cauvin, which he later Latinized. In 1535 he had to flee from his country because of his teachings of Reformation.

[14] At the time of the reign of Francis I of France (1515-1547), emerged mercantilism to governing economic system. He ruthlessly pursued advertisers and followers of Reformation.

[15] The first version of Calvin's multi-expanded chef d'oeuvre.

[16] Guillaume Farel (1489-1565) had to flee from France, because of his teachings of Reformation. He became the reformer of Western Switzerland.

[17] Calvin after his expulsion from Geneva, he worked in Strasbourg from 1538 till 1541 and participated in negotiations for the abolition of the Great Schism in 1539 in Frankfurt, then in 1540 in Hagenau, and in the same year in Worms, then in 1541 in Regensburg.

[18] In 1541, at the request of the city's leaders, Calvin returned to Geneva and worked there until his death.

[19] Csaba Lentner is a member of the workshop preparing the government programme in 2010, as well as the reform of the Hungarian National Bank targeting the return to the original goals of the founder Count Stephen Bethlen's government, after the Bank's degradation during the 45 years of communist regime and the following 23 years of neoliberal domination, both serving primarily foreign interests. Lentner, 2014; 2015; 2017.

[20] Moses, 1332 BC, in his book the warnings appearing besides the Divine Orders are for his age and partly timeless.

[21] The Old Testament considered the deification of Mammon as the main sin. Moses has the Golden Calf crushed and makes the creators and worshipers eat the debris of it, who, for their great sin with a cruel death paid the price. "In the Enlightened Age of our time" the worship of Mammon (money) has spread once again.

[22] At the end of each seventh year, the accrued debts had to be released (Deuteronomy 15:1-3).

[23] In addition, every year in the jubilee, every fifty year, everyone got back their land, which he gave as a guarantee for a loan (interest-free).

[24] The last edition published in Calvin's life, compared to the earlier one multiply extended in four volumes.

[25] In the ancient Hebrew language a few letters and numbers are the carriers of the Divine Report.

[26] The death penalty for charging interests on loans goes back to religious law (Mitzvah) of the Old Testament (Ezekiel 18:13).

[27] For the Middle Ages the Christian philosophical school system is decisive.

[28] This teaching of interest goes back to the Aristotle conception, which Augustine (354-430), bishop of Hippo, one of the Fathers of Church, shares in the statement that "Money does not have sexual signs, so it can not make birth".

[29] Abraham's son Ismael, the 2nd millenary BC, was born from wife Sarah's servant, Hagar, as the first but not legal son. The definition of Islamic followers comes from his name.

[30] The Islamic interest rates are as strict as the Israelites ones: "As for those who revert to it, they are the people of the Fire, and in it shall they abide" Koran 2:275-276. This command did not apply to aliens.

[31] Puritanism intended originally to purify the Anglican Church, working in a Presbyterian, synodic organis ation, teaching the Calvinist doctrine in strict, rigorous manner, which became the strongest Protestant Church in America.

[32] Otto von Bismarck (1815-1898), the imperial chancellor, fought ruthlessly within the framework of the "Kulturkampf" against the Catholic Church using the Prussian model of 1817, he enforced against the will of Calvinists "Unification" of their Church with the Lutheran Evangelic Church, in order to strengthen the Protestants against Catholics in 1886.

[33] Calvin's ecumenical efforts are less known to eliminate the Great Schism, as for to establish a Protestant unity.

[34] Western analysts predicted in 2010 that the Hungarian economy would fall apart sooner the the Greek economy. Like so many times, this assessment of the situation proved wrong, thanks to the new Hungarian economic policy.

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Z. Elisha Bán

A Religious Order on Trial

Cistercians in Socialism

Summary
In this historical retrospection, as a member of the order concerned, I recall the disgraceful harassment our convent underwent as I myself experienced or heard as a contemporary. Although others have also described these events with historical impartiality, personal evidence is perhaps not futile at a point when the last "witnesses of great times" are passing away. With my comments and evaluations I do not intend to pass infallible judgements on people, rather I would like to give graphically render all the likeable and annoying people I met in my life. In order to present unity, continuity and interrelationships in the historical period and in the interest of maintaining the accuracy of certain dates, I rely strongly on the doctoral thesis written by Eszter Cúth Gyóni in 2014 (The history of the Cistercian order in Hungary after 1945), who based her research to a major extent on the minutes of the security organisations of the single-party state. I feel obliged to follow the "sine ira et studio" principle, i.e. to remain unbiased, and instead of summary generalisations I make efforts at understanding the considerations of the organisation that persecuted us.

Keywords: Cistercian order, socialism, communist regime, nationalisation of schools, peace movement

Preface

The past political system provided an excellent example for setting the events that happened in an ideological perspective in order to present completely falsified history as it was truth. This was the way of miseducation, and perhaps also the method of

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making completely innocent people and institutions object of hatred. As an example I mention that in the prison where I was incarcerated there were a few young secret police members. One of them, S. Cs., was naive enough to enthusiastically endorse the party's ideas, and as a sergeant with his zeal he managed to become the party secretary of the unit. However, when his own rural parents were put through the wringer to surrender their crops and animals, his conviction was shaken. And when in the name of "communist ethics", at a party meeting he mentioned his superiors' drunkenness, he was taught by a long imprisonment that theory and practice are two different things. Other's eyes were opened when they realised that they were not trusted by the regime and they were demanded to write reports about their own companions and fellow members. Thinking differently made someone an enemy.

What was the Cistercian order and why was it considered criminal by the regime?

The Soviets saw it as a mass organisation considered hostile by virtue of belonging to Christian religion, based on a counter-revolutionary basis, and its hazard derived especially in its international character, as its centre was in Rome. It was a strong pillar of the hated Vatican in Hungary, which controlled the education of youth. As additional reasons, the order had landed property on more than 40,000 Hungarian acres and 5 excellent secondary grammar schools, which were easily used to make the order seen as a company of extortioners among the feasting landlords of feudal Hungary.

But what was the reality? This order of monks was established in the 12th century by the example of the lives of saints who withdrew from the world to serve the peace, spiritual, mental and financial development of their fellow human beings. Its high popularity is demonstrated by the fact that in the Middle Ages there were 718 Cistercian abbeys. (In Hungary there were 18 prosperous abbeys.) In accordance with Jesus's teachings, the monks gave up earthly pleasures and lived simply, in abstinence, but they created prosperous farms and used their proceeds to contribute cultural values to medieval society. The question why today's monks do not live this way could be raised. In addition to the fact that every community has unworthy members, as a general rule, as soon as the fresh idea becomes commonplace and the enthusiastic life becomes everyday practice and institutionalises, the community members lose their zeal and live their lives increasingly automatically, following rules to the letter. This is why reforms are required over and over again, and they frequently change the very ideas as well. Over the course of history, our order also changed a lot, as it made efforts at meeting the new challenges of the surrounding world. At a later stage, Cistercians had to participate in pastoral activity and in the early 19th century, the order had to adopt teaching. However, whatever the order did, it strove for an excellent performance. The large estate system that evolved during the Middle Ages helped them achieve this goal, as they could afford building and maintaining churches and then building and improving schools and training teachers at a high level. Several teachers also became university professors. Monkhood and the monastic spirit prevented teachers from seeking happiness in financial welfare, although they lived a relatively comfortable life and belonged to the educated middle class, called “the high society”, they never lost touch with simple folk, the poor people. Our schools also admitted lowborn students, and with sufficiently hard work they could earn free tuition. Teachers donated considerable amounts from their salaries as charity to poor students. The majority of the teaching monks also came from humble families. So did our abbot, the excellent mathematician, Vendel Endrédy, born into a family of Croatian farmers living in Hungary. His knowledge and humanity raised him to high priesthood and to membership among the peers, on par with aristocrats. Accordingly, in the appropriate company he behaved like a nobleman, however, he always remained a very simple person, kind to everyone.

The attack by the communist regime was directed primarily against the religious worldview

In Hungary everybody was well aware of the bloody persecution made in the Soviet Union when they destroyed the churches of the orthodox faith on their own territories and executed their bishops and priests. All this was based on the principle borrowed from the writers of the French enlightenment, and claiming that religion was the opium of the people, a tool for demagogy, the oppressor’s lie to deceive the poor with the promise of compensation in the otherworld to prevent them from arising to protect their rights. If this was true, the condemnation of the representatives of the various religions and the efforts made at the elimination of misconcepts would be understandable and justified. However, judging whether this is so cannot be assigned to artificially infuriated masses who lack sufficient historical knowledge.

In the history of the Catholic Church, there were unworthy persons and seriously inhumane practices performed with reference to God, in the name of true religion, which contorted the teachings of Jesus Christ and caused scandals, and we must distance ourselves from them. Such included the persecution of heretics and witches, forcible proselytizing, crusaders’ cruelties, the tortures of the Inquisition, the extermination of the Indians, the dragging of Africans to slavery, etc., which are all beyond excuse and we must be ashamed of on behalf of the perpetrators. All these were not the official teachings of the church, but trespasses of certain leaders, and often of secular lords, and the contemporaries of higher morality did speak out against them. It is unjust and historically absurd to reproach the current, purified generation of Christians several centuries later for those scandals, so much the more as it was unilateral, as the church did have its heroes and martyrs even in the darkest ages.

It was a pleasant surprise for us to hear the invading soviet power call for democracy and ensure the country a multi-party government. The general elections resulted in the victory of the Independent Smallholders’ Party. There was no word whatsoever about religious persecution. However, the war had not ended yet, when on 18 March, the Temporary National Government seated in Debrecen issued decree no. 600/1945 on the land reform, depriving church institutions, including our order, of the majority of its landed properties, promising subsequent government support for their operation. Church leaders did not protest against this decree, and endeavoured to allocate their landed properties in accordance with the decree. Our order was highly regarded for its exemplary agricultural activity, and ministers used to take their remarks into consideration. Nevertheless, several points of impact had already evolved in this stage. The party resented that Abbot Vendel and the bursar and head of our order's holdings, Gyula Hagyó Kovács pointed out certain unprofessional actions and adverse impacts of the land distribution, exactly for the smallholders who received the properties. In the general poverty that followed the war, in the absence of machines and animals, these smallholders were incapable of cultivating their plots. Gyula Hagyó Kovács was among the first priests arrested on accusations that he did not perform land distribution in accordance with the decree. Before long, Abbot Vendel became the target of the party's hatred, as he was the person charged with negotiating with the government on behalf of the episcopate and Prince Primate Mindszenty. Thus the land reform was only the first strike on the church and the various orders, as the landed property served to maintain these institutions. Seizing these properties caused a major trouble in the operation of the orders, and left them at the mercy of the government, which promised them support as a compensation.

Based on soviet experiences, the party wily had the democratic parties actually build up its dictatorship step by step, using democratic slogans. Large landowners' estate were seized, and at that time it was easy to present this as a fair action, but it was not made in the interest of the poor who received the properties, as the very first step was the formation of cooperatives: as smallholders were unable to make a living from the properties, they had no choice but accepting their organisation into farming collectives called kolkhoz. Thus they became vulnerable to party leaders' intents. "Organised workers", whether employed by a state-owned farm or an agricultural cooperative, were then easily mobilised according to the party's interests. Similarly, having been deprived of their fundamental assets, teaching orders also became helpless and dependent on the state: if they did not teach in conformity with the government's official ideology, they were not granted support or had to give up their schools. Prince Primate Mindszenty foresaw the danger and knew that there was no way to reach agreement with the party leaders because they do not keep their word, and so he firmly resisted all violent initiatives against religion. For this reason he could be presented as an enemy of democracy, and even bishops and priests disagreed with him. Before long the government dissolved Catholic associations because no organisation was tolerated. "Divide et impera!" Weapons were hidden at schools, then they were "found" and used as legal grounds. Using "freedom" as a pretext, the termination of mandatory religious education was proposed. The archbishop also anticipated that if children's religious education was decided by the parents, parents, especially "organised workers", were easily intimidated, and so he launched a huge movement to defend mandatory religious education. For a short time, the question was indeed removed from the agenda.

In August 1947, during the infamous "blue slip elections", the left wing of the government coalition forged ahead, and using a violent "salami slice tactics", smallholders were ousted, in the summer of 1948, the social democrats were named Hungarian Labour Party and merged into the communist party, and other administrative actions were taken to dominate the landscape and seize total power. During the demonstrations against the nationalisation of schools, in the village Pócspetri, a policeman's gun accidentally went off and killed the policeman, and the government presented it as the murder of a policeman. The local vicar was sentenced first to death and then to life imprisonment for instigation. This accident was also used as a gimmick to press for the nationalisation of schools. In the same mummer, Gyula Ortutay of the Smallholders' Party and Minister of Religion and Public Education nationalised monastic schools, and at the end of December, Prince Primate Mindszenty was arrested. The pupils of nationalised schools were required to attend general meetings and demand an exemplary punishment for the "treason Mindszenty". During demonstrations people had to chant: "Job and food! Rope for Mindszenty!" The episcopate was also expected to condemn Mindszenty's policy and swear loyalty to the government.

Cistercians come to the forefront

Cistercian canon lawyer Justin Baranyai, professor of ecclesiastic law at the Pázmány Péter University, was included in the show trial planned against the primate. For his royalist sentiments he was held liable as if he wanted to overthrow the republic, although from the moment the republic was proclaimed, both he and Mindszenty had been well aware of the fact that there was no realistic chance for the restoration of a monarchy had no realistic chance. During the hearing he did not appear to be broken, and with his final words he kept defending his opinion. He was sentenced to 15 years in penitentiary. (Previously, nine Cistercians had been detained.) When he was granted amnesty and released in early 1956, for a short time he was housed in a priests' home in Székesfehérvár, where I worked as a secular employee, a factotum. It was poignant to see the former great scholar who had lost his once sharp memory to the extent that during conversation he suddenly forgot who he was talking to. He manifested interest (or merely gentle politeness) while he listened to whatever I told him about the current situation of the order, but he instantly forgot everything. Once he was talking to an elderly brother, an old acquaintance of his, and when the conversation stopped for a moment and he felt that he should go on, he politely inquired: "And how is your charming lady?" He obviously did not know who he was talking to. I tried to ask him if he had any disease but he did not know of any. Subsequently I read in the memoires of one of his fellow inmates that sergeant major B, also well-known to me for his cruelty, once punched Father Justin in the face with his fist that the Father dropped to the ground. (It was well-known among the inmates that sergeant major B had been an illiterate swineherd. He climbed the ladder with his cruelty. He immensely hated the lords of the old world.)

Even if a political regime worries for its achievements, in this case, the republic, and understandably endeavours to isolate its opponents, in his case a criminal case was fabricated out of loyalty to the king just to increase the list of crimes for Mindszenty they wanted to keep out of the way. In addition to the prosecutor's request of a death penalty Father Justin, once he had been sentenced, he got brutalised. His fate traumatised the members of the order, as this was the very first such a severe judgment against a Cistercian. Presumably it was meant as intimidation.

The case of Abbot Vendel Endrédy

Once the Prince Primate was arrested, Abbot Vendel expected to follow suit very soon. However, he still had a lot to do. He was elected as head of the Hungarian Cistercians in 1939. The war, and the Arrow Cross regime and the period when the Hungary was the frontline posed a host of problems for him. He provided refuge for the population of Zirc in the abbey. He got into a closer contact with Mindszenty when he was appointed bishop of Veszprém County in 1944, and reported directly to him. Although he was familiarised with the communist terror back in 1919 and then the prison of the Arrow Cross, he steadfastly defended Christian moral values. Pope Pius XII appointed him Archbishop of Esztergom in August 1945 and then cardinal. With total reverence, Abbot Vendel joined forces with the primate under the leadership of the latter, who in turn valued his carefully considered opinion and advice. One of the witnesses in the lawsuit against Mindszenty, Miklós Beresztóczy, who had previously been dragged through the mud and crushed, claimed in his evidence that Mindszenty and Endrédy were good friends and that Endrédy was the primate's adviser and one of his contacts to the West. Undoubtedly, Abbot Vendel visited the primate on several occasions and even brought a letter to him from Rome, after he had participated in the events of the Mary Days, where Catholic masses protested against the nationalisation of schools and against making religious education optional. In 1948, events accelerated. After the nationalisation of schools, teaching monks remained unemployed, as the primate forbade them to undertake teaching in nationalised schools. The reason was that he knew that in schools with a Marxist education they would either come up against their conscience, or they would be dismissed very soon. For a time, monks willingly undertook jobs as pastors, and bishops were pleased to employ them, however, the government did not approve it. It was mentioned that similarly to the Benedictines, the Cistercian order may be organised as an independent diocese, and thus at least a few members of the order would find a job as pastors, but the government refused this solution too.

Even after the nationalisation of schools in 1948, a lot of young people still applied for admission to religious orders. This was the period when I also became a novice with 17 others. The church elders were both pleased and worried. During the war, Vendel Endrédy tried to rescue the order by sending a few members to the United States to gain a footing there. After a lot of hardships and challenging times, this initiative worked: Hungarian Cistercians undertook teaching at secondary schools and universities and established a new abbey in Dallas. Meanwhile, in Hungary planned the return of a few schools, probably to prove that there is no religious persecution in Hungary but people's democracy was evolving in a healthy way. Hopes were raised in our order for the return of our two secondary schools. The party left the decision on the religious orders. In the course of the negotiations, the decisive statement was made by Mátyás Rákosi, who cut all hopes:

"As for the religious orders that may be maintained, all orders are the same to me, just like churches, however, the condition that one supports us while the other does not should not be indifferent for the state. But we did not experience that one order would support us more than the other. Still there is one thing that deserves mentioning: aristocratic orders, like the Sisters of Loreto and the Sacré Coeur, where a poor person has not been allowed to step foot in, should not be offended if we do not want to maintain them. In the summer of 1945, Endrédy, the head of the Cistercians requested us to immediately return their forests and 4000 acres of arable land, as they were engaged in Mangalitza pigs and they have agreed with their serfs, and he brought a list to prove this. Later on he was one of Mindszenty's bad spirits. Up to most recently he has been the most actively anti-peace. Of the 70 orders, I am unable to support his order, the order led by such a person. Allow the state have a veto in this issue, we liberally said that they could pick the schools, but after all the state should have some kind of a right of veto. I would certainly exercise veto power against the Cistercians and the Sisters of Loreto."

The abbot was personally attacked within the order, saying that his unyielding policy insisting on Mindszenty's views was the reason for our inability to come to terms with the government. One of our teachers in the Buda secondary school openly stood up for the communist regime, and left the order, he claimed this was done to save his abbot: his name was Richárd Horváth, subsequent leader of the Clerical Peace Movement and then a member of the Presidential Council of the Hungarian People's Republic. At a general meeting of the order the Abbot offered his resignation if the order suffers disadvantage on account of his person, but the council members stood up for him. At this moment he named the person to govern the order in case he is arrested. He informed his superiors both in Hungary and in Rome to consider any statement he may make if he is arrested. This is because during the Mindszenty lawsuit he learnt that the State Protection Authority, the secret police of Hungary, had certain chemicals for influencing detainees during giving evidences: they simply said whatever had been dictated to them.

In 1950 the government's endeavour was to persuade the episcopate to sign the agreement that would legitimize all the anti-church actions of the single-party state and could be used as a reference for the arrest of all those clerical persons who "violate" the agreement. Already at the time when Mindszenty was in control, the episcopate rejected the government's wish claiming that they were not authorised to sign such a comprehensive agreement, as this was the competence of the Holy See. Under the leadership of József Grősz, Archbishop of Kalocsa, they put up a common resistance to the agreement, while Gyula Czapik, the Archbishop of Eger was inclined to agree. The reason was that during the previous regime, he stood up for the *levente* movement, a paramilitary youth organisation, and he was frowned upon for it. Now he had to make the government forget it. The government broke the bishops' resistance by two violent actions.

Intervention: the hauling of monks

On 9 June 1950, at night, the inhabitants of the houses of our order in Baja, Pécs and Szentgotthárd were woke up by the secret police knocking at the door. They were given half an hour to pack up maximum 5 kg and carried in vans to the Carmelite cloister as a place of forced stay. As they were not told where they were carried, several of them thought that they would be taken to Siberia or killed somewhere along the way. The kind hospitality of the small Carmelite community who received them and meeting the other Cistercians carried from the other two places brought them great relief. Under strict orders of the secret police, they were not allowed to leave the nunnery, and their headcount was checked on several occasions. Overcrowding was quite a burden for the host community, but the forcible guests made their utmost to confine themselves to the simplest possible situation, contribute to every housework and make the exigency tolerable for all. As my teachers from Pécs, who experienced these things, related to me later on, very soon they organised cultural groups among them and held high-standard lectures to increase one another's knowledge. Those who had a good practical sense, undertook all kinds of servicing and repairs to reduce the financial burden. The villagers generously helped to feed them.

The government justified this action by declaring that due to the tension that had been evolving with Yugoslavia, "unreliable elements" had to be removed from the border zone. The real reason, however, was the showing off of the "people's fist", in other words, intimidation. Accordingly, many of the people of the secret police behaved cruelly, but there were also humane ones.

At that time I was a novice at Zirc. I learnt from my mother that the monks had been taken away from Pécs. This news was confirmed by others from several directions. There was a mother who took her son home, but most of us stuck to our profession. Then we heard that the night abductions were repeated on 18 of June and then on 11 July. Every night we went to sleep wondering if we were the next that night. This was no little stress but we persevered. Seeing this, the abbot obtained permission from Rome for us to profess a temporary vows (for three years) before the end of the full year on probation. On 22 June, 15 novices committed to the order in the midst of this complete uncertainty. Then, to our great surprise, at dawn on 1 August we awakened to see lorries drive to our monastery with about 500 nuns, collected and carried there from various cloisters. The abbot had to take action to make room for everybody, feed all of us, and he had to undertake responsibility that nobody would flee. All of a sudden we emptied every room and hall that could be vacated, and scattered straw on the floor to make berths for them, and at the moment they received their places, they reported for work. They pulled out everything edible from the garden for lunch and started to process them, while praying the rosary aloud. They were also happy to enjoy the hospitality of Zirc instead of Siberia. Abbot Vendel also gave up his own apartment to them and very kindly provided for their physical and spiritual needs. The young monks drove around the neighbouring villages and brought foodstuffs offered by the kind-hearted folk to feed this mass. The secret police encouraged the displaced monks to leave their orders and promised them to immediately release them and moreover, to get them jobs, but none of them broke their professed vows.

The other violent action taken by the government to break the episcopate's resistance was the so-called peace movement. Defending peace became a slogan continuously voiced in the international conditions of the Cold War, and it was also used as a means of organising Catholic priests and putting pressure on the "stubborn" bishops. A clerical general meeting was convened for 1 August 1950 in Budapest, where about 300 "priests" showed up. Subsequently it turned out that some of them did not even know where they were carried, others were Franciscan fathers deployed on command. The attendance list also contained the names of priests who were actually languishing in internment camps at that time, and even undercover secular persons. Richárd Horváth "exposed" the "slanderous campaign" of the reactionaries, and emphasized that we can be good Catholics and good citizens at the same time. It was frequently voiced at that time that in terms of faith and morals we are faithful to Rome but we disapprove Vatican politics. Following the Soviet example, the government would clearly have welcomed the creation of a national church that is dependent on and serves the interests of the communist party. These two pressures forced the episcopate to request agreement from the government.

Essentially, in the agreement the episcopate had to acknowledge the new democratic regime, condemn all actions taken against it, and the state undertook to financially support pastoral work for 18 years. After the agreement, 6 secondary schools were returned to 3 orders and 2 girls' secondary schools to the Schools Sisters of Notre Dame. On 19 August it was decided that the Cistercians would not be returned any secondary school, and thus they would lose their operating licence. On that day the abbot had not yet received the novices in the order and clothed them in the Cistercian habit.

On 7 September Law-decree 34/1950 of the Presidential Council was published in the Hungarian Gazette, withdrawing the operating licence from the monks. Thus 2300 men and 800 women were compelled to leave their homes. We were given 3 months.

As the monks did not consider the government's dictatorial action legitimate, and they also knew that the hostile and incompetent mob would destroy their valuables, they made efforts at hiding or depositing them with reliable people. Naturally, this caused them trouble later on. The abbot also wanted to rescue the novices by sending them abroad, but the law did not allow this, and so illegal border crossing was the only way left. He commissioned his nephew, Father Paszkál, to organise an escape, as he was born in the border region, and novices were allowed to volunteer for the perilous adventure. And subsequently this was indeed considered as an offence.

Abbot Vendel Endrédy's ordeal

The abbot was highly regarded among the bishops and monastic superiors, and he often negotiated with them as he did with the government. He also corresponded in a kind of cryptic language with the foreign members of our order, not being aware that each single step he made was reported by agents. After the dissolution of the order, he only cared about helping whoever he could. He expected his arrest as his home had been searched on several occasions during the summer and several people from the Zirc were interrogated about him. At the end of October he handed over the monastery to the person appointed by the government, and then with Father Timót Losonczi, his secretary, he travelled to Budapest, where he was given temporary accommodation in the Central Seminary. On the 29th, he drove to visit one of his relatives for a few personal belongings he needed, but on the road he was intercepted and detained by the secret police together with Father Timót. He was carried to the basement of the infamous 60 Andrássy Street, in Budapest, the headquarters of the secret police, where interrogations started right away. As he described subsequently, with utterly humiliating and painful tortures he was extorted to plead guilty in heading an organisation that had organised sabotage actions to overthrow the socialist order, acted as a spy for Vatican, made money in the black market with foreign currency and made several novices of the order defect to the West. He admitted the latter two but refused to sign the previous two. After five weeks of torture, they could not break him. Finally he was told that if he still refused to sign, his fellow members from the order, and moreover certain lady friends would be brought there and he would be tortured in the same way in front of them. This was already beyond what he could undertake, so he signed the mendacious charges.

However, the secret police was not content with having dealt with him. They fabricated an extensive conspiracy with József Grősz, Bishop of Kalocsa and head of the episcopate assigned the key role. If he was brought down, the entire church would be made a mockery of, and their man, Gyula Czapik would be seated at its head. In this huge farce, Endrédy was made sixth defendant, and the financial manager of our order, the above-mentioned Gyula Hagyó Kovács, who was a few years older, was added as the seventh defendant. Twenty-four subsidiary litigations were linked to the main lawsuit, including the case of novices who were helped to escape abroad but were captured, the case of the Paulines, the Kecskemét railwaymen's organisation, various foreign currency cases, etc. The harsh sentences were adopted in the summer of 1951.

Abbot Endrédy was sentenced to 14 years' imprisonment. He was a hero when he held the ground during the tortures, but at the hearing he already made statements as the secret police wished. Using his opportunity to make a last statement, Archbishop Grősz was also "sorry for his sins he had done against his people", and in addition to God's forgiveness, he hoped that his judges would be understanding when delivering the sentence. In prison the abbot was solitars confinement and for a long time he was not even given paper and pencil. He made conscious efforts at remaining mentally fit in idleness: he continuously stretched his mind and his memory, and did arithmetic in his head and solved complex mathematical tasks. When after 6 years, he was freed during the 1956 revolution, he was feeble in body (his heart condition was poor and he had vitamin deficiency, etc.), but mentally he was completely healthy. When after the reversal he was incarcerated again, due to his health problems, he could only be returned to the prison hospital, and so the government itself took the initiative for the episcopate to plead mercy for him. So the remaining 8 years were forgiven, but he was required to spend the rest of his life in the old people's home at the Benedictine Abbey of Pannonhalma. Thanks to the good care he received, he recovered pretty well, and lived in a fairly good physical condition and relative freedom up to the age of 86. I got to know him closer in this period of his life, since at that time I was employed by the said institution, and I had my meals together with him every day. His miserable judges and guards, for whom he prayed every day, had no idea what an intellectual giant and a warm-hearted person they had had in their hands and used for satisfying their primitive animal instincts.

In the Abbey of Pannonhalma he did his best to take mental and financial care of this brothers, and the monks had a very high regard of him. In the old people's home, cultural presentations were held every Sunday morning and he also held several highly successful lectures. He reviewed numerous interesting discoveries of contemporary science he had learnt from foreign journals. A lot of renowned church and secular dignitaries visited him, including his former student who had become famous. They admired his memory, as he could recall tiny details of events that happened to them in the secondary school. It was still his pleasure to help Benedictine pupils in mathematics if they did not understand their assignments. In addition, he was a cheerful person who liked jokes. He had a genuinely lovely personality.

Novices' adventure

At the end of August in 1950, every novice was required to write an application to one of the bishops and request them to allow us become ordinands in their bishopric. I had to write to the Bishop of Székesfehérvár. Meanwhile, the abbot was informed that an accurate plan of illegal escape towards Austria had been developed, and one of my mates also asked me if I was ready to undertake such a risky adventure. I was a shy boy, abhorred any irregularity, but as I assumed that my superiors would be glad to hear me agree, I undertook the journey. On 5 September 1950, I had to travel to the village Bősárkány with Brother Vazul, where we joined the others. On the site it turned out that there were twenty two of us, and we had to approach the "iron curtain" on foot, in the darkness of the night, led by three armed men. At the end of a thrilling journey, we did manage to cross the border at dawn (Brother Vazul dropped behind, so only twenty one of us) but for lack of sufficient information and knowledge of German, 8 bothers, including me, got into the hands of Austrian gendarmes, who accompanied us to Eisenstadt and handed us over to the town's soviet commander. The remaining 13 brothers successfully arrived in Rome and then to Dallas. After five weeks of waiting, a soviet lorry transported us back to Sopron and handed us over to the Hungarian secret police. Although we were not beaten, with uninterrupted yelling we were intimidated and during one night, were transported by a patrol wagon (nicknamed "dreamboat") to Budapest, to the secret police's headquarters in Mosonyi Street. It was 11 October. We were accommodated in private cells in the basement, where we were scared on numerous occasions during the daytime to prepare for the night interrogations. In the lock-ups with concrete floor there was only a metal wire bed, without a mattress and with three rugs, but we were not allowed to lie down before the lights-out. At night we had to sleep opposite a light that was on, and we were not allowed to have our hands under the blanket. If asleep we unconsciously pull our hands under the blanket or turned away from the light, we were immediately awakened.

For the interrogations we were awakened from our first slumber. We always had to run, as we were continuously yelled at: “Move!” The interrogation rooms were, however, comfortably warm. Usually it started at a civil tone, but if someone tried to have a gainsay, even the presenting officers beat him badly. In our case there was no such a problem: we admitted that we defected and they believed that we did not know if our superiors knew about it. They finished with us within ten days, we signed our statements and on 20 October we were transferred to a joint lock-up on the third floor of the Markó Street prison. This was already paradise in comparison to the previous one: we were together, we could talk to one another, nobody disturbed us, and we could lie down even during the daytime, the room was pleasantly warm and the secret police staff was relatively nice. However, we were under heavy guard, separated from all the others. We did not know when we would be heard and what the sentence would be.

We spent 9 months in the Markó Street prison, and this actually was intensive monastic life. Initially we made efforts at regaining our strength after starvation in Austria, and then by regular physical exercise, also our strength. Then the daily routine evolved, and the approximately 15 hours between the wake-up call and the lights-out. We had to wake up earlier to be able to privately perform the morning prayers, with reading replaced by meditation. For the remaining parts of the liturgy of the hours, we all joined in prayer and soft singing. Most of the day was spent in learning: everybody contributed what he could in Latin, Greek, German, English, French, Italian and Croatian, and we also learnt shorthand and the rules and theory of driving cars. Physical exercise was never omitted. After supper we even told bedtime stories. On 16 July we were finally taken to a hearing behind closed doors. All our court appointed public defender, a retired judge known from the Mindszenty litigation, Kálmán Kiczkó could say in our defence was that due to our young age theology still had an impact on us. (I wonder if he knew at all what theology was.) Judge Béla Jónás admitted that there was no evidence that we had spoken against people’s democracy while we were in the west, but it was presumable, and therefore we were sentenced for 4 years imprisonment, except for the eldest two of us, who were sentenced to 7 and 4.5 years. Naturally, we were devastated, but when we were transferred to the non-compliant detention centre and saw how many people had been sentenced to 10 or even 15 years, we realised that these far outweighed our sentences.

The commanding officer of the detention centre was captain Bánkuti (a steel worker from Ózd), who gave us a formal speech, saying in essence, that irrespective of sentence we could be released earlier if we worked honestly. The prison consisted of two three-pointed stars, but at that time only three sections were occupied in the left-hand star – crowded: three or four persons in a small cell. I lived with two mates in Left 2, and we worked in a chair polishing workshop, two of us lived in Left 1 and worked in a button-making plant, and three lived in Left 3 and worked in a bakelite plant. Unfortunately, the production quotas was set too high, it was impossible to comply with them. Anyone who failed could expect either being put in irons, which meant he was chained at the wrists and ankles from 6 in the evening until midnight, sitting in a painfully strained muscles, exposed to the cruel amusements of the guards on night shift, or being withdrawn from work and bored in the cell alone.

In the early 1950's prison population was composed of war criminals, in other words, high-ranking army officers (most of them sentenced to life imprisonment), priests sentenced for incitement (for 3 to 5 years) and young conspirators (sentenced for 10 to 15 years). It was an elite company. We could learn a lot from them. For monks, prison life did not present a major difficulty, as it was similar to the life of voluntary denial, only without the rite of mass. However, the special annoyance caused by bedbugs and guards made things more difficult. And yet, there were a lot of pleasure, including the friendship of valuable persons, interesting events etc.

In the autumn of 1952, we were relocated to the town of Vác, where we were assigned to a comfortable schist quarrying job. Then in the summer of 1953, we were transported to Tatabánya and we became miners. Although work was hard, the conditions were so good that this was considered as a dream lifestyle. At this place I earned so much that I could pay for the costs of my 4 years in prison, and when I was released in July 1954, I could even take some money home. However, the most important thing was that secretly, in that year I could already participate in masses every day. (This is because using grape and white bread brought to us by non-prisoner miners, inmate priests could celebrate the mass unnoticed while walking the yard. In retrospection, I consider the entire prison experience as a high school of life, where I learnt a lot, and give thanks to God for it as one of the most beautiful periods in my life. I have no grudge against anyone, and I rather feel sorry for the secret police staff and would like them to recognise the extent to which they were manipulated and misled by Marxist ideology.

Until 1956

While I was living in the prison in a kind of blissful ignorance, I did not know anything about the threats to the order. Although gone underground, the management wanted to live: they appointed people in charge of holding together the scattered members of the order. However, they were not aware of the fact that they were surrounded by numerous penetration agents, who reported everything about them and so it was only a matter of time when they were hit. In this period solidarity was the worst sin of all: a gathering of two or three people was already seen as the felony of "organisation directed at overthrowing the prevailing order" and entailed arrest. Another crime was the concealment of values from the abbey, as the state claimed ownership of all valuables of the nationalised abbey. The third offence was selling the foreign currency received from abroad without involving the National Bank of Hungary. Several members of the order were arrested on this charge and were prodded to cooperate as penetrating agents. Some tried to escape denunciation by leaving the order and marrying.

This period was also hallmarked by two poignant murders against Cistercians. In Eger, on 21 February, 1954, at the age of 37, Cistercian parson Sixtus Debreczeni was hit and crushed to death by a military passenger car, allegedly driven by a drunken driver. The claim that it was a sheer traffic accident is disproved by the fact that the zealous pastor had been threatened and there had already been two attempts at hitting him by car, unsuccessfully, and this time the person who committed the vehicular manslaughter was acquitted. Seven years earlier, when he was still serving as a parson in the village Nagykarácsony, Father Sixtus had already been beaten half to death by communists. In Eger he was not political at all, he only conducted his work as a priest beloved by all. As there was no matter that could be charged against him, he was finished promptly.

The other murder removed János Anasztáz Brenner, a young chaplain at Szentgotthárd, out of the way. János was one of the last novices clothed in the Cistercian habit at Zirc in August 1950. Anasztáz was his name adopted on his admission to the order. I saw him in the seminary in Győr after I was released from prison. He was already in his last year while I only began my first year as an ordinand. When he was killed, Anasztáz had been a priest for only two years, liked by everybody for his zeal and kindness. The main charge against him was that he had a profound impact on youth. When on demand from the government the competent bishop refused to relocate him to another place, the commissioner for church affairs held out the prospect that no good will come of this. At around midnight on 17 December, 1957, he was called to see a dying person, and on the go in the pitch-black night several persons attacked him and killed him by stabbing and trampling on his body. The authority failed to identify the assassins. The church considers him as a martyr.

Allow me to note here that the bishop of Pécs and his well-intentioned office director, who was a “peace priest” kept my past secret, registered me as an ordinand and sent me to study in Győr in the autumn of 1954. However, by the end of the schoolyear it become obvious that I was a monk, and so with two of my fellow-members I was expelled from the seminary. Previously, numerous other novices had had the same fate.

After the abbot was arrested, the master of novices Lóránt Sigmond became the secret governor of the order. He did his best to hold the members of the order together and help them financially, and he also worked for the future: covertly he educated new recruits for the order and collected financial means for a restart in the order’s life. During the 1956 revolution, he sent his covert novices to Dallas. The secret police had been watching him since 1952, but he was arrested only in late May 1961.

Lawsuits against Cistercians in 1961

This last series of suits eradicated the illegal Cistercians. The government was primarily interested in the education of the youth. Several members of the order were arrested for this reason. Instead of religious considerations, efforts were made at demonstrating immorality and stigmatise the detained monks to destroy their authenticity and discredit them in front of people. As I personally knew Father Bernardin Palos, the elderly bishop Shvoy and Father Lóránt, the charge that they lived in a homosexual relationship was completely out of the question. But the investigating authority could force them plead guilty. In the first instance, Father Lóránt was sentenced to 10 years of incarceration, but in the second instance treason and two counts of sexual perversions were dropped and the sentence was reduced to 7 years. In the prison he was diagnosed with kidney cancer, he was operated on and released on 1 April 1963. He lived for a year in the old priests' home at Pannonhalma. I had the privilege to be present at his death. I witness that he lived, suffered and died a saint.

It was startling that even the most soldierly personality, Bernardin Palos, could be broken. Previously, he was a director general of the Pécs school district and a devout scout. After the nationalisation of schools, he was appointed director of the abbey office. He was not an emotional kind, he could be respected rather than loved. He was discipline incarnate. After the dissolution, he lived in Székesfehérvár and he was a popular public speaker. His highly concise, suggestive and short addresses attracted masses. He was released in 1963, after two years of incarceration, burdened with the stigma of sexual perversions and organised to act as a mole. Although he never harmed anyone with his 315 reports, for 12 years he had to live divided against himself.

As I had no closer relationship with the participants of the lawsuits conducted in 1961, I do not speak about them. At this point, however, I think I should contribute to the question of agents in an annex.

Agents

Many years after the fall of socialism, many still consider our order as continued defendants, as several honourable members of the order turned out to be agents, in other words, moles in that ruthless communist world. I related to this matter in a way that after I was sentenced, in the detention centre the so-called D officer (defensive, more or less meaning a counterespionage officer) summoned me for investigation and tried to assess how useful I was. I probably disappointed him, as on hearing my naive responses he flew into a red-hot range and threatening with chains, he dismissed me. He said I was a liar, because I did not admit that I only wanted to become a priest to have the church finance my studies, as he thought. From one of my fellow inmates I learnt that the D officer tried to organise one or two moles from every company of inmates, and this was what he tried with me too. Instead of me, he managed to recruit one of the brethren, blackmailing him by some messy issue his father had had. He, however, discussed everything with me, as he did not want to be a genuine traitor. It was really difficult to play this double game, as he had to write monthly reports to make the D officer content while not harming anyone. The dissatisfied D officer beat him badly on several occasions. Moles figured out their colleagues pretty soon and knew who was a really dangerous, dirty dog, and made efforts at rendering them harmless through their reports. It was an ugly world of liars.

At a later date one of the older brethren from my order confessed to me that after many attempts he finally could no longer sidestep the demand, and he had to meet his organising officer in a confectioner's shop. In that shop everybody was employed by the secret police. There was a person at every table who struggled with a haggard face under the organising officer's pressure.

The managers of the old priests' home at the Abbey of Pannonhalma was visited on a monthly basis by a young officer to check the activities of the "dangerous elements" who lived in the home, like Endrédy, 'Sigmond, Csávossy, Kerkai, etc. In the absence of the manager, I had to receive him. Fortunately, this officer was not a fanatic: he chatted for an hour just to be able to reconcile with his duty and left. He allowed the home manager to let the elderly monks leave the home for the nearby parishes to help with the pastors' work in the absence of licences. This was already in the mid-1960s.

During socialism, fear was general and it prevailed everywhere. In addition to the population, who could never know when the secret police broke the door on them at night, the secret police staff were also afraid: of one another and or the "reactionaries". The reason why they wanted to know everything was for the sake of their own security. They smelled danger and wanted to defend themselves everywhere. This is why they were aggressive. As a matter of fact, they were deplorable. Undoubtedly, some of them were really evil, capable of interrogating and reporting their mates to get some kind of an advantage. In the prison it also happened sometimes that somebody related some of the things he had done, and the mole in the group hurried to report them. The consequence was retrial, and the person was executed. Naturally, such agents deserve to be called to account. But most of them were not like that.

Here I mention the names of two of my excellent brethren, who became bishops and subsequently turned out to be organised agents. One of them was a popular professor of ethics, György Zemplén, who also taught me at the Academy of Theology, and later on became rector of the Hungarian Papal Institute in Rome and then rector of the Academy of Theology as an Assistant Bishop of Esztergom. I cannot imagine what made this learned monk back into a corner, as neither career not intimidation seem to be likely. Similarly incomprehensible was the organisation of my former fellow novice, Gábor Kádár, who became Bishop of Veszprém and then Archbishop of Eger. From his youth he was the Eger congregation's pride and joy. As far as I know, he was respected and loved in his later years too. He had to die at a relatively young age, of cancer.

"Peace priests"

It is sad that a member of our order became so immersed with the socialist order that despite ban from Rome, he served the persecutors of the church and collaborated with them, undertook to act as their representative, led the "peace priest movement" dividing the clergy and putting pressure on bishops, and even received a seat in the Presidential Council of the Hungarian People's Republic. Richárd Horváth was a good teacher in Budapest, a socially sensitive person and a good monk. It is incomprehensible how he could turn his back on his former life. His fellowman, Miklós Beresztóczy, had been tortured before his will was broken, but we know of nothing of the kind in his case. Perhaps inordinate ambition was an option. He was respectful with his abbot when he applied for his release from the order. Even if initially thought that this order may bring the ideal social order into success, he must have seen that a dictatorship built on lies had been set up and maintained by violence, causing immense damages and sending several of its own leaders to the gallows or to prison. How could he hold on to it for decades?

"Peace priests" caused a lot of troubles for bishops, as through their governmental friends they demanded influential places, "gravy train" parishes, titles and ranks for themselves. With their secular attitudes they did not represent the teachings of the Gospel and misled believers. If a pastor did not participate in peace conferences, he risked being disbarred from religious education or deprived of the government's financial support. Many priests, mainly the elderly, were compelled to join the movement for such reasons. There was an infamous event in 1959, when the seminarists of the Central Seminary of Budapest (including me) did not attend the peace conference and in response the government removed the disobedient students (about 80 per cent of all ordinands) from the seminary.

The legal grounds voiced by peace priests was that they wanted to ensure survival for the church by this collaboration. However, the ordinands were of the opinion that saving the church is not our task, the Lord Jesus Christ is in charge of it. What we must do is to submit to Rome and to our bishops loyal to Rome, but not the anti-church leaders appointed by the government. However, there were peace priests who used their authority to protect the pastoral work done by their young chaplains, even in particularly sensitive areas, like the education of the youth. They deserve respect. As apart from Richárd Horváth, active participation in the "peace movement" was not characteristic of our order, I do not need to write more about it.

Summary and evaluation

As seen from this short compilation, the Cistercian order suffered quite a blow during socialism financially, in terms of persons and reputation. We cannot say we were all innocent and that we are entitled to the ornate pedestal of martyrdom. We lost our landed properties of 100,000 acres. We handed it over relatively easily, and our conscience does not tell us we had been bad managers, we had obtained them dishonestly or had used them to other people's detriment. In 1990 I was a parson in the village called Apátszállás, once established by Gyula Kovács Hagyó on our order's former property. It was a joy to hear how the descendants of the former domestic workers still blessed the memory of the strict governor, sentenced as an "extortioner" of servants, who had homes built for these families and provided social benefits for them, for the young couples who wanted to marry, for the elderly and for the ill, in a period when such things were novelties on large estates. We lost 5 model secondary schools, but in the knowledge that all of them were in good conditions, and moreover, in Pécs with the pupils' contribution to work, we had just built a competition swimming pool that served to boost water sports. Perhaps we do not need to grieve about being too proud of our schools. We lost many hundreds of pupils who continued their studies in naturalised schools, but as it became clear after the change of regime, they still carried on in the spirit received from us, did not become disloyal and has not disgraced us.

In 1950 the number of members in the order was about 240. And in 1990 no more than 40. In addition to natural attrition, unfortunately, there was a high ratio of dropouts, especially among the young priests, even among those who successfully made it to Dallas. It is particularly sad that about 10 priests left their profession due to being organised as agents. I am convinced that we can certainly refuse moral charges as slander, but we must admit feebleness, as many have undertaken to act as moles.

Approximately 40 of us suffered longer or shorter imprisonment. As shown above, not innocently. After the change of regime, the courts declared all these sentences null and void, but it was a fact that we, prisoners did violate the socialists laws. As for me, for example, I and my mates left the country without authorisation. Others hid their valuables the socialist regime seized as public assets. Again others caused damage to the people's economy by not allowing the National Bank of Hungary to tap the support sent us from abroad. We refused to acknowledge that the laws of the old, bourgeois world had changed in Hungary. In such a case we may say we appeal to the justice of history against the judgment of the changing laws of the political regimes taking turns. However, such a theoretical forum also depends on the assessment of flawed humans.

In the case of a fundamentally religious institution like a religious order, it is legitimate to name God as the ultimate forum to judge. In the order the question was raised whether the events might have taken this direction because the institution of monks, including our order, has gradually become disloyal to the original concept, the service of God. Similarly to the disasters in the history of the chosen people, which afflicted them because reverence and the honour of God had become mere formalities, and they worshipped idols and false gods instead of the one true God, the life lived by the monks of our age has also gone blank, secularised and become devoid of content during the centuries, and monks are seeking secular emergence instead of God's favour. This is not to say we have deviated from the way of life established and followed by our forefathers and saints (as this issue was also raised), as under the changed circumstances this was necessary. The problem is that since the 19th century our relationship with God has withered away. True, in the 20th century it was revived, but God saw the time ripe for implementing his judgment on us. He was the one who seated us in the dock at court to suffer the punishment, learn and purify. God always judges out of love, and his judgments serve improvement, repentance and perfection in life.

In addition to the numerous losses, however, our order certainly increased, was purified and strengthened in the wake of the tests and trials that we have passed, in order to prepare for a new prosperity.

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Ignaz Semmelweis, the Saviour of Mothers

Summary
The author describes the life of the most important Hungarian physicians, Ignaz Semmelweis, the circumstances surrounding his death, the story of his discovery, and reactions by his contemporaries and the next generations. He focuses on the historical, intellectual and scientific historical relations that paved the way for Semmelweis's thesis, its proof and its acceptance. In the opinion of posterity Semmelweis was an excellent researcher and a great humanitarian, who fought for others' lives until his death without sparing his own health. His tragic fate was raised to heroic heights by the fact that he did not live to see the practical use of his life-saving discovery, and even his death was caused directly by the very disease he had described and identified a prevention for.

Keywords: Semmelweis, obstetrics, childbed fever (puerperal fever), asepsis, antisepsis

Historical Period and Environment[1]

The Hungarian physician, honoured with the most beautiful *epitheton ornans* (or epithet), was one of the greatest personalities of universal medicine, and one of the most important benefactors of humanity. He was perhaps the best-known and most appreciated Hungarian physician, who relentlessly fought up until his death for the human right to live. But undoubtedly he was the most beloved one. In his life and death he united the most beautiful traditions of humanity. Without weighing the consequences, he did not spare his health and life, he fought to save the lives of others.

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He unshakably stood for the truth he had recognized, and followed the Doctrine: "truth will set you free" and free people do not need to be afraid. His life also proved Thomas More's reflection: truth still remains truth if only one man speaks it, and it remains truth, even if no one speaks it. The patients saved subsequently and posterity have proven and spoke Semmelweis's truth. He firmly believed in the freedom of thinking and of science, in the higher value of morality, and defended it against the whole world in transcendental heights and on earth. He was not motivated by personal ambitions, but by the protection of the unrepeatable life, at all costs, in the midst of unscrupulous defamation and personal remarks, sacrificing social conventions, personal contacts and friendships. The discovery of Semmelweis and his often enigmatic life and behaviour was a permanent subject of universal and Hungarian medical history. The former passions have been washed away by benevolent time. Personal involvement no longer affects the accuracy of recognition; and remembrance has turned it into peace.

A critical analysis of contemporary documents, archival research and the enormous literature reveals the crystal clear and unchanged significance of Semmelweis in medical history and recalls his life comparable to ancient Greek tragedies. In order to better understand Semmelweis, one needs to learn more about his family, his nation, traditions, attitudes and habits, and the spirit of the historical age which legitimized his motives and perceptions.

He was a descendant of Frankish and Bavarian immigrants who relocated in Hungary several generations earlier and very quickly became Hungarian nationals. Hungary was a country that achieved and maintained its status as a medium-sized empire for six hundred years and built on classical and Christian values under the reign of the Árpád dynasty and its female lines. It had developed a unique system of law and justice, accepted all victims of persecution, refugees and immigrants and guaranteed their intellectual, religious and material rights (remember that the first Act of Religious Tolerance and Freedom of Conscience in the world was issued in Hungary, at Torda, 1568). This country defended the Western part of Europe from the Tartar invasion. For three hundred years it fought for itself, for its integrity, sovereignty and faith, and for Europe against the Turks, while it was plundered and exasperated, lost half of its population, and yet remained steadfast. All the four grandparents of the first elected Hungarian king, Ferdinand I (Habsburg), descended from the Árpád dynasty on the female line, and all his successors, until 1918, made an oath to the Hungarian constitution and to the Holy Crown. Nevertheless, all the 18 emperors of the Habsburg and the Habsburg-Lotharingian dynasty violated their crowning oaths and reigned primarily as Holy Roman Emperors, and then after 1805 as the Emperor of the Austrian Hereditary Lands, which had no constitution, rather than kings of the independent Kingdom of Hungary. The different statuses, traditions, jurisprudence, economies and cultures of the emperor and king's two empires evolved in different directions, sometimes converging, sometimes moving away from each other, but the Hungarian identity remained strong enough to never be crushed and merged. More than 350 years of the Habsburg reign was characterized by efforts at the exploitation of the raw materials and human resources of the kingdom and restricting the ancient rights of the Hungarian nation. The Diet of Hungary, supported by the people, protected their rights lawfully, using its right of resistance (Golden Bull, or edict, of 1222) or even by freedom fights (1703-1711, 1848-1849).

Ignaz Semmelweis lived in the era when the Reform Diet of Hungary voluntarily decided to peacefully waive its prerogatives pursuant to the constitution and raise the nation (regardless of race, religion, origin, etc.) to the state of full equality of rights. In April 1848, Hungary's King Ferdinand V, obviously under the influence of a series of revolutions that had swept through Europe, legally approved these acts and thus they were enacted. While in England and France this was achieved by the decapitation of kings and bloody civil wars (in France by brutal terror and the complete extermination of the ancient ruling classes), in the Kingdom of Hungary it was put through legally and peacefully. The first responsible Hungarian government, with enormous and enthusiastic support, quickly and efficiently reorganised the state and governance. This was necessary indeed, as after the defeat of the European revolutions, the ruling dynasty wanted to restore the former conditions. Since the freely elected Hungarian Diet (National Assembly) could not be persuaded to support resotration, the royal family council made Emperor and King Ferdinand V abdicate, and raised his nephew, Franz Joseph, to power as Austrian Emperor, however, in the absence of the Hungarian constitutional conditions, the royal power as King of Hungary could not be passed to him. The new Austrian Emperor tried to obtain royal power over Hungary first by decrees and then by war. Just as always during its 1100-year history, after 1848 Hungarian nation took up arms for its legitimate constitution and freedom. Using brilliant strategy, they managed to defeat one of the most powerful European armies, the troops of the Emperor of Austria. Franz Joseph ran to Tilsit, kissed the hand of the Russian Czar, and called for help (then during the Crimean War he bit the helping hands). The Russian army of 200,000 led by Paszkiewicz, the Duke of Warsaw, crushed the Hungarian freedom fight, and the humiliated Austrian Emperor took a bloody revenge, which won Europe's detestation (English Prime Minister Palmerston wrote to the English ambassador in Vienna that the Austrians behave in Hungary like Bantus in Afrika). Emperor Franz Joseph governed by edicts and decrees, and the Hungarian nation responded with passive resistance. They did not support the imperial administration in anything. The emperor's empire weakened, and was unable to prevent the unification and rise of Italy (Solferino, 1859) and Germany (Königgrätz, 1866). Franz Joseph was forced to abandon absolutism. The most prominent politician and lawyer of the time, Ferenc Deák, elaborated a framework for a Great Power of the Danube, and formulated the "balancing" of conditions. On the basis of Hungary's thousand years old constitution, Franz Joseph could become King of Hungary and secure the royal succession order under the Pragmatica Sanctio only after he ensured the rights of the Hungarian nation, including the laws of 1848. As an emperor, he was required to draft a constitution for the Austrian Hereditary Lands, because in the absence of a constitution there was no Austrian state, and there was no one Hungary could agree with concerning common matters necessary for the survival of the countries guaranteeing the security of each other in the personal union. This is how Austria and its annexed parts were given a constitution, and Hungary was finally given a legitimate king, which resulted in the Austro-Hungarian Monarchy (a successful prefigurement of the EU) and an unprecedented upturn for Central Europe. Between 1867 and 1914 Hungary increased its national income by a factor of 16. The growth rate exceeded that of Austria and France. In the competition with Vienna, Budapest was built and became one of Europe's most beautiful capitals, and other big cities were built in concentric circles at a distance of 200 km and 400 km around the city (Pozsony, Kassa, Debrecen, Nagyvárad, Kolozsvár, Marosvásárhely, Nagyszeben, Brassó, Szeged, Arad, Temesvár, Pécs, Novi Sad/*Újvidék*), interconnected by excellent roads and railways. In addition to the economies of the two countries, this competition also fertilized their cultural and scientific life and education systems for the benefit of both nations and all nationalities.

Ignaz Semmelweis was born in 1818, at a time when Europe was in a cathartic state. The Napoleonic wars, which had caused unimaginable suffering, misery and massacres in the contintent, had just ended. All this horror hed been done on behalf of the "reason", and "common sense". It was thought that as the laws physics, nature and the society, which created and governed the universe, including humans, also sets the limits of people's lifestyles, morals, and goals, and so everything is correct what reason dictates, every new discovery proves the power of reason, and everything that is practical and reasonable improves the quality of human life. The main task of a human is to accumulate knowledge and to eliminate everything beyond this. It had to be discarded, since it does not exist, there are no other and higher thoughts and spiritual planes only that can be grasped with reason. One can achieve the supreme good, social agreement, freedom, equality and fraternity by reason alone, and there are no higher conceptual and transcendental realms. But the French Revolution proved, at least to some, that the reason alone does not protect anything; in practice it leads to a dead end, destroys values that are thousands of years old, without replacing it by anything else. Another part of the contemporaries though that the approach was good, but practice was incorrect and should be improved. This direction led to various "-isms" (nationalism, chauvinism, socialism, bolshevism, liberalism, atheism, nihilism, etc.). But in the era of Ignaz Semmelweis, this was not yet seen or even imagined. His contemporaries really believed in the classical values and could reasonably agree with common sense.

Semmelweis was the fifth child of a reasonably wealthy and happy family in the ancient Hungarian district of old Buda, called *Tabán*, and grew up between Germans, Dalmatians, Bosnians and Serbs. The evolving Hungarian Reform Era, with its flourishing commercial and spiritual life captured Semmelweis's feelings. Opposite his family's 500-years old Baroque-style home lived the revered poet and historian reverend Benedek Virág, a Pauline Father, (the "Hungarian Horatius"), who warmed the bench of the nearby ship station, next to eavesdropping children, exchanging ideas with the giants of the cultural life of the age: Bajza, Vörösmarty and others. Semmelweis inherited excellent intellectual capacities. Family patterns included hard work, honesty, a steadfast sense of justice, and a Hungarian identity, which he has repeatedly voiced. Ignaz Semmelweis was an eminent student throughout his studies. He completed his secondary education at the Catholic High School (royal academic *archgymnasium* after 1777) located in the Buda Castle and founded by the Jesuits in 1687. After 1832, the school was managed by the Piarists. Besides Latin (which was the official language of the Kingdom of Hungary until 1844) the professors placed a great emphasis on teaching Hungarian and German. Semmelweis perfected his knowledge of the German language, which he spoke with his family. In addition to speaking Hungarian as a native, he also considered himself as a native Hungarian. He completed his academic studies with excellent results in these three languages at the universities of Vienna and Pest, and later he also lectured in all these languages at the University of Pest. He achieved his highest academic achievement in his senior year of High School. He was second among sixty students ("*secundus eminens*", equal "*primi aemulus*" to the first student). As the Hungarian identity of Semmelweis was questioned at the peak of his fame, it is to be noted that the Semmelweis boys were always identified in school yearbooks (Informationes) as "Hungarus" (and never as "Austriacus" or "Germanus", etc.).

In accordance with his father's wishes, Semmelweis enrolled in the Faculty of Law at the University of Vienna in 1837, in order to become a judge of the court-martial. After finishing his first year of studies, he transferred to the Faculty of Medicine.

The University of Vienna was founded by three Austrian dukes (one of them being Rudolf IV) in 1365, the University of Pécs was founded by the Hungarian king, Louis the Great in 1367, the University of Prague was founded by the King of Bohemia, Charles IV of Luxemburg in 1348, and the University of Kraków was founded by Casimir III, King of Poland in 1364. The latter was reestablished by the Queen of Poland, Jadwiga, daughter of Louis the Great (together with her husband, Władysław II Jagiełło, Grand Duke of Lithuania, later King of Poland). Neither of the following universities had the same luck: nor the University of Pécs or the Jesuit Academy, founded at Marosvásárhely (town in Transylvania) by István Báthory, prince of Transylvania and King of Poland in 1581. Both were swept away by the storms of history. In 1777, due to the Ottoman occupation of Hungary, Péter Pázmány transferred the chair of the university at Nagyszombat (founded in 1635), to Pest.

Students from both the Kingdom of Hungary and the Austrian Hereditary Lands applied to the Faculty of Medicine at the University of Vienna for two reasons. Firstly, due to a royal decree, a person could only practice medicine thorought the Empire with a degree earned from the University of Vienna. The degrees earned at any other universities only authorized the physician to practice in the country of the respective university. The other reason was the higher quality of education in Vienna. This was again due to legal and financial discrimination. The Empire which was one of the strongest in Europe, was the political, intellectual, cultural and scientific center of the continent. The golden age of the Viennese Medical School was in the second half of the 18th century. The professors of the first great Viennese school (e.g. van Swieten, Stoll, Störck, Auenbrugger and van Haen) provided the highest level academic and educational services in the 18th century and relied on the huge patient population of the Vienna General Hospital *(Allgemeines Krankenhaus)*, established in 1784. This great legacy was carried on by French anatomists, pathologists and physiologists at the beginning of the 19th century, when the universities of German-speaking countries temporarily recoiled. The achievements of the French school of medicine directed the attention of Vienna to pathology and experimental medicine after 1820. The second great Viennese Medical School was established. The young generation obtained leading positions in the 1830's, particularly Rokitansky (pathology), Skoda (internal medicine), Hyrtl (anatomy), Kolletschka (forensic medicine) and Hebra (dermatology). Several Hungarian professors also worked at the university: Mihály Lenhossék, before his return to Hungary, gave lectures on physiology, Carabelli was a professor of dentistry and Rosas (born in Pécs) taught ophthalmology.

The Royal University of Nagyszombat was re-established in 1770, its curriculum and education methodology was regulated by the *Ratio Educationis.* The university's Faculty of Medicine was transferred to Pest in 1784. The university's importance increased significantly, however, before 1848 its operating circumstances had not been managed by the Diet of Hungary but by the imperial government. The imperial government ensured that the university had no chance to exceed mediocrity, despite all the fine words. Due to the scarcity of resources, research, clinical and laboratory education were difficult to conduct, although the members of the faculty followed and were aware of the scientific achievements of the time and also authored textbooks on them (Fabinyi, Lenhossék, Rácz, Bene, etc.). The professors of the University of Pest were proposed for appointment by the University of Vienna, and the budget of the University was also determined in Vienna. Typical of the time, the total annual allotment of a new anatomical institution was 50 forints, and Professor Márton Csausz added to it from his own resources. Some of the faculty members gave lectures in more than one academic discipline. The following physicians were the founders of their respective fields in Hungary: Ignác Stáhly, János Balassa, Ignác Sauer, and Ferenc Bene (internal medicine); Teofil Fabinyi (ophthalmology); Sándor Aranyi (pathology); Mihály Lenhossék, *protomedicus Hungariae* (head-physician of Hungary) (physiology); Ágoston Schöpf-Merei (paediatrics.)

Students and professors freely transferred back and forth between the University of Vienna and the University of Pest during their studies and careers. The majority of students completed their first year of studies at the University of Pest and finished their studies in Vienna (and therefore they were awarded a degree from the University of Vienna).

Ignaz Semmelweis completed the first year of his university studies in Vienna, the second and third in Pest, and returned to Vienna for the last two years. At times the number of Hungarian students at the University of Vienna were almost as much as the number of Austrian students. The Hungarian Society *(Magyar Társaskör)* was the largest student society in Vienna. There, an eminent member of the club, the life-affirming and always cheerful "Semmel-Nazi" became friends with Balassa, Markusovszky, Ferenc Schwartzer (the founder of Hungarian psychiatry) and others. He was awarded his doctorate degree in medicine in 1844. He wrote in his *matricula* (personal student register) that he did not wish to stay in Vienna. Fortunately for mankind, he changed his mind.

Semmelweis's places of employment

Between 1844 and 1849, Semmelweis worked for Department I of the Vienna General Hospital (Allgemeines Krankenhaus) a huge Maternity Clinic directed by Dr Klein. After his involuntary departure from Vienna, he was given a position as director of the maternity clinic at St. Rochus Hospital *(Szent Rókus Kórház)* in Pest (1850-1857). In addition, he was a professor at the University of Pest between 1855 and 1865 (during this time he was offered a position as head-physician at the maternity clinic of the University of Zurich, but he declined the offer).

At the maternity clinic Semmelweis, once one of the most cheerful, life-affirming and carefree students of the imperial city Vienna, threw himself into work with immeasurable ambition and extraordinary diligence, perseverance and exactitude. He was awarded a master's degree in midwifery in 1844, and became a surgeon in 1845. He made ward rounds early in the morning, prepared the rounds of the head physician, and taught students both in the morgue and by leading the afternoon rounds at the clinic. Although every clinic performed the autopsies of their dead, with special permission from Rokitansky, Semmelweis was "accustomed… to examine for the benefit of my gynaecological studies almost every day all the female bodies in the morgue… The kindness of Professor Rokitansky, of whose friendship I could boast, gave me the opportunity to dissect all the female cadavers… and consequently I was able to verify the results of my examinations by dissection." Without the superior knowledge gained at the morgue, Semmelweis might never have been able to identify the causes of childbed fever. As he was immediately confronted with the high maternal and neonatal mortality, he refused to accept the idea that birth is accompanied by death. He was shocked to learn that in certain months the mortality rate was as high as 30% at the clinic.

Childbed fever is as ancient as mankind itself. Although its occurrence was sporadic, Hippocrates, Galenus and Avicenna described many of its characteristics. It was presumed that the decay fever caused by parts of the placenta remaining in the uterus was poisoning the body and was the cause of death. The problem was brought in the focus of attention when it occurred *en masse* in France between 1662 and 1664, in 1764 and in 1776; in London in 1760, between the years 1770 and 1771 and in the 1820's. In these periods autopsy became general practice and the majority of births already took place at hospitals and maternity homes. Thomas Willis was the first to use the term "childbed fever" (1662). Before Semmelweis's discovery, the disease had been attributed to at least 30 different causes, including fatum (death, destiny) inherent to pregnancy, fear, shame, or a "miasma" in the air (effected by cosmic and telluric influences) that caused epidemics. Other possible explanations were a sui generis disease (a case specific condition), constipation, mechanical reasons (Busch), or the perturbation of the "natural revolution" occurring in the female body during puerperium (Carus). Theories were made to explain these causes. According to the "theory of milk metastasis" after the onset of milk production, the mother's milk metastasizes and accumulates in the head (Willis, Sydenham, van Swieten, Boerhave, Levret, etc.) or in the organs of the abdominal cavity (Puzos). The "phlogistic theory" saw the cause of the disease in the inflammation of the organs of the abdominal cavity and of the small pelvis (Platter, Harvey). The inflammatory focus could be the uterus (Kirkland), the intestinal tract (Halme), the peritoneum (Hunter), or the peritoneum and the omentum (Osiander), or the ovary and the fallopian tubes (Wagner). Some believed childbed fever was not a separate illness but a localized inflammatory disease of the genital organs (Schmuch and Helm). This last theory was not so far from the actual truth. However, many of Europe's leading obstetricians thought that the substances that accumulated during pregnancy exit the body during a typical delivery. If this does not happen due to an additional illness, the blood "deteriorates", and childbed fever is a consequence of this state (Siebold, Ritgen, etc.). Physicians of the continent were unable to manage the "genius epidenicus". British physicians did not feel entirely helpless, as they were followers of the "contagion theory". According to this theory the cause of the disease is contagion, and as it is airborne, it can be prevented by ventilation, cleanliness and disinfecting the air around the patient (by sulfur and chlorine) and by the segregation of patients. They did not recognize that the disease was transmitted by direct contact, and that it is not contagious. White realized the importance the direct environment had on a women in labour (1773), which was later amended by Denman, who recognized the importance of the cleanliness of physicians and midwifes (1782). According to Gordon, childbed fever is caused by erysipelas (1795). However, he did not realize that the "putrid matter" is not introduced to the uterus from the inflamed peritoneum or intestines. As he interpreted the nature of the disease the methods of purging and bleeding the patients in a copious amount rather worsened their condition. Holmes, a professor at Harvard University, emphasized the transmittable nature of the disease and the importance of cleanliness in 1843. To ensure cleanliness, he summed up his proposals in 8 points (most of these were redundant due to the lack of knowledge of the nature of the disease). Eisenmann suspected that the damage to the uterus and its infection are the causes of the disease (1837), and according to Watson (1844) the hands of the examining physicians also play a part, and recommended rinsing the hands in chlorinated water. In his book *Diaetetica. Recommendation for Health Maintenance and Forbearing Diseases* (1814, 1817, 1818) János Zsoldos, *"protomedicus comitatis Wesprimiensis"* (the chief medical officer of Veszprém county), wrote that midwifes must wash their hands first in vinegar water, then in lye water, and lastly with soap and water before attending to women in labour. He also wrote down the instructions for cleaning and dressing wounds with camphorated calcined boron blended in "lukewarm water". These instructions were turned into a rhymed verse by Gerzson Fodor for midwifes to learn by heart in 1818.

The above explanations were given as causes of childbed fever in the West during the "Age of Reason". Although Zsoldos had already observed and pondered the genuine reason, it was Ignaz Semmelweis who gave the correct and accurate answer. He looked into the facts, recognized, explained and prevented childbed fever (diligently, with perseverance, the highest ethics driven by self-sacrificing philanthropy and with unshakable faith and hope in the truth). There had been clashing and competing theories along the line of truth before him, but no one realized the true nature (a kind of pyaemia, and not a separate contagious disease) and the direct cause of the disease (internal examination performed with unclean hands). For this reason no one had been able to prevent the onset of the disease.

Discovery of the cause of childbed fever and its prevention

The Viennese Maternity Clinic was one of the busiest institutions in the world. By the time Semmelweis started working there, the clinic had already been in operation for 63 years and 186,000 deliveries had been performed (7764 babies were delivered in 1846). The autopsy of deceased women and the post-mortem practice of medical students were introduced by Semmelweis's superior, Johann Klein. Next year, childbed fever mortality rates increased from 2.8% to 7.4%. In 1840, the clinic was divided into two separate institutions. The students practicing autopsies were educated in the first section, and midwifes were educated in the second one. From that time on, the difference in childbed mortality rates between the two sections continued to increase 3 to 5 fold. (By December 1842 it reached a steady 31% in the first institution.) Semmelweis was responsible for keeping the mortality records at the clinic. He reviewed them going back to the earliest day of the clinic and after analysing 67 tables, he concluded that identifying the reason behind the difference in mortality rates would lead to discovering the cause of the disease. Professor Klein reconciled himself to the idea that the disease was unpreventable, and found the statistics unpleasant. His assistant, Semmelweis, often expressed his dissent on the subject. (For example, he publicly corrected and refuted Klein's argument that the disease was caused by the old walls of first section's buildings.) As Semmelweis worked relentlessly, day and night to find the causes, he became impatient and agitated ("Every question is inextricable. Only the number of deaths is unquestionable"). He kept detailed records of all data about the women in peripartum, including their lifestyles, health, and the course of the disease. He turned the patients sideways, separated them from others, aired out the rooms and paid attention to their cleanliness, shortened the time for the last unction, put guards in front of the rooms, etc. He compared all conditions in the two institutions and found nothing different between them. Except for one thing. Midwifes in the second institution did not perform autopsies. During the autopsies of the deceased mothers and their babies he observed that they displayed very similar pathological changes. He noticed symptoms of pyaemia. He correctly came to the conclusion that if the same pathological changes displayed the same symptoms, the cause of death must be the same: pyaemia. As the corpses of postpartum patients were not the only ones that showed the pathological changes of pyaemia, childbed fever is not specific to maternity patients alone. Despite his fervent efforts, Klein did not extend the appointment of the highly independent "savage Hungarian". Semmelweis travelled to Venice with his friend and roommate, Markusovszky and decided to learn English. He wanted to get as far from Vienna as possible and get a new job in Dublin. Yet, he ended up returning to Vienna to the first institute where he learned the devastating news of his friend Kolletschka, a student of Rokitansky. His finger was accidentally cut by a student during an autopsy. The wound got infected and Kolletschka died of septicemia. Semmelweis was shocked to discover the symptoms and pathological changes of pyaemia in the autopsy report and in the description of the course of the disease – something he had observed so many times before. "Day and night I was haunted by the image of Kolletschka's disease and was forced to recognize, ever more decisively, that the disease that caused Kolletschka's death was identical to that from which so many maternity patients died."

It was a moment of truth Semmelweis recognized, seized and correctly interpreted. His suspicion was confirmed that a connection exists between conducting autopsies and cause of childbed fever. He connected the dots. The medics conducting the dissections transmitted cadaverous particles on their hands into the wounded birth canals. The contracted disease spread from the mother to the baby. This explained why childbed fever was so rare among women giving birth at home, or delivering quickly (as there was no need or time for vaginal examination). It was also rare in the second institution of the clinic, since midwifes did not conduct autopsies. Semmelweis tested his hypothesis on animals. He inserted cadaverous particles and/or uterine fluids of those infected with childbed fever into the vagina and uterus of 9 rabbits. All 9 rabbits produced the clinical and pathological symptoms of pyaema and died of the disease (other sources mention 7 out of 10 animals).

Semmelweis was aware of the significance of his findings. He stated that his discovery could save as many lives as the small pox vaccination of Jenner. Yet he was not motivated by inextinguishable pride or complacence, but was greatly disturbed and bitter self-accusation overtook him. "In consequence of my conviction I must affirm that only God knows the number of patients who went prematurely to their graves because of me… No matter how painful and oppressive such a recognition may be, the remedy does not lie in suppression. This truth must be made known to everyone concerned."

It became clear to Semmelweis that the cadaverous particles transmitting the diseases must be removed from the hands of the examining physicians. They must be cleaned and disinfected. But how? After conducting autopsy the cadaverous odour does not disappear with a simple hand wash, which means the cadaverous particles are not completely removed. He started to experiment with various solutions. Chlorinated water seemed to work and in May 1847, he ordered physicians to wash their hands in chlorine solution using nailbrushes before examining maternity patients. Since bacteria and the role they play were discovered nearly two decades later, he could not have known that the chlorine solution does not only remove the cadaverous particles, but it also destroys bacteria causing pyaemia. This is how antisepsis was born in obstetrics.

In the first institution the mortatlity rate fell from 28.27% in April 1847 to 0.17% by the end of the year. This was lower than in the second institute. Semmelweis first concluded that cadaverous poisoning was the cause of the disease. Next year the discharge of pus from a woman suffering from cervical cancer and tuberculosis caused an outbreak of childbed fever. Then he finalized his hypothesis: not only cadaverous poisons, but all decaying organic matters, and patients' discharges of pus could also cause childbed fever, if they are conveyed by hand into the birth canals of women in labour, where they are absorbed.

"Semmelweis's discovery was not accidental, but a conviction based on scientific evidence" (Markusovszky). The boom in medical discoveries in the 19th century were mainly due to technological advances. Semmelweis's clinical and pathological knowledge and experience, extraordinary perceptibility and logical reasoning could all be put to great use at the busy Viennese clinic.

Reactions to Semmelweis's discovery

Semmelweis considered his own discovery evident and important. He thought that others would also receive it this way and that it would be widely adopted by clinicians shortly. His discovery was first published by Hebra, the renowned dermatologist, without Semmelweis's knowledge, in the December 1847 issue of the Viennese Medical Society's journal. In the same year Rokitansky and Skoda adopted his new principles, however, the articles received little attention. The foreign students in Vienna (German, Dutch, English, Scottish, Swedish, Czech, Russians, etc.) showed great enthusiasm and respect for Semmelweis's work as a teacher and a clinician and appreciated his kindheartedness, and hard work. They reported the discovery to the leading obstetricians in their respective countries (Kussmaul in Erlangen; Sondenegger in Switzerland; Schwartz-Kiel in Copenhagen; Steinrich in Amsterdam; Arneth in Edinburg; Wieger in Strasbourg, etc.). Thez in turn forwarded the news to their colleagues and friends throughout Europe. Most recipients gave a chilly response and/or dismissed the notion (Simpson in Edinburg; Tilamus in Amsterdam; Levy in Copenhagen, etc.). However, Michaelis immediately introduced the new method in Kiel, and it confirmed Semmelweis's findings. Having seen the results, the overly sensitive Michaelis condemned himself for not being able to help a relative who had deceased a few months earlier due to childbed fever. Feeling guilty he committed suicide. ("I will have the opportunity to introduce obstetricians to the reader who could make use of the consciousness Michaelis had too much of. May he rest in peace" wrote Semmelweis.) In France the method was advocated by Wieger, and in England by Routh. In the correspondences among medical professionals several inaccuracies circulated, which gave grounds to attacks on Semmelweis. The growing medical controversy proved that one can either support or attack Semmelweis's hypothesis, but no one can ignore it. One just could not go past it.

Attacks on Semmelweis's work, his return home, refining and publishing his thesis

The European revolutionary tide reached Vienna on March 13, 1848, two days before the Hungarian revolution, which actually had no casualties. Chancellor Metternich and his politics failed, at least for the time being. The scholars also organised a legion of 3000 to 5000 volunteers in support of the revolution, and Semmelweis immediately joined. Although the legion was dissolved shortly after its establishment, many of its members participated in the Viennese Uprising. Semmelweis played an active role in the events of March 13 and in the battle against the imperial army on October 6 to prevent their attack on Hungary. Semmelweis's three brothers volunteered to serve in the Hungarian army. As the events were unfolding, Semmelweis carried on with his work at the clinic, frequently in his military uniform bearing a skull. All his presentations, demonstrations and private conversations were concluded with one topic: childbed fever. Neither the legion, nor Semmelweis participated in the Transylvanian battles of the revolution (against the two imperial armies) in 1849.

On October 30, 1848 Windisgrätz carried out a bloody repression of the Viennese Revolution and it seemed that the Hungarian Revolution would also be crushed. Professor Klein, Semmelweis's superior, who had grown jealous and resentful of him after the Vienna Medical Society asked him to present his discovery, failed to renew his term that expired in March 1849, despite the support of the medical board. The Ministry accepted Klein's decision and the appeal was also rejected. Semmelweis's human greatness is underpinned by the fact that he never penned a words of reproach about Klein. The next generations did that for him. "It is to the discredit of Professor Klein that he cut short the impetus of Semmelweis, throwing back by at least twenty years the advance of one of the greatest achievements of the century" (Varnier). One of the most prestigious British journals called him the "shameful persecutor of Semmelweis" and according to the *Encyclopaedia Britannica* "the blindsided Klein… chased Semmelweis away".

Stripped of his job and of his academic career, the Imperial Viennese Society of Physicians elected him as a full member in July 1849, and in October Skoda presented his discovery in a grand lecture. This gained Semmelweis new enemies, who attacked him in various articles (Scanzoni, Seyfert, Hamernik, etc.). In the summer of 1850 Semmelweis was invited to give two lectures at the Viennese Society of Physicians and he successfully defended his thesis during the discussions. "It is a grand celebration of honour" (von Waldheim). Semmelweis made a great mistake by not publishing the full lectures and the subsequent discussions. Although his repeated application for a private teacher's position was accepted with numerous restrictions, within five days due to personal harassment and because "the reactionists have extended their political control over sciences, in hope of a better future, he resettled in his home country" (Markusovszky). He never mentioned that he had the desire to return to Vienna. His friends in Vienna never forgave him, and only his friendship with Hebra lasted for a lifetime.

Semmelweis arrived home, among real friends. His Hungarian colleagues respected, appreciated and accommodated him. He was never under any personal attack. Nevertheless, he only realized how crushed his homeland was after the Revolution after his return: oppression reached inconceivable levels in all spheres of politics, military, police and public administration. A wide network of spies and censorship kept the country under control, crippling education, culture and sciences. "We were living in strange times. Orvosi Tár, the Hungarian medical journal ceased to exist, and our county did not have a medical journal, nor any medical professional associations. We were not allowed to meet and listen to each other's academic work, it was like living in pitch darkness. This lasted for 9 years, after 1848" (Frigyes Korányi). Still not quite, since János Balassa (Army Head Surgeon, sentenced to 3 months in prison) having served his sentence, received professorship again in 1851. (He was an internationally renowned surgeon. He was offered the position to head the Vienna Surgical Clinic twice, which he declined both times.) Doctors, who later became major figures in the first great Hungarian generation of physicians (Bókay, Lenhossék, Korányi, Markusovszky, Lumniczer, Haynal, etc.) all flocked around him. They met almost secretly for professional discussions the political power tried to deprive them of. The "Balassa Circle" *(Balassa Kör)* became increasingly vibrant and a growing sense of professional freedom put Semmelweis to ease as well. Almost immediately upon his return, he was appointed unpaid head obstetrician at the Maternity Clinic of the St. Rochus Hospital that was established in 1796 and had 675 beds. He held this position until 1857. In addition, between 1855 and 1865 he had professorship at the University of Pest (while he declined a professorship in Zurich). During his six years at the clinic, after he introduced the rigorous prevention methods of childbed fever, the mortality rate declined to 0.39%, while in Vienna and Prague it was around 10-15% at that time.

Since he had used up most of his family fortune in Vienna and he did not receive a salary in Pest, he launched his private practice. He treated his patients in a humane and professional manner, with great knowledge and patience. He was a kind and sought after obstetrician. He had a significant income (Birly, his predecessor at the university left a fortune worth half a million forints to his heirs). Nevertheless, after his early and unexpected death, he left no inheritance. He joined social life in Pest, which included a series of events in silent resistance against the Austrian oppression. They wore traditional national attire and danced to traditional Hungarian music. The tuxedos were replaced by Hungarian noblemen's wear (such as the *bocskai),* the headband by the corolla, and the waltz by the tighter and more elegant Hungarian *palotas* or *czardas.* The famous figures of the progressive Reform era broke their silence and the muses of unparalleled and deep Hungarian poetry sang about the glorious past and a happier, more humane and free future. They could not let go of the nation's thousand year old history and of the 1848 revolution. The cultural and scientific societies were re-established and slowly they gained access to international publications. In 1851, Semmelweis was elected full member of the renewed Hungarian Medical and Natural Sciences Society. He frequented their library and he actively followed and read the literature published on childbed fever and footnoted the publications.

His appointment as a professor unleashed extraordinary energies in the already hardworking man. The language of education in the universities throughout the Austrian emperor's empire was the mother tongue of the respective universities (Italian in Padua and Pavia; Polish in Krakow; Czech in Prague and German in Vienna). For various reasons, in Pest education was conducted in Hungarian, Latin and German. Semmelweis continued to teach in these three languages in Pest after 5 years, from where he left off in Vienna after 21 months. He had approximately 200 students annually. In addition, he took on a wide array of literary and scientific endeavours. He was among the founders of the *Orvosi Hetilap* (Hungarian Medical Journal, 1857). He started to write a university textbook for obstetricians (his death prevented him finishing it). As a member of several university committees, he actively contributed to proposals (reform of medical education, establishing a university campus, public health reforms, establishment of the St. Stephen Society (*Szent István Társulat)* and the Medical Publishing Association *(Orvosi Könyvkiadó Társulat).* In addition, he became the director of the Smallpox Vaccination Institute, "supervisor" of the university library, and the finance director of the medical faculty. He was extremely strict (once he used mild corporal punishment to discipline the owner of a laundry facility who brought back the patients' sheets with blood and pus stains) and precise (after his death his widow had to settle the accounts with the university concerning 2900 forints and the university actually returned 55 forints and 62 krajcárs to his widow).

The University of Pest, except for a few professors who disliked him, always acknowledged and appreciated the achievements of Semmelweis and the significance of his discovery. It is a historical fact that chlorine handwashing was routinely done at the surgical clinic of the university in 1858 (Balassa). In 1862, for the first time in the world, the relevant authorities made the obstetrics prophylaxis mandatory in Hungarian hospitals (based on the recommendation of the university). "What the medical professionals denied of him in Vienna, he found at home… and they paid utter respect to his extraordinary discovery" (Navratil).

After his successful lecture at the Viennese Society of Physicians (1850), he thought he managed to convince obstetricians and the results spoke for themselves. However, the medical literature and the private conversations with his foreign visitors had shown otherwise. The European and British obstetrical societies, with a few exceptions, did not accept his theses. He realized that he had made a mistake, and he decided to step out. In 1857 and 1858, he held a series of lectures on his thesis at the Medical Society of Pest, in front of the most renowned Hungarian physicians, who were deeply "moved". Markusovszky wholeheartedly recommended his lectures. ("Semmelweis presented his doctrine with such firmly grounded conviction that only such doctrine can boast of, for which one would be ready to fight for not merely by words, but at the expense of his own life.") The *Orvosi Hetilap* published them in seven issues and in 1860 Tivadar Dutka published them in the *Indian Lancet.* As a result of a year and a half's relentless efforts, he published his main work, a book entitled *Die Aetiologie, der Begriff und die Prophylaxis des Kindbettfiebers* (The Etiology, Concept, and Prophylaxis of Childbed Fever). In the preface he wrote: "By nature, I am averse to all polemics… I believed that I could leave it to time to break a path for the truth. However, for thirteen years, my expectations have not been fulfilled… Fate has chosen me as a representative of truths… it is my inescapable obligation to support them… I feel that it would be a sin to keep silent."

The book is divided into two parts. In the first one, he details the discovery of the disease, its concept and prevention. This form of pyaemia is caused by decaying organic matters transmitted to the birth canals from any external source (examining physician's hands, devices, sheets, sponges, bedpan, etc.), then are absorbed there and cause pyaemia. He describes that decaying organic matters can also be generated within the body (particles of the placenta, membranes, etc.). This is called autoinfection. In this case, childbed fever occurs without external effects or transmission during internal examinations. Semmelweis addresses all theories developed on the subject one by one and refutes them with infallible logical reasoning. In the chapter on "Prophylaxis" he wrote that the goal is to "prevent the introduction of external decaying matter, prevent the generation of internal decaying matter and remove as quickly as possible any existing decaying matter to prevent its resorption" (Description of the non-infectuous surgical principal). He calls on every government in the world to ensure compliance with the preventive measures by law.

The title of the second part is "Reactions to my teachings: Correspondence and published opinions". In addition to publishing the various opinions on the subject (articles of Hebra and Skoda), he addresses each and every critique and attack and refutes them (Simpson, Ruth, Michaelis, Levy, Tilanus, Littmann and their correspondence, Bamberger, Braun, Hamerik, Dubois, Seyfert, Scanzoni, Kiwisch, Martin, Virchow, etc.). His arguments are extremely sharp, to the point, objective and logical. He writes in a passionate style on purpose. It conveys the uncompromising truth, love of his fellowmen and his profession, and medical conscientiousness. In the *Orvosi Hetilap* Markusovszky published the most outstanding analysis in which he describes Semmelweis as follows: "We are consumed by one doctrine, we are focused on the life-saving deeds of the warmhearted man who is so deeply and firmly grounded in the truth of his convictions… he kept silent for almost fifteen years and tolerated the disparaging words of his colleagues without penning any response… The Orvosi Hetilap had the honour to stir him up in his quietness… Semmelweis did not handle his colleagues with kid gloves when visiting them. He likes to speak what's on his heart and boldly proclaim what others only dare to think."

I could conclude this paper here, since the revolutionary work of Semmelweis is complete and known by the world. It only should have been put into practice. Yet, I cannot finish here since his fate forced him to reach heroic heights. His own life and the life and death of masses were at stake. At this point, his life took a tragic turn that elevated him into immortality.

The "saviour of mothers" and "the benefactor of humanity"

Semmelweis sent his work to every notable obstetrician as well as several physicians and scientific societies. Only Froriep replied in a few lines in favour, the rest of Europe's obstetricians formed a united front to suppress, misjudge, misinterpret and reject these new doctrines. An obstetrician from Prague, Breisky labelled them mockingly as: "the Koran of puerperal theology". Once again Markusovszky was the only one, who proposed the chemical and histological examinations of putrid matter among other things in an article which was later highly valued by the contemporaries (Bruch, Fischer, Waldheim, etc.). (Remember that at the time bacteriology did not exist!) As there was no other choice for Semmelweis, he went on the offensive, grabbed a pen and wrote his famous "open letters" against the leading obstetricians of the time. ("My answer is not the intent, but the inevitable means.") He wrote "the murders must be stopped, and in order for that I will keep watch, and anyone who dares to propagate dangerous errors about childbed fever will find in me an eager adversary". He wrote his first open letters to Professors Späth (Vienna) and Scanzoni (Würzburg). In his letter he reminded Späth that "(your mind) had not been sufficiently lighted by the puerperal sun, which rose in Vienna in 1847, however close to you it shone" (they were colleagues). Then he proceeds to prove with the use of statistics that under 10 years 1924 deaths could have been avoided at Späth's clinic. "In this massacre you, Herr Professor have participated." His judgment upon Scanzoni is as follows: "your teaching, Herr Hofrath, is based on the dead bodies of lying-in women slaughtered through ignorance". In his second "open letter" to Scanzoni he wrote: "Herr Professor was right for thirteen years, because I was silent for thirteen years; now I have forsworn silence and I will be right… for as long as a human female gives birth." He wrote a letter to Siebold, residing in Göttingen at the time, with respect and deep humanity but mercilessly, in the voice of a shattered person. "I recall with pleasure… the time we spent in Pest together… but the cries of women dying from childbed fever are louder than the voice of my heart, and my mind pressures me to enforce the truth even if it hurts my heart… Your doctrines leads to the massacre of women in puerperium… You state that the Parisian Academy (Maternité de Paris) is opposes my teachings… I confess that I do not consider the Parisians to be a supreme authority… the Parisian physicians should come to Pest so to be enlightened here… Call upon, Herr Hofrath, the German obstetricians and physicians to gather together… I also will make an appearance."

Siebold was not offended ("I gladly forgive my friend, Semmelweis… who, after having been enlightened by the puerperal sun… wanted to scorch me with these exact sunrays."), however he could not call together the "Medical Council of Constance" as he passed away in 1861. In that same year the Congress of German physicians and natural scientists in Speyer considered the discovery and unanimously rejected it with the sole exception of Professor Lange from Heidelberg. Markusovszky answered each of the professors in writing, including Virchow, the "Pope of Pathology" of the time, in the *Orvosi Hetilap.* Later on, in 1862 Markusovszky published Semmelweis's subsequent 92-pages long "open letter" addressed to all professors of obstetrics. He recited his arguments, reasserted the evidences and rebuttals, and emphasized personally the accountability of governments and obstetricians. He stated that if need be he would take his case before those concerned and before the public. In the article he also published the acknowledging letters of Pipinskjöld (Helsingfors), Dietl (Kraków), Kugelmann (Kiel) and Veit (Hannover). "It has been vouchsafed to very few to confer great and permanent benefits upon mankind, and with few exceptions the world has crucified and burned its benefactors. I hope you will not grow weary in the honourable fight which still remains before you, as among your opponents many have already became de facto heralds of your doctrines" (Kugelmann). The first hairline cracks have appeared on the homogeneous icy crust of apathy, vanity, ignorance and malice.

The death of Semmelweis

Both Semmelweis's personality and physical state changed in 1862. He was less enthusiastic about the growing recognition of his work. The good-tempered, amiable, charming physician turned into an irritable and depressed person. He aged at an extremely fast pace, and deteriorated physically (as it is evidenced by his portraits from that time). Nevertheless, he fulfilled his scientific, academic and social responsibilities and his responsibilities towards his patients up until the last month before his death.

His wife noticed a sudden and grave deterioration in his condition on 13 July, 1865. She suspected that his mind became unhinged. His friends and fellow professors (Balassa, Bókay and Wagner) first treated him in his home, then they made arrangements for him to be transferred to the famous spa town of Gräfenberg. As his condition was worsening his family – on the advice of his physician friends – transferred him to the asylum in Prindelfeld. At the train station in Vienna his long-time friend and perpetual supporter Hebra was waiting for him on 31 of July. He was one of the last people with whom Semmelweis could speak. His wife was not permitted to visit him the next day. There is no record of what happened to him in the last two weeks before his death (August 13, 1865). The only indications can be found in the reports of his autopsy (if they are correct and were not changed). Based on the autopsy report written by Scheuthauer (later a professor at the University of Pest) and on Semmelweis's behaviour, almost every one of his significant contemporaries had come to a different conclusion regarding his illness. As of today the cause of his death is clear and based on the following evidence: the research covering one and a half centuries; the reinterpretation of the status written in the autopsy report in light of modern medical knowledge; the connection between his suspected diseases and the causes of death. The cause of death was: pyaemia. The entry point of the infection could have been the wound in the middle finger of Semmelweis's right hand acquired during one of his last operations or it could have been a wound acquired in the asylum (he was probably beaten twice, both of his arms were broken and then secured in a strait-jacket and strapped to a bed. By the time the straps were removed both of his forearms had become gangrenous.) Another possible cause could also be grave osteomyelitis (discovered by Professor Haranghy in 1966, during the careful and intensive examinations carried out on the occasion of the exhumation of Semmelweis). Wherever the infection's starting point was, Semmelweis died of sepsis "metastatic boils spread over the extremities, purulent blood was found to be present in the left kidney, which caused his rapid death" (Markusovszky).

According to Haranghy the pyaemia caused the inflammatory lesions in the brain and the spinal cord. The abnormal brain lesion independent from pyaemia was caused by developing arteriosclerosis. Professor Nyírő, an internationally recognized psychiatrist finds that Semmelweis did not suffer from a chronic mental illness, or paralysis, or paranoia or mania. The pseudo-neurasthesia symptoms that appeared in his last two years were the consequences of psychological burdens and the developing arteriosclerosis. The psychosis manifesting three weeks before his death was exogenous (induced by external effects), a reactionary type of mental illness caused by the same sepsis as was the cause of death. "If Semmelweis's sepsis had been cured, his mental illness would have been cured also" (Nyírő).

The reasons for Semmelweis's refusal

According to Semmelweis the harsh criticism of his work was not led by an honest belief, but by hostility. This is probable after his "open letters". Semmelweis's veracity, feverish activity ("der verrückte Nazi" = the crazy Nazi), the role he played in the Vienna Upraising ("der Rebell"), his emphasized Hungarian self-awareness after the defeated Hungarian Revolution of 1848 ("der wilde Ungarn" or "the savage Hungarian") was not appreciated prior to his discovery. The weakening of the Austrian imperial power was not seen as the consequence of defective politics or unlawful governance, but as the fault of the Hungarian resistance. It seemed hardly believable that a young obstetrician with new methods not only recognized and wrote down the cause, nature and course of childbed fever (a disease that physicians could not treat or understand for thousands of years), but also prevented it as evidenced. An unfortunate circumstance was that Semmelweis's every thesis and statement contradicted those of the Pathological School demonstrating significant results. The Pathological School looked for the cause of diseases in the changes and abnormalities of tissues and cells, which were often found. The most prominent member of the Pathological School, Virchow had made up his theory that pyaemia develops – without an external influence and damage to the body's surface, in the tissues – in response to cold. Virchow upheld his opinion on the role of his favourite tissues and cells their stimuli until the end of his life. He was the most considerable opponent of Semmelweis and the biggest obstacle in the way of acceptance for Semmelweis's doctrines. He called Semmelweis "der Kerlspekuliert" (= the speculator) in 1861. Semmelweis's response was not surprising: "823 of my students are now midwives practicing in Hungary… they would laugh at Virchow to scorn if he attempted to lecture them on epidemic puerperal fever… Thrombosis during puerperium under physiological conditions are present only in Virchow's speculations but not in the uterus of women in puerperium." Semmelweis was right. The most common method of scientific research at the time was experimentation, which Semmelweis rarely used (he infected a few rabbits). His method of using statistics as scientific evidence was not understood and not accepted. The centuries-old thesis that this disease was contagious and is spread by *miasma* or *contagium* was deeply rooted in the minds of Semmelweis's contemporaries. Semmelweis's research and style was too much to take for the vanity and self-esteem of illustrious scientists. The "classical" and "scientific" method – still practised today – was withholding and misinterpretin his activity. As Semmelweis's teachings and method were increasingly graining ground (many have already used them, but were not talking about it), the value of his work grew and was less frequently opposed. The preferred methods of opposing his work were distortion, misinterpretation as well as doubting its originality and overvaluing the partial truths in other's work. Semmelweis's priority was challenged and his mental health was questioned many times after his death.

The most illustrious scientists, scientific journals and societies of Europe and the USA took part in the decades-long debate. There are two important scientific discoveries in this respedct: Louis Pasteur, while conducting studies on fermentation, proved that observable changes in liquids were caused by microorganism from the air and dust (the microbiological origin (germ) theory of diseases), 12 years after Semmelweis's discovery. These changes can be prevented by filtration, exposure to heat, or exposure to chemical solutions. Pasteur started to research the bacterial origins of infections after 1875 and he cultured the streptococcus bacteria (as evidenced by its form) from the birth canal of women suffering from childbed fever in 1879 (30 years after Semmelweis's discovery). (Later on other pyogenic microorganisms were also discovered). He found the "decaying matter" at last.

Lister, the British surgeon from Glasgow, observed the mechanism of fermentation and wanted to prevent putrefaction (and bacterial infection after 1879) by using chemical solutions, out of Pasteur's recommended methods. In his two articles published in the *Lancet* in 1868 he recommended using carbolic acid spray to disinfect the air and surgical instruments and for dressing wounds. However, Lister did not attach relevance to contact infections, as he operated, still in 1885, wearing dress-coats and without antiseptic scrubs. Surgical mortality was reduced to one third from 45% in 1879. He supported his method by conducting several animal experiments and had his findings published in several journals. Pasteur's discovery was more easily accepted soon after Koch developed the methodology of bacteriology, and almost every year new strains of bacteria causing infectious diseases were discovered. Lister's method conquered the German and continental medical societies, as they had been hardened in the debate of Semmelweis' work and were sensitive about antisepsis, before those of England. Lister's method was supported by Nussbam (München) from the start, but Billroth (Vienna), the great surgeon of the century, opposed it until 1879. As the result of German criticism, Lister perfected and finalized his aseptic procedures.

Semmelweis's doctrines came to the limelight of medical societies all over the world after Pasteur and Lister had won their respective debates (in a significantly shorter time and more easily). The findings of the two scientists verified beyond doubt that Semmelweis had been right. During the worldwide discussion it turned out that Semmelweis's discovery goes far beyond the boundaries of obstetrics and revolutionized, although aside from Balassa no one applied it in practice, the concept of surgical antisepsis and also clarified the concept of asepsis ("childbed fever is the same disease… that occurs following surgical operations").

Although Haller, the director of Vienna General Hospital, had realized the significance of the above mentioned statement in 1847, twenty years later it was attributed solely as Lister's achievement by many. "Semmelweis had clearly recognized the importance of asepsis, and it was only because of the blindness of his contemporaries that his discovery… prevailed through Lister's work in the 1880s" (Sauerbrach). This statement is not accurate for all the world. Balassa had applied Semmelweis's method in his clinic's practice in 1858, a long time before Pasteur and Lister. His successor at the clinic, Kovács (who did not agree with Lister's theory of antisepsis) recognized the poisonous effect of carbolic acid spray, abolished it along with the corrosive sublimate (mercuric chloride) and carried on Semmelweis's practice of sterilizing the medical instruments by boiling (surgical asepsis). "The basis of modern-day asepsis is Semmelweis's statement that it is safer if the obstetricians do not dirty their hands, than if they wash their dirtied hands" (Bruch).

The comparison of Semmelweis's and Lister's work was inevitable. "Semmelweis also established asepsis in surgery… it is not right to only label him as the forerunner of Lister" (Brunn). "Semmelweis is to be regarded as the person who actually established the practice of surgical asepsis" (Schönnauer). "Semmelweis is to be regarded as the 'father of asepsis'… he should not only be named equal to Lister, but should be put first because he clearly realized the connection between the exogenous factors and the infections caused by them and used disinfection twenty years before Lister" (Sigwart). The truth is that both of genius discoveries of Semmelweis and Lister were closely linked. "Lister helped spread the principles of Semmelweis, and likewise, Lister's actions and success were achieved by Semmelweis's prior struggles" (Müller). Giving a smart conclusion: "Semmelweis's greatness was late to be recognized by the world, only when the theory of antisepsis was replaced by the theory of asepsis, in other words, when Lister's method was perfected to be Semmelweis's method" (Zoltán Gortvay). This took almost fifty years.

The method and the discovery of Semmelweis

The discovery of Semmelweis is based on a very accurate observation, knowledge and evaluation of the course of disease and the autopsy findings, the logical recognition of the existing connection between them, and their proof using statistics, which was a new method. Due to the low number of the animals used in them, his experiments (although the results were clear) were complementary. He discovered the nature of childbed fever and pyaemia (it's not an epidemic, but an infection), their cause (all decaying organic matter), the gate of the infection (damaged wound surface), the transmitters of the infection (examiner's hand, instruments, every object and agent in contact with the wound), the method (the absorption of the decaying matter), the consequences (blood poisoning-pyaemia) and the possibility of prevention. By doing so, he described autoinfection (the decaying matter is generated inside the organism without external exposure), he formulated the importance of non-infection (avoiding the agents of infection) and the practical way of preventing it (hand cleaning with a mechanical brush and hand washing with chlorine solution before any vaginal examination). He has statistically proven the effectiveness of his method. He wrote and used for the first time the antisepsis (to prevent the growth and the spread of the bacteria) and the asepsis (the removal and destruction of all pathogenic agents). He was the pioneer of epidemiological and experimental pathogenesis research. If the word "decaying matter" is replaced by the word "bacterium", which was discovered 30 years later, all the words of Semmelweis are still valid without change, as opposed to Lister's, whose method has changed in every detail. However, Lister's principle is eternal. The discovery of Semmelweis was accepted and applied after recognizing in the 1870's and 1880's that Lister's antiseptic procedure, apart from sporadic and increasingly rare contrary opinions, was the same. First, the German obstetricians expressed their opinion. "Germany recognized with difficulty and late the blessed doctrines of Semmelweis, and wants to redeem the mistakes" (Diebmann). Everyone who counted believed in him. In 1897, at the (50th anniversary) Congress of the German Gynaecological Society Zweifel considered the discovery of Semmelweis the greatest scientific event that marked the beginning of a new era in medicine. At the turn of the 20th century England, France and Italy, then the whole world celebrated and venerated him: Semmelweis was vindicated as a scientist and as a man.

The apothesis of Semmelweis

In 1891, the Budapest University and the Budapest Medical Association *(Budapesti Orvosegyesület)* founded the Semmelweis Memorial Committee *(Semmelweis Emlékbizottság)*. In 1894, his ashes were brought home from Schmei and buried in the capital's elite tomb, the Pantheon table. Over his grave a shrine was built, which was inaugurated at an international congress. In the presentation, Hueppe (Prague) set Semmelweis's significance next to Lister and Jenner. He asserted that he should be considered as the founder of the aseptic policy. Professor Chemtesse from France with warm deep respect spoke about overcoming death: "If all those mothers and children would come here who owe their lives and their health to Semmelweis, the city of Budapest would not have been sufficient to accommodate them. The doctors of all nations bow down to the grave of the benefactor, and show their admiration and their recognition." In 1895, a delegation of the German Gynaecological Society travelled from Vienna to Budapest to lay a wreath on Semmelweis's grave. With the support of Lister the English Semmelweis Commemorative Committee was established, chaired by Wells, who praised him in 1892: "What Semmelweis did radiate honour, not only about him, but also about the entire medical faculty, not only in his homeland but also in our country, indeed the whole world." In 1906, the doyen of French obstetrics, Adolphe Pinard said in his presentation that Semmelweis deserved to be classified in the first place among the benefactors of mankind. "He ripped off the veil that obscured everything before."

In 1905, a biography was published by Fritz Schürer von Waldheim, using the archives of the University of Vienna, the University of Pest, of ministries in both countries and the memorials of contemporaries. Waldheim is straightforward. He produces a beautiful memory for those who have stood for Semmelweis and severely questioned all those who attacked him. He demonstrates to the world the large number of offenses from Vienna, from the contemporaries and from posterity. "How could Vienna and Austria find this blessing? The forgiveness is a huge debt that has to be repaid." In 1908, in front of the Maternity Clinic in Vienna, a relief of Semmelweis was inaugurated, and in 1920 a street was named after him.

Previously, however, with international contribution, a memorial statue was erected in his honour in Budapest, which was unveiled in 1906 in a highly solemn ceremony. On the previous day, the Budapest Medical Association held a memorial with president Bókay in attendance: "We are celebrating because we are proud. Until his tragic death he was our hard working colleague, despite the fact that he was discouraged, misunderstood and unappreciated in Vienna. Our ancestors understood Him; he was supported with open arms and surrounded by warm heart." "Spirit of Semmelweis! Look at us in this moment. Just see, the doctors of the educated world give you reward for your suffering and laurel for your immortal great discovery. Just see, around you the best of your nations, who are grateful to you for the glory that you have gained for your country and nation. Scientists from the educated nations of Europe pilgrimize here to venerate the spirit of the great son of our country, and to give the laurels of recognition to the memorial. There is hardly anyone among us who do not owe him the happiness of his family, maybe the life of his mother, maybe the life of his wife, maybe the life of his daughter who became a mother. For before him the woman in the most magnificent moment of her life… was always in mortal danger; for this reason his great soul was fatally excited" (Tauffer).

In the presence of the family, the universities and official representatives at this memorial besides the rector, a number of prominent medical representatives expressed their appreciation: Shulze on behalf of the German Gynaecology and Medical Association, Chrobak, on behalf of the Vienna Medical Faculty and the oldest medical association (Imperial and Royal Society of Doctors), Schanta, on behalf of Vienna General Hospital ("We, who are Viennese, are aware of the fact that our unfulfilled obligation is to express our gratitude to Semmelweis"), Fibiger, on behalf of the Danish obstetrics, the Italian professor Petalozzi, who remarked that the very important course about the antisepsis starts with the name of Semmelweis in universities worldwide. "The indifference of the era, which was a torture and the evil spirit of his life, has now been replaced by universal respect: today the knowledge turns to Hungary from the all scientific centres of the world. I am delighted to be the representative of the universities of Rome, Florence, Milan, Pavia, Pisa and Parma to express our appreciation for the Noble University of Budapest and for Semmelweis." Herff (Basel) highlighted the great responsibility of Switzerland in maintaining his memory. Pirner read several accolades from around the world including those who could not pay their respects personally due to their age. Sinclair wrote: "There are only a few other people in the medical profession greater than Semmelweis… I can hardly express my gratitude and admiration for this great man whom I could consider my friend."

But William Sinclair succeeded. He wrote and in 1909, published one of the most outstanding biographies of Semmelweis ("I want to give justice to a great and honest Hungarian doctor"), in which many controversial issues have been closed once and for all (e.g. priorities).

The cult of Semmelweis began at the beginning of the century and it is voluminous today also. In 1906 a memorial tablet was placed on his house of birth in Hungary, a commemorative plaque was issued; in 1907 a "Semmelweis cup" was founded. At the annual dinner of this yearly event the most prominent Hungarian physicians held a presentation in his honour. In 1917 throughout Europe the 100th anniversary of his birth was celebrated, in 1918 the Viennese Medical Association expressed their admiration; in 1918 "Semmelweis Memorial Medal" was produced in his home country.

At the Budapest International Congress in 1906, Hungarian medical science and the first generation of great physicians were introduced to the world. After the Austro-Hungarian Compromise of 1867, when the management of healthcare got into the hands of the elected national assembly and the responsible Hungarian government, the most up-to-date medical legislations of Europe were set up, modern public health was organised, universities and hospitals were very rapidly and intensively modernised. They have created excellent conditions for medical sciences and education. The foreign participants found that the University of Budapest reached the level of the University of Vienna, and in the free atmosphere scientists with international reputation grew up. In 1914, Róbert Bárány received a medical Nobel Prize (he received the medical award of the 17 Hungarian Nobel Prize winners, but the isotopic diagnostics and therapy also used the results of Hevesy). In 1927, in England a memorial session was organised on the 100th birth anniversary of Lister, where the discoveries of Jenner, Semmelweis and Lister were declared as the world's top three medical discoveries. In 1928 Tenard, and in 1929 the Congress of the German Medical and Scientific Society, held in Budapest, honoured the memory of Semmelweis. (In addition to speaking about childbed fever, President Sudhoff stated that "in this festive hour it has to be stressed that he clearly recognize that the wound and the wound infection are deadly threat for both men and women. We are pleased to place a wreath at the memorial of this great Hungarian doctor and render homage before His genius, before the magnitude of his actions"). His portrait was placed next to Lister's in Berlin in 1930. His bust was inaugurated in 1930 at the National Panthenon in Szeged, and in 1935 at the University of Budapest. In 2004, his bust and his full-body statue was inaugurated at the park of the University named after him.

On the 100th anniversary of the discovery (1947) memorial meetings were held by scientists on four continents. In 1954 the World Federation of Surgeons, on the proposal of Max Thorek, secretary-general of Hungarian extraction, established a memorial hall in Chicago, the seat of the Federation, and placed marble statues of the "Immortals" in honour of the ten greatest medical practitioners in history. The line of statues starts with Imhotep and Hippocrates and ends with Semmelweis and Lister. In 1906 the former New World Street *(Újvilág utca)* in 1912 the Medical Association's hall, in 1952 the old Erzsébet Hospital, in 1991 his one-time workplace, the Vienna Maternity Clinic, in 2004 the Budapest Medical University, the Semmelweis Reflex and the Semmelweis asteroid were named after him. Between 1936 and 2014 nine movies were made about Semmelweis and his life (American, Dutch, German, Hungarian-German-Austrian, French-Polish, American-Austrian and two Hungarian films). In 2013, the UNESCO recorded him in the list of "the world's most memorable" persons.

The importance of Semmelweis

Semmelweis made one of the most important discoveries in medicine that has saved millions of human lives. This discovery was not accepted in his era despite the fact that, without sparing his health, he selflessly fought for it. Semmelweis was an offense against mankind; his struggles raised him among heroes and he was considered a tragic hero also because his death was caused by that very disease he had discovered. He was a unique scientist and a great man. His discovery can be recognized in his talent and common sense used for the common good, his human greatness can be recognized combined in the Hungarian intellectual history and tradition, in his transcendental faith and classic morality. In recognition of his discovery he earned the eternal epithet of "saviour of mothers" and "the benefactor of humanity". For his struggles he was named by the grateful posterity the "orchlight of science", "the Jan Hus of Epidemiology", "the Martin Luther of physicians" (Blesh), "the apostle of philanthropy" and "the highest medical and human ideal". For his tragic life and death (in the author's opinion, if Aeschylus could have known him) Prometheus could have been modelled after him, because Semmelweis brought down not only the flame and the light from the sky but also human life so that it could burn and radiate.

Note

1 Citations from Gortvay, György and Zoltán, Imre (1966): *Semmelweis élete és munkássága* [Semmelweis: his life and work]. Akadémiai Kiadó, Budapest.

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Adél Vehrer

Táltos, Witch, Incubus, Succubus and Other Beings in Hungarian Folklore and Mythology

Summary
The study of Hungarian people's folk beliefs has long been a major field of research in ethnography. Studies focus on rural people's theories of the functioning of the world, mythological figures and people with supernatural powers. In folk culture this worldview and knowledge was passed from generation to generation up until the second half of the 20th century. However, hardly any of these mythological figures have survived in the public mind. This is exactly why research in this topic and a summary of the previous achievements are important, and this study will raise a few typical and important questions.

Keywords: folklore, Hungarian mythology, supernatural beings

The study of the ancient Hungarian religion has a history of a hundred and fifty years, in agreement with European peoples' efforts at rediscovering their national mythologies. A survey of the history of Hungarian mythology reveals that an ancient system of religion already existed before the adoption of Christianity. Hungarians' pre-Christian religion was not organised by any institutionalized organisation, but they believed in higher beings they worshipped, they offered sacrifices to them and sought their

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help. They had shamans, who also acted as their priests. The pagan worldview survived in numerous beliefs even after the spread of Christianity, and what is more, the new religion absorbed a lot of pre-Christian elements. In the folk culture and rural world view of the period preceding the turn of the millennium, the religious explanation for the world, the old beliefs and the empirically obtained and genuine knowledge handed down for centuries co-existed. Rural people's cognition was anyway different from our current way of acquiring knowledge: they saw and experienced more in their immediate environment, and inherited far more tradition, while obtained considerably less through learning and reading. Presumably, our ancient mythology and ancient religion did not constitute a coherent system: it was fragmented linguistically, ethnically and, most of all, regionally (Bartha, 1998, p. 475).

Explanation for the universe

The most important elements of cosmology could be found in folk mythology. The view of the world included beliefs regarding people's environment and everyday life. They had experiences of all visible phenomena of nature, as they lived close to nature, animals, plants and the starry sky. There are hundreds of sagas about the origin of nature and the world, and they were passed by word of mouth. The cosmological concepts primarily from legends explaining the origin of the earth and humans. The legends of Hungarian and European peasantry do not explain the world according to Christian teachings, they rather fit into a magical and religious worldview laced with ancient traditions.

The Earth and the sky

In the olden days, the Earth was held to be flat, covered by the sky as a dome firmament. It was thought to be carried by animals on their backs: a whale, a buffalo, an ox or a bear. When these animals move, there is an *earthquake*. If the vault of the sky opens, there is *lightning*. During lightning, God is said to be cracking his whip. Many think that in such a case the sky opens and Heaven becomes visible. Lightning was commonly thought to hit a place where there is a witch. Fire caused by lightning can only be put out by milk. Various explanations are given for thunder: for example, the devil is beating his wife, God's cart is rattling, or Little Jesus is angry.

The tree of life or sky-high tree depicted on various folk art objects recalls the memory of beliefs before the Hungarian Conquest. The sun and the moon frequently appear on the presentations of the tree of life (Dömötör, 1989, p. 434). The popular cult of the sun with the sun symbolism of the Catholic Church. The *Sun* is one of the fundamental elements of the calendar system, a time management regulator and the symbol of daylight. In the second place, it keeps off demons, who are active at night. According to folk belief data, the Virgin Mary appears in the Sun (Dömötör, 1981, p. 188). In former times, the *Moon* determined the system of reckoning time, and together with the Sun, it worked as a natural calendar and clock for people. Most beliefs related to the Moon refer to expected weather changes. The majority are empirical facts. Formerly, people thought that plants grew together with the waning and waxing moon. In accordance with this concept, they preferred to perform most agricultural works during new moon. When the Moon was waning, for example, ploughing and sowing were forbidden. Once people thought the *solar* and *lunar eclipses* were caused by some kind of a being who bit the celestial bodies, the Palóc held that a mythical beast, called *markoláb,* eats the Sun or the Moon. This *markoláb* may be a bird-lie being, a wolf or a dog (Dömötör, 1989, p. 434; Ipolyi, 1990, pp. 128-129).

The *stars in the sky* were particularly well-known for shepherds and wayfarers, as for centuries they found the right direction according to the patterns and positions of stars. They populated the sky with humans and animals from the Earth. In many places the constellation Orion was called "Mower", and they thought they saw him harvesting wheat. The little star Sirius next to the constellation was given the name "Lame Lass" or "Lame Kate", who carries lunch for the harvesters limping. She is lame because she stepped in a dropped scythe and cut her foot. Since then she has been unable to catch up with the harvesters. In the Lake Balaton region it was held that "a hedgehog rolled along the sky" and punched numerous holed in the sky. These holes are the stars (Dömötör, 1981, p. 190). Lots of weather forecasts are known in relation to the starry sky, and other beliefs are also related to it: comets, for instance, are thought to predict war, and a shooting star signals the release of a soul from the Purgatory (Pócs, 1990, pp. 527-536).

The *rainbow* was thought to end in a brook or a well and suck water from it, and so it is not advisable to stand next to such a place, as he or she may also be sucked. Anyone who could pass under the rainbow would change gender. If you finger-point at a rainbow, your finger will wither and drop off. From the colours of a rainbow, people tried to predict the harvest: red meant a lot of wine and green was seen as a sign of abundant wheat (Pócs, 1990, p. 543; Dömötör, 1981, p. 193).

Mythological figures

During the past century, numerous features of beliefs related to supernatural beings were discovered as a result of research, despite the fact that Hungarian mythical figures no longer constitute a system in the way they did during the Conquest. The reason is that after the adoption of Christianity, the majority of previous figures gradually disappeared: the roles of creatures defending people and warding off harm were assumed Christian saints, or nearly all negative creatures of former beliefs were merged in the devil's figure. Actually, the witch is the only surviving creature, although the features of former creatures were also merged into the roles attributed to him or her (Pócs, 1989).

The majority of supernatural beings in Hungarian folklore were not attributed clearly positive or negative roles. Most of them were *ambivalent.* In addition to Hungarian folklore, there are numerous examples of ambivalent creatures in tribal peoples' mythologies. The Piaroa Indians in Venezuela still believe in such creatures. Re'yo (the spirit of rainforest bees) is a frequent participant in the Indian legends. A Re'yo may be evil or benign: a useful honey collecting insect, which, however, has a sting. It combines the characteristics of animal and plant demons (honey is a plant product, but it is collected by an animal). Re'yo provides shamans' important medicine, honey, as well as the raw material of masks, way (Boglár, 2001, pp. 40-42).

Mythological creatures can be divided into two groups: supernatural beings and people with supernatural powers. Creatures with supernatural powers can always be identified with a specific, living person belonging to the particular community, while supernatural beings do not appear in the form of a specific, real person.

Supernatural beings

Ghost

Ghosts, wraiths or specters are dead people who are unable to have a rest in their graves. They are the representatives of the supernatural world and have the general features of supernatural beings: changing form, invisibility, flying, sudden disappearance or emergence. In a narrower, currently used sense of the term, ghosts are the souls of dead people who have been unable to have a rest in their graves or access to the otherworld. They may appear in the external form of animals (cat, dog, swine or chicken) or a fiery beings. The time is midnight or Christmas night. Typically, they keep frightening people or lead them astray, but do not cause any harm. Formerly it was held that certain dead people remained on the Earth and haunted people for forty days after their deaths. The reason for this is that he or she committed some kind of a serious crime in his life, say a perjury or suicide by hanging. Numerous ghosts were recognized by their garment or characteristic posture (Dömötör, 1981, p. 90; Pócs, 1990, pp. 547-550).

Will-o'-the wisp, ignis fatuus, incubus, succubus, demon lover

Guardian spirits are known all over Europe. In essence such a spirit helps a certain person and makes his or her owner lucky and rich. In Hungary, the family spirit (called "chicken spook-light", ignis fatuus or "earth devil") is primarily considered as a chicken ghost that hatches out of an accidentally found egg, fulfils his master's desires but remains invisible to others. Rarely, he or she can be a person small in stature. A chicken ghost hatches out under the arm of their master, from the egg of a black hen, and fulfil all wishes of their master. The person who hatches them must live with them as if he or she was the spirit's lover. Such a spirit appears when the master's spouse is away or has died. The chicken ghost has the opposite gender of his or her master. If the master grants this wish, the chicken ghost makes him or her lucky and rich. If, nevertheless, the master wants to get rid of the spirit, he gives him or her an assignment that is impossible to fulfil, like bringing water or sand in a sifting screen. This will destroy the chicken. In many places a person who became rich very quickly was said to have a will-o'-the wisp. It was a widely believed that the master of a chicken ghost was a friend of the devil (Pócs, 1990, p. 563). Nowadays the Hungarian expression "pressure by an incubus", meaning an intolerable and frightening frame of mind, a nightmare, is also less used in everyday language (Dömötör, 1981, p. 79).

In the majority of the Hungarian language area, the flickering light seen in the distance over land is also called fen-fire or ghost-light. This is because rural people could not explain the various lights seen over bogs, swamps or marshes. In the olden days it was said that treasure was hidden in the ground in such places (Pócs, 1989, pp. 59-62; Pócs, 1990, pp. 566-567).

The will-o'-the-wisp is not assigned so many various roles in accurately the same combination in any other country of Europe, and academic research has not found an explanation for the reason and way these many functions have combined in the figure of the will-o'-the-wisp (Dömötör, 1981, pp. 78-79).

Changeling

It was frequently said of a child with growth retardation, who could not speak that it had been mixed up by witches. Long ago it was held that, especially before baptism, witches could easily replace the child during the night. To protect the child, a rosary was placed on the swaddling-clothes. It was thought that the witch replaced the child with her own child. To switch it back, the child is seated on a baking peel and pretend to push it into the oven. This frightens the witch, who quickly swaps the child back (Dömötör, 1981, p. 105).

Devil

In the history of beliefs, the devil is frequently negative, sometimes neutral. For example, a man in the Palóc region, who committed suicide by hanging but his life was saved, said the following about the devil: it has a tail and horse hoofs, and it was poking his eyes with a pitchfork to drop him into a lime pit, where two other devils were waiting for him. In the former Gömör county, if a lad sat on a stool made on St Lucia's day was believed to be able to see the devils dance. Such a lad could also appear in the form of a devil to scare girls. Thus, for the most part the devil is an evil and frightening figure. Children were also scared with the devil: they were told not to look into a well because there was a devil in it (Ipolyi, 1854, pp. 43-50; Dömötör, 1981, pp. 97-98).

Fair lady

The fairies and demons in Hungarian beliefs are known by several names: fair lady, white lady or fancy lady. Their name is a taboo, which means that they were considered so formidable that people did not dare to mention their name. They are young, long-haired ladies of alluring beauty, often dressed in white, generally roaming in groups, mainly at abandoned places, along creeks, next to bridges or in the depth of forests. They dance, sing and bathe in teams, and hold dancing parties. They seduce or kidnap men, and lead women astray or make them lose their compass. They may also take the form of a whirlwind, a wild goose or a swan. They may bring illness (paralysis or muteness) on people if they are disturbed. In such a case they may force their victim dance until he or she dies. Generally they appear at night or at noon. Their characteristic features are frequently similar to the Hungarian concept of witches. Usually only those get diseases caused by fair ladies who disturb them during dancing, procession or entertainment at the typical places and times of their appearance. For this reason it is unadvisable to pass accidentally by such places. Beliefs related to fair ladies were most widespread in Transylvania. Today, their memory is only preserved by a single place-name: the Valley of the Fairy Lady in the town Eger (Dömötör, 1981, p. 82; Ipolyi, 1854, p. 60; Pócs, 1990, pp. 557-558).

Snake or snake-dragon

Once the snake-dragon was known all over Hungarian-speaking territory. It was considered as a benevolent spirit: the whole family's welfare and prosperity depended on it. It was believed to live under the threshold or in the wall. It must not be harassed or killed, otherwise the home will be struck by bad luck: fire or death. The figure of the snake is identical to the snake-dragon or dragon. The snake often helps the learned witch-doctor, who rides it (Ipolyi, 1990, pp. 88-90; Dömötör, 1981, pp. 108-109).

People Endowed with Supernatural Power

Every member of peasant communities established contacts with supernatural beings in some or another way at some level (e.g. lust spell, healing). Some areas, however, required specialists. Healers' knowledge exceeded others' only vertically. Folk communities attributed additional knowledge to these specialists, and thought that such knowledge was from the supernatural world (Pócs, 1990, p. 579).

Witch

As a social institution, witchcraft has been traceable in every people of Europe since the Middle Ages. Witches have the most emphatic role of all mythological figures, as they incorporated numerous other beliefs. The Hungarian word for witch, *boszorkány*, comes from Turkic, and means a being who causes a feeling of pressure, a nightmare to the sleeping person, and in this sense he or she was considered as demonic (Pócs, 1989, p. 19). Stories clearly depict the witch as a negative figure, primarily an elderly woman, but it can also be a man. In several cases she has a physical defect, a disability or is shifty looking, but physical characteristics are not of pivotal significance.

In the event of any personal problem or misfortune, the witch is manifest in a real, living and known person. This scapegoat role of witches was not assigned to an unchanged person, rather to the person that could be accused in the current case (Pócs, 1989, p. 9).

Witchcraft is transferred by holding hands at the witch's deathbed. She cannot die until she has not transferred her knowledge. If there is a volunteer, a broom is handed over to her.

She can put three kinds of hexes: 1) on animals or crop in the field of farming; 2) damaging human health; 3) destroying human relations.

Witches' most general harmful mischief is putting hexes on people and animals. The emphatic part of stories are about the *evil eye,* primarily in connection with children. For the most part, adults are abused by *love spells.* In such cases people turned to a knowledgeable man or a healer for help. The damage caused by witches is called *witch pressure* in Hungarian. At night they put their weight on a person's chest invisibly or in the form of an animal (e.g. cat).

The majority of the stories are related to cattle farming. Mischief causes the milk to dry up, loss in the profit earned on milk, or the cow to produce bloody milk. Witches often turn into cats, frogs or horses when they cast a spell on cows. They usually appear and cast spells at midnight. In order to avoid the mischief, the various form of the witch must be known. In the order of frequency, they are as follows: cat, frog, snake, horse, pig, goose and dog. A mischief is prevented by garlic: for example, on St Lucia's day, the door frame or the calf is smeared with garlic (Szendrey 1986, pp. 354-357; Pócs, 1997; Ipolyi, 1854, pp. 407-408).

Wandering scholar

The figure of the wandering scholar or wandering student was a generally known folk belief even in the 20th century. He was thought to have supernatural abilities, primarily weather magic. The wandering scholar learns his knowledge at school, he finishes thirteen or seven classes, and learns from the devil. He has a book he reads backwards to regulate cloud movement. He is wandering around in the form of a student or a beggar, in other words, as a ragamuffin. He is recognised by his tousled hair, hairy face, mane on his back and hoofs.

According to the relevant belief known all over the Carpathian Basin, the wandering scholar can generate and/or predict storm, wind and rain. They can do this in two ways: either they read storm from a book, or ride a dragon or a dragon-snake in the cloud. Wandering students cause harm if their wish is not fulfilled. In the course of their ramblings, they regularly walk into strangers' houses for milk, and if the master of the house refuses to offer him milk, he schools him with a thunderstorm. People ring church bells as a protection against the thunder created by the wandering student. The person who fulfils a wandering student's wish receives a reward, as this mythological figure can divert a hail storm approaching the village by merely reading the texts in his book (Dömötör, 1981, pp. 116-117; Pócs, 1990, p. 597).

"Táltos"

In Hungarian traditional folk belief, *táltos* is a mediator between the world of the living and that of the dead, but he may have had numerous other roles in the folk belief gradually changing over the centuries. The figure of the *táltos* is inherited from the shamanistic worldview, however, today he only has a positive role. Only a fragment of the characteristics attributed to the *táltos* at the time of the Conquest of Hungary has been preserved.

The *táltos* is characteristically born with an additional bone, for example an extra tooth or six fingers. However, this fact must be kept secret. In several places it was held that not long after his birth the *táltos* can speak, but the parents are not at liberty to reveal it. If all his unconventional characteristics are successfully kept secret, at the age of seven the ghosts come for him and torture him. At this time he falls ill, or goes hiding for three days, and gets raptured and goes into a trance. When he returns, he is able to give account of what he saw in the otherworld, where he saw the dead and was taught. The *táltos* has a sky-high tree and predicts the future having climbed on it. The essence of the *táltos's* activity is contacting the otherworld in order to fulfil assignments to the benefit of his community. According to the legends, sometimes he hides and in the form of a bull, he fights another *táltos*. The fight is usually over weather, accompanied by thunderstorm, wind or hail. Thus the aim of the *táltos's* struggle is to influence weather for the benefit of his own community (Ipolyi, 1990, pp. 14-17; Pócs, 1990, pp. 583-585; Diószegi, 1967).

Necromancer

People who keep contact with the souls of the dead and sends messages from and about them are called necromancers. They were known by various different names among peasants. They were usually named by the place of their operation, e.g. woman of Novaj or man of Csépa. Consequently, this role could be played by either women or men. There are examples of their activities to date, but in the middle of the 20th century, a large number of necromancers were operative all over the country. The majority of necromancers were Catholic women. There were several reasons for seeking a necromancer. One of them is that the dead person's soul was unable to have a rest and returned, while the other is that the correct thing was to visit the necromancer and inquire about the dead of the family at intervals regulated by tradition. The family members generally visited him shortly after the death to seek consolation.

The necromancer's task was to tell them what has made the dead person satisfied, and conveyed his or her wishes, which were proper to fulfil. He or she talked about the dead, said that he or she has hear their voices or even seen them and could bring messages from them. The necromancer did not ask for a payment, but accepted whatever was given. Another feature is that he or she can also talk about or predict deaths, lost things or animals far away in space or time. He or she can see things concealed from ordinary people, for example, he or she can find treasures hid in the ground, lost objects or disappeared persons or identify a witch (Czövek, 1987; Pócs, 1990, p. 592).

Learned people

The term "learned man" or "scholar" is an umbrella term. In a broader sense it includes any mythological figure having supernatural capacities or additional magical knowledge as well as the aforementioned specialists of folk belief: the *táltos,* the necromancer, the healer and also the seer. Moreover, learned men in professions other than farming are also called by this name: the learned coachmen, learned shepherd and sometimes even midwives.

Regarding the scholar's faculties and activities, part of the data refer to general knowledge, while another part to specific skills, for example, healing, seeing treasures hidden in the ground, lost objects and persons, or fortune telling. In the narrow sense, learned persons were people living in the peasant society but engaged in professions that differed from general land cultivation and animal husbandry, or having above-average expertise and outstanding knowledge. The magical activity attributed to them is usually confined to their profession, for example, a learned hunter's knowledge to hunting, the diabolical piper's to music, and the magical activities attributed to the learned coachman are related to transport, horses and the stable.

The group of wise people include numerous persons with supernatural powers. They include positive figures, like healers or the seventh child, ambivalent ones, like the learned coachman and the learned shepherd, and negative ones, who can cast spells and put hexes on people.

The learned shepherd

The knowledge of a shepherd who can heal animals was considered as supernatural. Such a person was thought to hand down his knowledge by holding hands before his death. It was a general belief that before his death he hands down his knowledge with the help of his crook, and that the learned shepherd had a pact with the devil. One of the most widespread belief related to him is that he holds the herd together using magical methods, for example, by smoking around the herd or sticking his crook into the ground. A herd "bound" this way will remain together even in his absence.

Learned shepherds release a rabid dog or wolf on one another's herds to defend their own herds. They are able to dispel or bedevil other people's herds. Thus, due to his ambivalent supernatural power, the learned shepherd of beliefs could cause good or bad, and have a positive role in increasing the herd of his community to the detriment of the neighbouring community's herd (Pócs, 1990, p. 606).

The learned coachman

A learned coachman has power over carts, horses and roads. For instance, he can set off a horse tied up or halt a moving cart even in his absence. He uses magical objects to achieve these: an axe or a jack-knife, or tools used in his trade, a horseshoe or a whip. Sometimes such beliefs surrounded coachmen serving at great houses. According to various stories, they could make their carriages fly over rivers or even make dead horses pull their carriages. Their lord was unable to dismiss them, because no one else could man his horses.

As a frequent motive in legends, the carpenters working on the roof are the persons who "tie up" (halt) the horses pulling a carriage or cart that passes the house. The coachman starts to reverse the spell using some kind of an object made of iron: for example, an axe or a knife, or he simply whips up the horses. The horses start out and one of the carpenters plummets from the roof dead. The coachman is able to halt other people's horses simply with his eyes, by a whistle or using magical objects. He can release any "tied-up" (hexed) horse at any moment (he is the only person who can do this), and he can even make them dance. Competing coachmen halt each other's horses or turn the other's coach-wheels out of it place. The more knowledgeable wins (Dömötör, 1981, pp. 120-122; Pócs, 1990, p. 608).

The devilish miller (the rat-catcher)

Every smaller community or district had their own "rat-sender" (rat-catcher) miller, who performed pest control for rural households. They sent the rats either to the neighbouring village or back to the place where they came from. According to the stories of experiences, this is done in secret or alone, after he has sent everybody away from home, keeping the methods in secret.

The miller obtains his supernatural power through tests at crossroads, and uses it to entertain and amaze people while they are waiting in the mill. Irrespective of this, as a specialist of the mysterious machinery, the devilish miller was surrounded by beliefs related to his supernatural knowledge and the magical operation of the mill. This was due perhaps to the fact that most people saw modern technology for the first time in their lives in mills.

There are hearsays about hostilities between millers of watermills who had equal power and sent rats to each other by turns. Finally they died at the same time, at each other's hands. According to folk belief, the mill hand could stop the mill and after he had "tied it up", he left for work in another region. Give way to the farmer's lengthy and numerous entreaties, he finally revealed that he had to pull a wedge that did not even touch the axis (Pócs, 1990, p. 607).

The learned hunter

Legends about the learned hunter were widely known over the majority of Hungarian-speaking territories. The figure is known all over Europe, but it was the most popular in German-speaking areas. The main characteristics of this figure is that either he has supernatural helpers (ghosts and the devil), or he himself has supernatural power. He uses his knowledge in hunting: for example, his gun an shoot by itself or hares voluntarily stand in front of his gun.

Whatever a learned hunter aims his gun at, he always hits the target, and he can shoot at any distance. If an unauthorised person uses the learned hunter's gun, he will shoot himself, or will not hit any mark at all. If he fills his gun with Sacred Host, he always hits the target. The hunter has a peculiar relationship with the games of the forest. He shoots as many hares as he wants, even all the hares across the fields. He is frequented by a miraculous hare, and he feeds it and converses with it. If he offends the hare, the latter threatens him. If he drops his handkerchief, it transforms into any animal he wants it to be. Such a game does not have a heart or a liver (Pócs, 1990, p. 609).

Healers

Healers are generally also included among learned people, as the community considered their healing capacity as supernatural. The most widespread legends related to them are about the disclosure of the disbelief of the people who visit the healer or their incapacitation by a witch or a ghost. The healer can identify the evil person remotely, in the absence of the latter.

Those engaged in healing are called witch doctors, diviners or soothsayers *(javas)*. Folk tradition has it that they have learnt their knowledge from medical book written in the last century. However, they considered "superstitious" procedures more important than medicines. Typically women, mainly elderly ladies who treated all kinds of diseases, but some of them were specialised, for example, anointing practitioners or chiropractors. Witch doctors are rarely men. Male witch doctors were usually sought to treat specifically men's problems men did not dare to disclose to women. In the village Nagysárrét, for example, they were called "midwives for males". Their method usually included incantation.

Witch doctors did not disclose their secrets of healing to anyone: they only handed down their knowledge to selected disciples. They held a meeting once in every seven years to exchange knowledge and experiences. They flew to such meetings having turned into birds.

Thus, healers are partly herbalists with empirical knowledge, chiropractors and animal healers and partly knowledgeable people who were believed to have supernatural power. Animal healers were usually shepherds while humans were healed by midwives (Dömötör, 1981, pp. 134-141).

Midwife

Similarly to healers, midwives had a dual social role. A certain percent of the births she assisted were unsuccessful, in an extent corresponding to the given social and healthcare conditions. A midwife's duties also included care for mothers in the postnatal period, when the new-born baby was exposed to numerous dangers and the mother's milk could decrease or even run dry.

In this period people were also afraid of mischiefs by witches and the baby's replacement. The midwife was a person easily accused of the presumed hex. Consequently, beliefs regarding abusive abilities and witchcraft were inevitably related to her. The records made of witch trials frequently mention midwives. According to certain beliefs recorded in several parts of the country, midwives are pally with witches. They can bewitch and change shape. Nobody can become a midwife before she has bedevilled someone else. She can also learn her profession by killing someone. This person may be her own child or relative. Some learn witchcraft from their mothers (Dömötör, 1981, p. 126; Pócs, 1990, p. 605).

Ensorcelling and the evil eye

Anyone was thought to be capable and thus could be accused of ensorcelling or putting the evil eye on others to cause inexplicable diseases. A child who has been given the evil eye on keeps crying and cannot sleep at night. Farm animals have diarrhoea if they have been hurt by an evil eye. Children were cured with *carbonized water:* three pieces of charcoal were put into a pot of water one after the other. The name of a person accused of sortilege was pronounced when the charcoal was put into the water. If the charcoal sank, the person whose name was pronounced with it was considered to have bewitched the child. Then the child was washed in the carbonized water. If the identity of the person who had cast the spell was revealed, a piece of his or her hair was cut and the ill child was smoked with the burning hair. This suggests that they were not angry with the caster, as he or she has cast the spell involuntarily. The spell was usually broken with the assistance of the healer, but certain simpler forms of healing were known to every member of the rural society (Dömötör, 1981, pp. 105, 146-151).

In summary, every member of peasant communities established contacts with supernatural beings in some or another way. However, some areas of these activities required specialists. Every peasant community had their own professionals. Today we can only reconstruct the system of their operation by conclusion from the 19th and 20th century data on folk beliefs.

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Antal Birkás

The Protestant Reformation: Origins, Impact and Heritage

Summary
By the end of the 16th century the different branches of the Reformation had created their own churches, or denominations, in the Carpathian basin. Over half the total population of Hungary and Transylvania were Calvinist, about a quarter were Lutheran, while the remainder were Unitarian, Catholic, and Orthodox believers. Therefore nearly 90% of the population were Protestants. The first part of this study discusses the beginning of the Reformation in Hungary and the way it spread. In the second part I analyse the heritage of this spiritual movement in relation to four different fields.

Keywords: Reformation, Protestantism, Luther, Calvin, reformers, religion, The Church, Word of God, Christianity, Lutheranism, Calvinism, education, culture, politics, economics

Introduction

In this short essay I start by giving a historical summary of the origins of the Reformation in Hungary. I then explore how the heritage of the Reformation has had an enriching impact on four fields of life.[1]

Historical overview: The main European connections

We are celebrating the 500th anniversary of the start of the Reformation this year, not only in Hungary but throughout Europe and the world. The Church needs renewal, as is clear from its history and also from our personal lives. The desire for renewal has

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always been part of the life of the Christian community, as we can see from the lives of St Francis of Assisi, John Wycliffe, John Huss and many others.

Of all the movements of religious renewal in the last 2000 years, the movement we call the Reformation was perhaps the most influential. It was not only a theological movement: what happened 500 years ago also led to a new beginning in politics, law, culture, education, and economics, and has even had an impact on modern science. Spreading initially through Europe, and then beyond, the forces of Protestantism have changed the entire world.

The jubilee of the Reformation being celebrated this year offers an excellent opportunity to gain a better understanding of the true legacy of this movement, and to see the relevance and validity of its message to our lives in the 21st century.

Reviewing the start of the Reformation is a worthwhile task for Christians and non-Christians alike. The Protestant community is the second largest Christian family:[2] of the worldwide total of 2.2 billion Christians, nearly 50% are Catholic and just under 40% are Protestant. The majority of these 800 million Protestants live in northern Europe, particularly the UK, the Netherlands, Germany, Switzerland, and of course the Carpathian Basin. There are also considerable numbers in North America, Australia, New Zealand and Oceania; there are also large Lutheran and Calvinist groups in Africa, and the "mega-churches" in South Korea should not be forgotten.

When and where did all this start? The key date is 31st October, 1517. On that day, Martin Luther, a monk and professor of the University of Wittenberg, posted on the door of the Castle church his ninety-five theses (Bitskey, 1988, p. 10) One of Luther's main criticisms of the Church was the selling of indulgencies, the idea that absolution from sin could be bought with money. "As soon as a coin in the coffer rings, the soul from purgatory springs" was a common saying of the time. Luther also criticised the fact that obedience to clerical rules was regarded as more important than obedience to the word of God and the will of God.

From Luther's initiative the spirit of the Reformation, and its practice, spread all over Europe. This took place for several reasons, not just theological ones.

In a few decades, this evangelical movement was affecting all aspects of life, especially in northern and central Europe (Troeltsch, 1912). As the distinguished lawyer and church historian Rudolf Sohm has said, the transformation of the church led to a transformation of the world (Sohm, 1922, p. 176).

However it is important to bear in mind that these "faith-innovators" did not want a new religion, but the old one, the original one. Luther himself was devoted to the universal Catholic Church. Their main goal was to rediscover and revitalise Catholic Christianity and return to the beliefs and practice of the original followers of Christ. (Although Protestantism began in 1517, Protestants naturally acknowledge the history of the Church from its very beginnings.)

The reformers wanted to go back to the beginning, to Christ himself, to that spiritual life which is based on the good news and on mercy; the life which obeys the word of God and is based on the Scripture and its central *kerugma* (message) – that Christ, the Son of God, our Saviour, can be attained through faith.[3]

In this whole process of renewal, an important part was played not only by the reformers and theologians, but by several other factors. The rediscovery of ancient texts, the rapidly changing world at the start of the 16th century and its tensions, the powerful development of the world economy and of the sciences, the discoveries of the great explorers, and the rise of the bourgeoisie were all contributors. In addition, there were the Islamic invasions, the dynastic wars taking place all over Europe, and the impact of epidemics.

We must also not forget an important point made by Owen Chadwick, that in many places political changes had an impact on religion, not the other way round. Political developments encouraged the spread of the evangelical movement, sometimes throughout whole regions such as England (Chadwick, 1990).

I have already mentioned Luther's role at the very start of the Reformation. We also need to consider the origins of our Calvinist brothers and sisters and bear in mind that the Reformation was an international event. In order to do so, we must travel to Switzerland. A theologian and priest called Huldrych Zwingli, admired by Erasmus of Rotterdam, had already in 1518 begun his work, initially near Zurich, later in the city itself. The spirit in which he wrote was evangelical: this was the term applied at that time to anyone who wanted spiritual or religious change. He derived his reforms from the Bible; the most important of them are the primacy of the good news, the inclusion of both bread and wine in the Lord's Supper, and the destruction of pictures and statues within churches. In 1523 these reforms were accepted by the whole town and its leaders.

Now we must go further west, to Geneva. Jehan Cauvin (John Calvin) was the leader of the Swiss Reformation in Geneva between 1536 and 1564 (except the years 1538-1541 when he was in Strasbourg). In 1536 his *Institutio Christianae Religionis,* or Institutes of the Christian Religion, was published in Basel, and in 1541 he wrote his famous *Ecclesiastical Ordinances of Geneva*, to which Hungarian scholars still refer as a basis of constitutions. The latter work was republished at least ten times during Calvin's stay in Geneva.

Calvin was first and foremost a teacher of Holy Scripture. What mattered most to him was the Good News and the way it was preached. He attached great importance to the structure and order of the church, and he was also interested in ecclesiastical law insofar as it helped the main goal of the Church.

Besides being a pastor and a teacher, Calvin showed himself, as the governor of the Church of Geneva, to be a great organiser. For him, the local church was the basis on which he could build parallel hierarchies of the ecclesiastical authorities (i.e. pastors and ministers) on the one hand, and of the secular authorities on the other. In Geneva the consistory was absolutely enormous. This was the opposite of the Lutheran model, in which secular rulers and city councils exercised patronal rights and controlled the local churches and their pastors. This "Lutheran reality", according to Sohm, was the unavoidable result of actual circumstances, not the product of Lutheran theology.

The *Consensus Tigurinus*, or Zurich Declaration, was a crucial event for the Swiss Reformed Church. In 1549 Calvin and Heinrich Bullinger signed a joint declaration on Eucharist and Baptism, a concordat between the local churches of Geneva and Zurich, later joined by the churches of Bern and other Swiss towns. This declaration was a starting-point, an important basis for the later confessions of the Reformed Church movement (Faggyas and Korányi, 2015, p. 41).

The start of Reformation in Hungary

In Hungary, both Luther's writings and his actions had an almost immediate effect (Bucsay, 1985, pp. 17-18; Sólyom, 1990, pp. 7-8). By 1518 there is evidence of the Lutheran reformation in several Hungarian cities; it had also appeared in the royal court at Buda. By 1522, Luther himself already had numerous students from the Carpathian Basin. In 1523, as church historians well know, a reforming Franciscan monk preached Luther's teachings and message in Sopron.

Between 1523 and 1525 the Hungarian Diet accepted many decrees against the Lutherans, partly influenced by anti-German feeling. One of the Acts of the Diet (Act 4, of 1524) condemned the followers of Luther to be burnt. Executions were carried out on the authority of this Act, but there was no mass persecution, mainly because of the lack of central secular power, and also because of the threat of Ottoman invasion.

In addition, over a decade later, in 1534, King Ferdinand I implemented penal actions against the followers of Zwingli; this shows that by the mid-1530s the Swiss Reformation had reached the Hungarians in Hungary.

We now need to consider what factors helped the spread of the Reformation in Hungary. In the section below I discuss five points: some of these are spiritual, others have a more secular or political dimension.

1. The Ottoman occupation following the battle of Mohács in 1526 caused considerable damage to the structure of both church and state. For example, the state was unable to carry out the Acts of the Diet against the Lutherans.

2. Initially, the Turkish authorities gave precedence to Protestant communities, sometimes for theological reasons, but often for the political motive of weakening the influence of the Catholic Habsburgs.

3. Many Hungarians, and people of other nationalities living in the Kingdom of Hungary, studied in Wittenberg. There were also commercial connections between Germany and Hungary.

4. During the times of hardship, especially after 1526, there was a real spiritual need to hear the Good News. In my view this was the most important factor. The new faith could also give a historical theological answer to the new political situation: for example, instead of putting one's trust in the saints and Mary, one had to trust in God and return to Jesus Christ. See the teachings of Mátyás Dévai Bíró, the "Hungarian Luther".

5. In relation to the previous point, the sheer strength of the evangelical movement, with its emphasis on repentance and conversion, caused it to spread.

Spread of the new faith

The new Lutheran faith spread mainly throughout the territory controlled by the Habsburgs, i.e. western Transdanubia, north-western Hungary and *Felvidék* (the latter region was also called "Upper Hungary" and is now part of Slovakia). This was partly because of the tolerant policies of Ferdinand I, and later Maximilian II.

Initially, the faith was also to be found in the central, occupied part of the country: the Great Plain, the Partium and Transylvania. But here, only a decade and a half later, Calvinism took over as the majority Protestant religion.[4] This process is indicated by the various Synods held in these areas from 1540 onwards, the earlier of which had Lutheran direction, the later ones a strong Calvinist influence (Sólyom, 1990, pp. 14-19). One of the most important Synods was held at Erdőd in 1545. This accepted the Lutheran teachings as written by Mátyás Dévai Bíró. Later, the assembly granted the right of free practice of faith to the Saxon communities in Transylvania.

In the 1550s Swiss Protestantism was spreading in Ottoman Hungary, Partium and the north-east, while in the 1560s Unitarianist teaching started to appear both in Partium and Transylvania. A major role was played here by Ferenc Dávid. (After studying in Wittenberg, Ferenc Dávid began preaching the gospel and became a follower of Luther. He was made a Lutheran bishop and later a Calvinist bishop; he was also *rector* in Kolozsvár. Towards the end of his life he became a Unitarian and with the help of János Zsigmond he published many anti-trinitarian essays. He influenced the famous Edict of Torda, too. After the death of János Zsigmond a less tolerant ruler gained power in Transylvania, and Ferenc Dávid was imprisoned and eventually died in Déva.)

Finally, in 1568, the Edict of Torda declared the right to practise all religions freely, whether Catholic, Lutheran, Calvinist or Unitarian. This was the first time that communities and individuals in Europe had been given the freedom to choose their own religion and preacher.

In passing, one may note that the Protestant faith provided a rallying call which encouraged revolt against the rule of the Catholic Habsburgs. Our freedom fights and uprisings, notably the one led by István Bocskai, subsequent Prince of Transylvania were struggles for religious freedom, as well as political freedom.

Heroes of the Reformation

The best-known personalities of the first period (up to 1540-1541) were Mátyás Dévai Bíró[5], Mihály Sztárai (the "singing reformer"), Gál Huszár, Gáspár Heltai, Imre Ozorai and István Gálszécsi. During this period of "reception", many students returning from the University of Wittenberg, as well as former Catholic priests, converted to the new faith, and immediately started to preach Luther's teachings. The most influential preacher was Philip Melanchthon, a colleague of Luther, whose classes and lectures were packed with students. Another highly influential figure was Péter Bornemisza, who became a Lutheran bishop and was the most prolific writer in Hungary in the 16th century before his death in 1548.[6]

The Swiss Reformation also had its heroes. The first reformer to follow the ideas and teaching of Zwingli was Márton Kálmáncsehi Sánta, who had been the Canon of town Gyulafehérvár before he became a Protestant preacher. He wholeheartedly adopted Zwingli's teachings on the Eucharist, as well as on the issue of altars and paintings: he moved these completely from many churches especially those in the so-called Transtisza region.

His work was followed in subsequent decades by numerous pastors who had joined the Swiss Reformation. The most outstanding of these was the internationally known István Szegedi Kis, a great theologian and organiser. Another talented and hardworking organiser was Péter Méliusz Juhász, who established the Reformed Church in the Transtisza region during the second half of the 1560s.

In 1567, at the Synod of Debrecen, the Second Helvetic Confession was adopted. This was when the two families of the Reformation, the Lutheran and the Calvinist, were separated from each other. In Transdanubia, however, this did not become a reality until the end of the 16th century, after the so-called Csepregi Colloquium.

To summarise, the different branches of the Reformation had created their own churches by the end of the 16th century. Over half the total population of Hungary and Transylvania were Calvinist, about a quarter were Lutheran, while the remainder were Unitarian, Catholic, and Orthodox believers. Therefore nearly 90% of the population were Protestants. This changed a good deal during the Counter-Reformation of the 17th century, when a Catholic majority was formed in the west and the north, i.e. in the territories under Habsburg rule. At the same time, however, a new flourishing period of Calvinism began in Transylvania, Partium and north-east Hungary with the Bocskai rebellion of 1604-1606: this period lasted until the end of the 17th century (Bucsay, 1985, p. 23; Faggyas and Korányi, 2015, p. 53).

These were the most important stages and personalities during the 16th century. Although, owing to limited space, it is not the aim of this essay to examine subsequent centuries, it is important to mention two further episodes which made a vital contribution to the development of Protestantism in Hungary.

The first is the "Decade of Sorrow", in the years between 1671 and 1681. Protestant priests and teachers were brought to court and attempts were made to coerce them into converting.[7] Some were imprisoned, many abandoned their profession or were forced into exile. Forty men were sold as galley slaves; some of these were liberated by the Dutch Admiral Michiel de Ruyter on 11th February 1676.

Secondly, there was the "Articular" period between 1681 and 1781, during which Protestant services were only allowed to be held at two or three places in each county. Frequently Protestants had to start their journey on Saturday evening to arrive in time for the service on Sunday. In some places the service would be in three languages: for example at Nemescsó in Vas county (western Hungary today), the Word of God was preached in Slovenian, German and Hungarian to the exhausted people. The strength of these communities can be seen from the fact that, very soon after the Edict of Toleration of October 1781, many hundreds of them re-established themselves. These communities survived the century without pastors, partly owing to the important role played by the presbyters.[8]

In the above account I have not had space to discuss topics such as social stratification, the backgrounds of the reformers, and the differences between the various branches and nationalities of the Reformation. In the following section I shall examine the aspects of the Reformation which I believe to be the most important both from a Hungarian point of view and on a European level.

Legacy of the Reformation

There is no dimension of life which has not been affected by the Reformation. I shall discuss four dimensions.

Religion

Through Luther first and foremost, the Reformation rediscovered God the Merciful. The so-called *five solas* are the most important teaching of Protestantism. Among these is the question of salvation. The teaching that salvation is in Christ, by faith and mercy, has a strong effect on a believer's life: the individual can now step forward, out from under the rule of Law, to the free world of the Gospel, and God makes him or her act righteously. This requires the exercise of one's conscience. This had a vital impact on both religious and secular life.

Politics

The influence of the Reformation is seen both in practical politics and in political thinking: I shall focus only on the latter, in particular Luther's "two kingdom" theory of government, and Calvin's views on the constitution and political decision-making.[9]

The first of these still gives valuable guidance to Protestant communities as to how they should relate to the secular authority. In Luther's view, God rules the world in two different modes: on the one hand the secular mode, which uses the power of the Sword and the Law to coerce, and on the other the Word of God. This idea is very important to Lutheran communities in their attitude to the relation of State to Church.

Calvinism also had an undoubted effect on ideas about the constitution. Calvin's original *Ecclesiastical Ordinances*, which had been accepted initially by members of the Calvinist Church, was later used as a basis for the political constitution, even by the greatest thinkers of the Enlightenment (Köbel, 2016, p. 305). The views of the monarchomachs, for example Francis Hotman, are also relevant to the impact of Protestantism on politics (Birkás, 2011).[10] Protestantism also had an effect on communal decision-making, mainly thanks to the reformers' anthropological and theological teachings.

In other areas of public life the influence of Protestantism can be seen. Protestants have a strong sense of group identity; they are open to discussion and debate; and they have often been ready to take part in freedom struggles.

Education and culture

These are the areas of secular life in which the influence of Protestantism can probably be seen most strongly. A few simple facts serve to illustrate this. For example, most Hungarian books published at the beginning of the 16th century were connected with Protestantism; and all the famous printers, from Gál Huszár to Gáspár Heltai, were Protestants.

Through its new secondary schools or *kollegiumok*, Protestantism exercised a major influence on education. Nearly all the outstanding writers and poets from the 18th, 19th and 20th centuries were educated at these colleges. It might be said that the history of Hungarian literature was born within their walls. The minds of their students were formed under the constant influence of the Scripture and of the sermons delivered in the Hungarian language. In addition, the Protestant institutions were extremely modern in terms of methodology: they devised new educational methods (see Johannes Amos Comenius in town Sárospatak) and formed networks of colleges.

Protestantism also had a liberating effect on the natural sciences, as has been clearly demonstrated by the analyses of Max Weber and Alister McGrath. Research in natural science was greatly stimulated by Protestantism, both for theological reasons and for exegetical ones. In the last 200 years, the number of Protestants working in various fields of natural science has exceeded the denominational share in society as a whole, particularly in France and Germany.

Economics

Luther regarded work as vocation. As Weber shows in his book *Protestant Ethics and the Spirit of Capitalism*, Luther's translation of the Biblical "Beruf" as "vocation" is to be taken in the modern sense of the word. Later this was adopted by the secular language of all Protestant nations. To understand this, we may have recourse to some linguistic analysis. The German "Beruf" ("profession" or "occupation") also has the connotations of "rufen" ("calling") and "Berufung" ("vocation"). That is, man doing his work performs a mission given by God: this is how work becomes vocation and action glorifying and serving God. Work is "holy behaviour", which gives it an ethical, religious and moral dimension (Chadwick, 1990, p. 175).[11]

Luther opposed the contemporary idea that only clerical or ecclesiastical work was holy. Furthermore he decidedly rejected the monastic way of life. He emphasised that one must not live isolated from the world: it is in the world that one must pursue the vocation one has been given.

Luther rejected all forms of usury. (It should be noted that in his time, and even more previously, interest and usury were not distinguished; as the Roman church considered interest unacceptable as well, so its measure, its character of plain interest or usury, was inessential in the sense of principle.)

One of his most famous sayings relates to the infamous Fuggers: "Both the Fuggers and societies of the same mould should actually be restrained in this context. How could it be a divine and rightful thing to lay up so many princely treasures during the life of one man? I am no good at calculation. But I cannot comprehend how one can acquire twenty forints with a hundred in a year, what is more, with one forint another; and all this not from agriculture or poultry farming because riches are not a result of human wittiness but of God's blessing. I leave this to wise men of the world. I as a theologian cannot castigate anything else, only the evil, scandalous outside appearances about which Paul says: 'Avoid every kind of evil (Paul's first letter to the Thessalonians, Chapter 5, verse 22)'" (Luther, 2004, p. 148).

Just as he condemned the Medieval Church, so Luther condemned collecting interest for theoretically vicious usury, pointing out the sterile character of money: "nummus nummum non parit". However, he considered a moderate interest acceptable in certain cases, especially when paying the arising damages.[12]

Calvin thought that it was allowable to make a profit through interest. The 17th century form of Calvinism which is called Puritanism considered unceasing moneymaking, the fruits of which cannot be used but must be reinvested in enterprises serving others, to be service to God and one's fellow humans.

The medieval Catholic Church had taught the sterile character of money: reproduction of money is unnatural. Calvin did not agree with this concept. From a theological point of view, he criticised the references to the prohibiting of charging interest which can be found in the Bible. In terms of human psychology, he emphasised that it is not interest itself that is unacceptable, but the greed and despotism which accompany interest-collection that are irreconcilable with a Christian disposition.

Formulating and assessing Calvin's views, we must keep in mind that these ideas originated in the city of Geneva. Capitalist Geneva influenced both Calvin's political views and his concept of economy. Calvin analysed the nature of credit and its function with regard to his time and the economic life of his city. As a result, he considered acceptable the so-called "productive credit", i.e. credit received for an enterprise-producing profit, whereas he concurred with Luther on the question of consumer credit: no interest can be charged for it. If lands, means of production, goods or a rented house can yield a profit, it is incomprehensible why the same right should be denied to money. Calvin came to the conclusion that many forms of credit are acceptable, e.g. granting credit to the needy free of interest; however if somebody offers financial means to a profitable enterprise, in this case it is natural as well if the creditor wants to have a share in the fruits of the enterprise, yielding a profit (just like in the case of leased land) (see Orosz, 2010, pp. 97-98).[13]

At the same time, it is essential that Calvin does not give a free hand to granting of credit. Keeping the law of fairness and love in view, the reformer set up different rules connected with the granting of credit. The most important are: no interest may be collected from those who are in a grave financial situation, creditors should also take the common good into consideration, besides their private profit; and it is forbidden to overstep the rate allowed by the law of the given country (the latter was usually about between 4 and 6 per cent in contemporary Europe). The main law in all is love.

Conclusion

The Christian Church needs constant renewal. This renewal becomes reality sometimes through a community, sometimes by the work of an excellent theologian or other personalities. Among these renewal processes the Protestant Reformation is probably the most important one in the history of the Christian Church. This process started with the distinguished persons, among them Luther and his spiritual need, by Grace – Luther searched for a merciful God.

The influence of Luther and Calvin, and the other reformers and the members of modern Protestantism, is unquestionable. Their influence related to church, society, the whole history is important: they influenced all aspects of life.

But the Reformation is not only a memory: it is living with us. It had a strong influence on the Roman Catholic Church, too. The renewal processes became stronger. Luther and the *solas*, and the spreading of the evangelical movement forced the Roman Catholic Church to be renewed, to formulate its own theological teachings. There would have been no Council of Trent without Luther and the Reformation. There is no Tridentine Mass without Luther and the Reformation. From an ecumenical point of view, it might be said that the Reformation was a start, which aimed to show anew the Catholic (universal) truths: the importance of Grace, the importance of the Scripture and the understanding of it. I myself as a Protestant focus on these values, commemorating the 500 years of the Reformation.

Notes

1 I am grateful to Mr Stephen Terry M.A. (Cantab) for his help in checking the English.

2 Of today's world population of 7.3 billion, just over 30% are Christians.

3 All Protestant denominations have these teachings in common: *sola fide* (by faith alone), *sola gratia* (by Grace alone), *sola scriptura* (by Scripture alone), *solus Christus* (Christ alone). Also, in the Reformed/ Calvinist tradition, *soli Deo gloria* (glory to God alone).

4 Heinrich Bullinger had an important role in this process. Bullinger, who was a priest in Zurich between 1531 and 1575, wrote many letters to Hungarian priests, theologians and rectors. They were collected and re-published in Hungarian in 1967, more than 55 pages altogether. They dealt with all the major theological questions and caused a large number of Hungarian priests to become Calvinist.

5 Mátyás Dévai Bíró visited Wittenberg many times and was also a guest of Luther. He preached the gospel and was imprisoned twice because of his faith. His Catechisms and book on Hungarian Grammar are influential works.

6 Bornemisza himself believed that in his own lifetime God showed the power of his Word more than at any other time except that of the Apostles. See Sólyom, 1990, p. 21.

7 Fear was put into both the pastors and the secular leaders of the Protestant churches and communities, who in turn frightened their congregations into converting.

8 It was not until 1848 that freedom of religion was granted to everyone.

9 But other areas could be mentioned, too: the rule of Law, its impact on governments, the parity, synods-system etc.

10 Francis Hotman was a well-known lawyer, teacher and a theologian in his time. He visited Geneva and after meeting Calvin became one of his followers. He had an important role in formulating the right of resistance. Like his lawyer colleague, he was opposed to absolute power.

[11] All this had a major effect on prosperity.

[12] His decided viewpoint is unambiguously outlined in his debate with professor of theology Johannes Eck. Eck considered a fixed interest of 5 per cent acceptable, whereas Luther regarded interest as unambiguous stealing. Luther taught: "If you loan money you should not expect it to be returned; if the grantee wants to repay it all the same, you may only accept as much as he originally loaned." See also his writing on business deals and usury.

[13] Realistically surveying the contemporary circumstances, "overwriting" the earlier Bible interpretation and ancient views, Calvin gave strong stimulation to the development of economy with his original views connected with interest, even more, however, similarly to Luther, with emphasizing ethics of vocation.

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Géza Sebestyén

Proactivity and Innovation as a Means of Central Bank Renewal

Thoughts on the National Bank of Hungary's Book Entitled *The Hungarian Way - Targeted Central Bank Policy*

Summary

The 2008-2009 global crisis created major challenges for fiscal policy, monetary policy and the financial regulatory authority at the same time. To respond to these challenges, proactive and innovative solutions were needed. This paper presents the niche volume of the Magyar Nemzeti Bank (National Bank of Hungary), which describes the measures that resulted in the turnaround of the Hungarian fiscal and monetary policy.

Journal of Economic Literature (JEL) codes: E42, E44, E52, E58

Keywords: central bank, global crisis, monetary policy, regulatory policy

The US subprime mortgage crisis of 2007 and other factors like significant international trade imbalances, high debt levels in several major economies, real estate bubbles, and lax regulation of non-depository financial institutions has caused the most serious financial crisis since the Great Depression. This crisis had a huge global impact as well. In 2009 the annual per capita real GDP of the world declined by almost 3%, resulting a global recession. This crisis was so significant that it has earned its own name, entering the economic history books as the Great Recession.

Because of the severe and global impact of the crisis, governments and cen-

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tral banks had to take complex measures to fight the negative consequences, like the high unemployment rates, low or negative GDP growth, and struggling financial systems. Although the crisis was having a global impact, some countries were facing more significant and complex challenges. One of these countries were Hungary.

Multiple factors caused the complex problems of the Hungarian economy. The country had a high government debt ratio (71.6% in 2008), mostly because of the huge budget deficits of the previous years (the negative balance was between 6% and 10% of the GDP in the years 2002-2006, much higher than the 3% Maastricht criteria). As one of the consequences, the level of the public debt was expanding rapidly. External financing requirement was also high, and the country was dependent on foreign financing in times when international capital flows to emerging markets have dried out significantly. The employment rate was one of the lowest in Europe (around 50% before the crisis). The composition of the household debt was also a significant problem, since majority of this debt (in 2008 around 70%) was denominated in foreign currencies, mainly Swiss francs. Thus, as the Hungarian forint weakened because of the capital outflows triggered by crisis, the debt burden of the population increased materially. Because of these problems, Hungarian policymakers were facing a more complex and challenging situation, than their European, American or Japanese colleagues. Both fiscal and monetary policy was in a desperate need of a sharp turnaround.

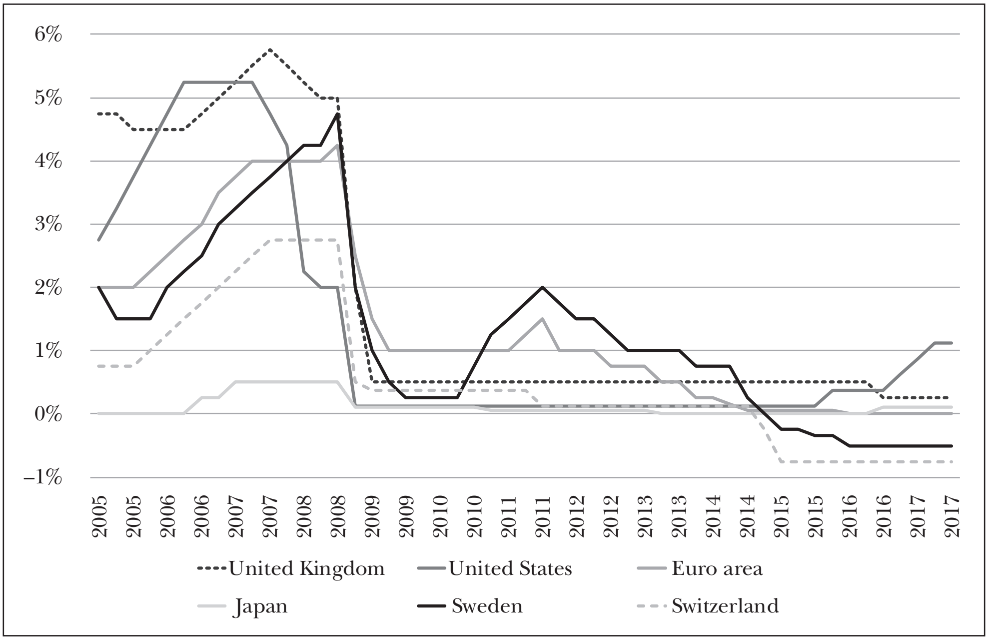
This review is organised in three parts in line with the three main chapters of the book. The first part is introducing the effects of the crisis on foreign central banks. The second part is focusing on the Hungarian monetary policy turnaround. The third part is introducing the challenges and reforms in the Hungarian regulatory policy.

The effects of the global crisis on central bank policy

The decades before the 2008-2009 crisis gave a false sense of stability to many economists.[1] Stable growth, falling inflation and interest rates diverted the attention from widening imbalances. Among these imbalances, balances of payments problems were prominent. Current account imbalances were on the research agenda well before the 2008-2009 crisis. Although many theories have been worked out to explain this phenomenon (i.e. Bretton Woods II, dark matter, excessive global savings, demand for secure investments) (Krugman, 2007), only few authors believed that this could not be sustained in the long run. A common assumption was that current accounts must be balanced in an adjustment that would mostly affect countries with the largest surpluses and shortages. Events following the crisis surprised both optimists and skeptics of sustainable imbalances. Although imbalances moderated, the dynamics of the processes was not in line with the expectations of the skeptics either. The main losers of the crisis were not necessarily those countries, which had high surpluses or deficits. The euro area for example had a more or less balanced current account. On the other hand, the deficit and surplus positions of the regions were maintained.

The depth and the global spillovers of the crisis required novel and complex measures both in monetary policy and regulation. The main objectives of the monetary policy had to be reconsidered. It became clear that price stability alone was not enough to ensure the stability of the financial system (Kolozsi and Hoffmann, 2016). The role of macroprudential policy has appreciated (Ábel et al., 2014). Real-economy targets such as the reduction of unemployment and the promotion of economic growth have become more pronounced. Short-term interest rates, which were formerly the main tools of monetary policy, hit the zero lower bound. In countries like Switzerland, Sweden, or Japan, central banks experimented with negative interest rates but were cautious about the uncertain consequences of negative rates on financial and macroeconomic developments (see Figure 1). This also meant that central banks had essentially lost their number one and best known instrument in conducting monetary policy.

Figure 1: Key interest rates



Source: BIS

Asset purchases that bloated central bank balance sheets became the key tool of central bank policy. Monetary easing was achieved in many cases through open market operations. Both the Fed and the ECB had launched liquidity-providing, targeted lending, and large-scale asset purchase programmes,[2] which actions significantly boosted their balance sheets.[3] With respect to balance sheet totals, the most drastic measures were applied by the Japanese central bank, which increased the central bank assets to GDP ratio from 30% to over 90% in a few years.

In the case of the ECB the same ratio has increased to almost 40% from the pre-crisis 17%, while the Fed went from 7% to over 22%.

At the same time, the role of central bank communication became more pronounced (Csortos and Lehmann, 2014) as medium and long-term yields (which are of paramount importance for the economic actors) were determined by the subsequent short yields of the full maturity, hence monetary easing can not only be achieved by lowering the short-term yields, but also by lowering market expectations regarding future short-term yields.[4]

The severity of the global downturn posed serious challenges to monetary policy makers. Interest rates at zero level did not enhanced growth, or solved inflation and unemployment problems, so additional tools were needed to address the crisis. These new, previously untested tools, combined with the once in a lifetime economic downturn created serious uncertainty among economic actors. Besides, monetary transmission became less efficient and more difficult to forecast. In addition, many central banks faced unique, specific problems.[5]

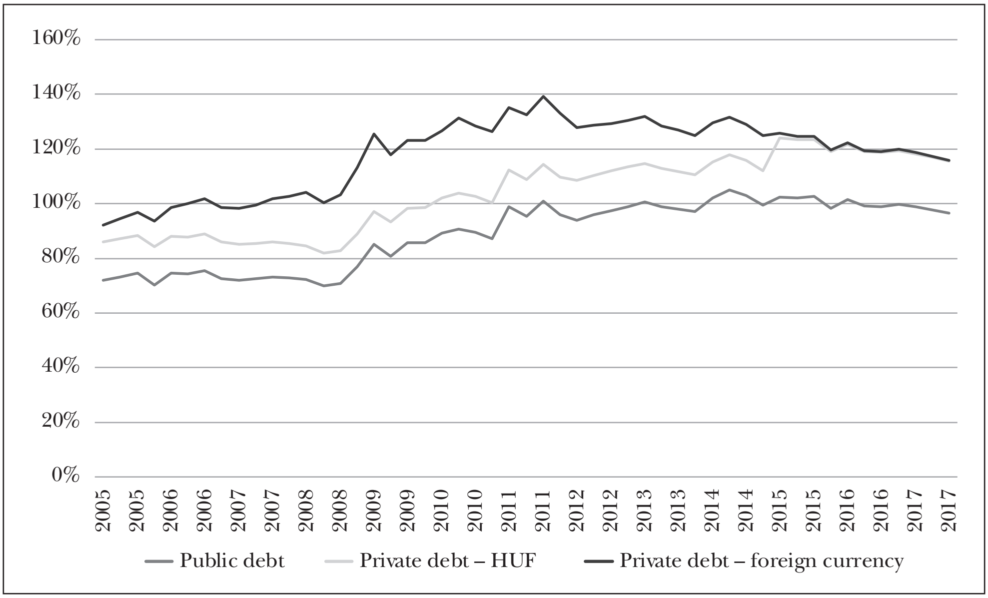
The first main chapter of the volume guides us through the international consequences of the crisis. Starting with the build-up of global imbalances, introducing the pre-crisis explanations, guiding us through the unfolding of the crisis, and depicting the situation of the global economy after the crisis (decreasing flow but remaining stock imbalances, balance sheet recession, protracted recovery), the changing framework of the monetary policy (transmission mechanisms, the relationship between fiscal and monetary policy, changing objectives, reform of the instruments) and the responses of the major central banks to the crisis (crisis management, unconventional monetary policy instruments and changing framework and communication of the Fed, the ECB). In the last part of the first main chapter, we receive an overview of the protracted struggles of the BoJ against sub-target inflation.

Complex economic and monetary policy related challenges in Hungary

The crisis hit Hungary in a particularly vulnerable state. The economic growth before 2006 was unsustainable, the high budget deficit (Orbán and Szapáry, 2006) (the country was subject to the excessive deficit procedure since 2004) has significantly increased the total debt of the country. Both the public and the private sector has increased its indebtedness materially. The external financing requirement was high, which was boosted not only by the public overspending, but by the high volume foreign currency retail lending as well (Matolcsy and Palotai, 2016, see Figure 2). The country was also running on a high current account deficit. And, though the reforms of 2006 were able to bring the very high public deficit to lower levels, current account deficit remained high, so external imbalances remained, and the cuts in public spending significantly dampened both the potential and the actual GDP growth rate of the country. These negative tendencies were also amplified by the procyclical banking sector.

Hence the effects of the global crisis were multiplied by some serious country-specific problems, coming together to

Figure 2: Total debt to GDP in Hungary



Source: National Bank of Hungary

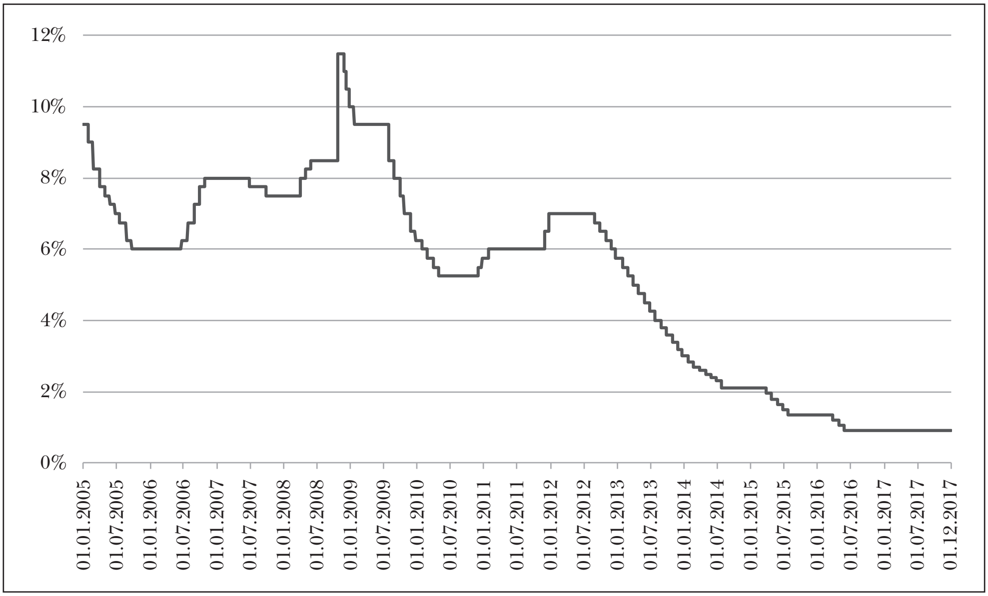
cause a severe recession. These negative processes had a significant and unfavourable impact on the domestic financial sector as well, which has propagated the adverse impacts pro-cyclically. Like the Baltic States, Hungary suffered the longest and largest decline in corporate lending in the region (Balog et al., 2014).

Hungary had faced problems regarding both growth and stability even before the eruption of the crisis (Matolcsy, 2016). In 2010 the newly elected government has implemented a deep fiscal turnaround, which has, in multiple steps, significantly improved the balance of the budget (Matolcsy and Palotai, 2014) by reducing work-related taxes, simplifying the system of taxes and contributions on labour, focusing on consumption and sales based, as well as sector-specific taxes, and introducing online cash registers.[6] As a result of the fiscal turnaround, Hungary was released from the excessive deficit procedure in 2013 (Matolcsy, 2016).

Although the fiscal turnaround was very successful in reversing the tendencies and was able to stop fiscal dominance, the financial system still faced some serious challenges. To address these challenges, the new management of the National Bank of Hungary launched a complex monetary policy turnaround in 2013.

The monetary policy turnaround had multiple steps. The base rate was materially reduced in three easing cycles, from 7% to 0.9%, by 610 basis points in total (see Figure 3). This has significantly reduced the interest burdens of both the public and the private sector. The National Bank of Hungary introduced its targeted lending incentive instruments, the Funding for Growth Scheme (FGS), and the Market-Based Lending Scheme, which actions helped to kick-start the SME lending in the country (Baksay and Palotai, 2017), which has been in decline since 2009 (Banai, 2016). The National Bank of Hungary has developed and launched its Self-Financing Programme, a mix of actions with the objective of decreasing the external financing requirements of the country. This measure helped to cut the ratio of foreign currency debt to public debt from 50% in 2011 to 25% in 2016 (Baksay and Palotai, 2017). The Central Bank was also a key player in the conversion of the substantial foreign currency denominated household debt to Hungarian forints. In the absence of this action, many people would have lost their homes and the country would have faced irreparable and significant social losses on 15 January 2015, when the Swiss National Bank unpegged the CHF from the EUR. As majority of Hungarian private mortgages were denominated in Swiss francs, the massive strengthening of the Swiss currency would have materially increased the debt burden of the domestic debtors.

Figure 3: Key interest rates in Hungary



Source: National Bank of Hungary

The second main chapter of the volume introduces the challenges and answers in Hungarian monetary policy. First we get familiar with the macroeconomic conditions in the first decade of the 2000s, the path of the GDP growth rate from balanced to unsustainable to negative, the very high public deficit, tax wedge and social benefits, the increasing public and private indebtedness and the external debt ratios. Then we can learn about the interactions between the fiscal turnaround and monetary policy, how the rearrangement of the tax regime, the review of social expenditures, and the contracting budget deficit has helped and gave room to the monetary policy. The next chapter introduces the way of Hungary from unsustainable indebtedness and a pro-cyclical banking system. After this we get familiar with the three easing cycles, which have resulted in a significant easing of the monetary conditions. The next chapter deals with the theoretical background of maintaining the level of the base rate for an extended period of time. After this chapter, we get an introduction into a more flexible framework of inflation targeting. Then we get to know the targeted lending instruments FGS and GSP (Growth Support Programme), which actions were helping not only domestic lending, but also growth in Hungary. The next chapter introduces the monetary policy considerations for the conversion of foreign currency loans. After this, we learn about the self-financing programme of the National Bank of Hungary. The next chapter deals with the development of BUBOR and the domestic interbank market. Then we get introduced to the logic behind the capping of the 3-month deposit as unconventional easing. The next three chapters are guiding us through the instruments to improve the functioning of the monetary transmission mechanism (a more efficient banking system, development and modernization of payments and financial infrastructures, and the relationships between monetary policy and the stock exchange).

Changes in the Hungarian regulatory policy

In addition to monetary policy, Hungarian regulatory policy had also significantly changed and improved. The crisis has shown that monetary policy alone cannot ensure the long-term balance of an economy. The role of macroprudential policy has been appreciated both internationally and domestically. The occasionally fatal impacts of the crisis on the banking sector and on some individual banks has led to the emergence of the resolution function. In addition, micro-prudential supervision, market surveillance and consumer protection have been renewed.

The third main chapter of the volume introduces these advancements. First we get introduced to the theoretical basis of macro-prudential policy, learning about the ultimate objective, the types of systemic risks and the market problems causing them, the instruments of macro-prudential policy, and the institutional framework of macro-prudential policy. The next chapter is a detailed account of the targeted Hungarian macro-prudential policy instruments which were introduced and used after the crisis like the debt cap rules payment-to-income ratio and the loan-to-value ratio, the countercyclical capital buffer, the liquidity coverage requirement, the foreign exchange funding adequacy ratio, the foreign exchange coverage ratio, or the mortgage funding adequacy ratio. After this we get introduced to the new resolution function of the National Bank of Hungary, where we learn about the goals, the setup of the new function, resolution planning, the conditions for ordering resolution, tools and international activities, and we get guided through the resolution of MKB Bank, one of the largest banks in Hungary. The next chapter offers an insight into the central bank supervisory functions,[7] where we can learn about the aim and the instruments of supervision, like the capital requirement directive, the bank resolution and recovery directive, the market abuse directive, the markets in financial instruments directive, licensing and enforcement activities, the concept of continuous supervision, types of inspections, and the market surveillance procedures. Next we get an overview of the improvements in the Hungarian micro-prudential supervision, like stronger supervisory regulation, the forward-looking approach, the basic monitoring system and the early warning system, the business model analysis, targeted and periodical inspections, stronger sanctioning, the internal capital adequacy assessment process, the internal liquidity adequacy assessment process, the liquidity coverage ratio, stress testing, the admission of capital market products and the gatekeeper role of the central bank, the supervision of insurance companies and funds. After this, we are offered an in depth look into the market surveillance and consumer protection procedures, where we get acquainted with the means of evidence, the inspection instruments, prevention, the priority of market surveillance, the paradigm shift in consumer protection, and the right to prepare action in the public interest. The last chapter deals with the new approaches and challenges of regulation in the 21st century, like cloud-based technologies, e-administration, the emergence of new players, the alternative banking system, technological challenges, the impact of digitalization, and the development of the efficiency of IT supervision and data analysis.

The monograph is an equally useful source for both domestic and international experts, academics and students, as well as for those of the general public, who are interested in the complex challenges ignited by the 2008-2009 global crisis as well as the countermeasures of the domestic monetary and regulatory decision-makers. The reader will not only get a professionally outstandingly precise and versatile introduction of the events, but also a colorful, readable account of the proactive and innovative measures of the National Bank of Hungary, with 46 tables, 216 figures, numerous framed stories and small case studies. This work is a worthy continuation of the book series launched by the National Bank of Hungary in 2015, with the first two volumes *Balance and Growth* (2015) and *Competitiveness and Growth* (2016).

The editors of the monograph are Kristóf Lehmann, Head of the Monetary Strategy Department of the National Bank of Hungary and the MNB Department at Corvinus University of Budapest, Dániel Palotai, Executive Director and Chief Economist of the National Bank of Hungary, and Barnabás Virág, Executive Director of the National Bank of Hungary responsible for Monetary Policy and Credit Promotion.

(Lehmann, Kristóf; Palotai, Dániel and Virág, Barnabás (eds.) (2017): A magyar út – célzott jegybanki politika [The Hungarian way – targeted central banking policy]. Magyar Nemzeti Bank, Budapest, 955 pages.)

Notes

1. The years between the mid-1980s and the late-2000s were labelled as the Great Moderation. Many believed that because of central bank independence, improved modelling, better monetary policy frameworks and tools, and an improved economic structure, the world economy has entered into a more predictable and less volatile state.
2. The Fed introduced the terms auction facility, securities lending facility, primary dealer credit

facility, the asset-backed commercial paper money market mutual fund liquidity facility, the commercial paper funding facility, the term asset-backed securities loan facility, the large-scale asset purchase programmes, and the maturity extension programme. The ECB has started its main refinancing operations, long-term refinancing operations, targeted longer-term refinancing operations, FS swap tenders, the covered bond purchase programmes, the securities market programme, the public sector purchase programme and the corporate sector purchase programme.

3 These actions also significantly increased money supply, measured by M0.

4 Two important practical examples are the forward guidance, a tool extensively used by many central banks after the crisis, and the famous "whatever it takes" speech by ECB president Mario Draghi on the 26th of July 2012, which was able to calm down the markets, and contributed to a sharp turnaround in the evolution of the government bond yields of the PIGS countries.

5 Greece and Japan was dealing with high levels of government debt and high public deficit, Russia was impacted by the falling oil prices, Switzerland saw a flood of capital inflow and hence a quickly appreciating currency, the US, Ireland and Spain saw their real estate prices collapsing, Latvia, Croatia and Hungary was suffering because the foreign currency loans of the private sector.

6 The budget deficit, which moved between 4% and 10% before 2010 has decreased significantly, mildly fluctuating around 2% since 2012.

7 The National Bank of Hungary has assumed the tasks related to the supervision of financial institutions and financial consumer protection from the Hungarian Financial Supervisory Authority (PSZÁF) on the 1th of October 2013.

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Zoltán Sipos

Review of Book Entitled *Management for the Benefit of the Public*

Summary

The handbook entitled *Management for the Benefit of the Public. Public Finance Administration and Management* includes studies by well-known Hungarian authors, mainly economists. The book review emphasizes that in addition to being a gap filler innovative reference work, it is an excellent textbook for public service experts as well as for specialists in the early stage of their careers. Significance of the economic policy reforms and the specific need for a new type of public service managers are highlighted in this book. The author of the review points out that the professional methods, needs, required knowledge differ in the public and private sectors. The reviewer lists the main parts of the book and highlights the most innovative studies, quoting their conclusions. The review introduces evidences and data on the impact what this book has already had on education and public management development in Hungary. This part of the review is based on a recent conference organised by the State Audit Office of Hungary in Budapest.

Journal of Economic Literature (JEL) codes: E6, H41, H83, Y3

Keywords: public finance management, public finances, public goods

An event

State Audit Office of Hungary has organised a conference on 25th January, 2018, at its Headquarters in Budapest. University of Miskolc has co-sponsored the event. National Bank of Hungary has also contributed to the opening lectures. The conference titled: "Ethical public finance management in focus", has significantly marked the strategic of the financial authorities and the Government of Hungary, to promote a reform of management training in public service organisations. Together they form strate-

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gic alliances with universities to support this effort.

As Tihamér Varvasovszky, vice president of the State Audit Office has expressed in his opening speech, the main question of this campaign is to develop the culture of organisational integrity in Hungary. Integrity model is based on a Dutch example, presented at an earlier conference abroad, where the Hungarian public finance sector leaders met this model and have started to introduce it in Hungary since then. Integrity model is bound for identifying, discovering and controlling risks of corruption in public organisations. A vast development had been initiated for the introduction of this model in Hungary since then.

A major step and result towards this development is the publication of a professional book. It is also a textbook for public managers, as it had been presented in the conference. Participants of the meeting presented evidence on the results brought forward by the publication of this book in serving the public benefit. Some findings will be further discussed at the end of this paper.

A book, its reasons and theoretical background

A well known paradigm in the circles of economic science is the term of "mainstream economics", meaning the dual structure of the main theoretical directions in this field. The two main findings are essentially contradicting with each other, and they may rather be mentioned as beliefs or "religions" of economists. These two approaches are the liberalist belief, convinced in the almightiness of the market, and the neo-Keynesian belief, trusting in state intervention for the purpose to avoid crises. World financial crisis beginning in 2008 had convincingly testified and verified the untenable nature of liberal principles in the present time. Countries of the world, including those which are repeatedly emphasizing the liberalist principles, baied out their teetering banks slipping towards bankruptcy, from funds of the state budgets with huge amounts. This way, state intervention has become again accepted, or, at least, a *de facto* tolerated weapon against deeper crises in economic policy.

In Hungary, before the changes in political systems and institutions and the economic transformation, the development of economic paradigms had taken a special direction. The formerly exclusive and general Marxist "state religion" had gradually faded away. Nevertheless, its professional and ideological representatives, interestingly enough, shifted to a radically liberalist ideology, as, for instance, to monetarism and other similar directions of the theory. They started to declare the all-around-efficiency of the market and emphasized the negative role of the government as a wrong economic performer. This ideology was in conjunction with the requirements of the International Monetary Fund and the World Bank as well. It had been supported with full energy by the domestic financial and economic theory forming elites. (This process had been described by István Szerdahelyi, in an unpublished study with full sincerity and in a clear analysis. The manuscript does not announce any year or date, but based on resources and on reference dates it might be dated back to around 2006; see Szerdahelyi, n. d.)

Several other economic theoreticians, observing the development of welfare states, and trying to learn from the mistakes made there, and also from mistakes of "market socialism", tried to position themselves outside of the mainstream economics. They especially preferred the institutionalist approach of the economy and institutionalist analysis in economic theory. This has been the theory, describing developments in the world economy in the best way: new situations and new competitors emerging in the world economy, and competitive structures changing due to institutional developments and reforms. They witnessed the reapproachment of certain developing countries, to the center of power in terms of competitiveness, by developing their economic institutions in a targeted way and having a responsible state economic policy supporting this development. They trusted the market to a very limited extent only and tried to organise their markets in a very active way. At least, they saw, that institutional structures in a country could, but must not make obstacles to technologic and economic development. The dominant success of multinational or transnational companies has also demonstrated: the economic success and competitiveness depends on the capabilities of economic performers: how they are able or not able, to control environment, politics and culture.

Historically in Hungary the traditions of Keynesian analysis did not have a strong position. State intervention and activist economic policy in our culture seem to bear a negative value judgment, even in economic theory. The "magic triangle" of the neo-Keynesian approach only raised interest because of the continuous intentions to curb inflation. The visible state intervention in the economic life and all market controls by the government have been declared as "centrally managed economy" and badly reminiscent of the uniform state ownership of the means of production. Other economists, standing on a platform of monetarism, refused all interventions and all meaningful economic policy steps, except for active monetary policy, as the regulator of money supply. Monetary policy as such, would focus only on rate of interest regulation and open market operations, as tools.

Refusal of government intervention from different platforms in a uniform way, resulted in several problems in economic development. Among others, analysis of government intervention efficiency did not appear in economic research and theory formation. Similarly, research and higher education as well, did not turn much attention on the economic role of government fiscal and development policy, industrial policy, mixed economy and public service management. These topics have been missing from the mainstream economic publications. Universities have a shortage in demand as well as in supply for a longer period of time to initiate public management programmes for the public good.

Nowadays, when improvement of national competitiveness is more important than any other consideration (and this should be done, in essence, not by pushing wages down, but rather by giving human capital and knowledge a better value and more chance) there is an urgent need for analyzing public finances and its regulations, determination of ethical standards in government intervention, and setting standards for the description of optimal measure and allocation of government intervention.

This is the point, which gives a basic rationality to this book. This volume is a gap-filler and a professional compensation of shortages in theory and methodology during the last decades.

Other than that, there are further obvious reasons for publishing a book like this. Professional literature of public finances and its management can be seldom found, still in our days. For this reason, as written by László Domokos, president of the State Audit Office of Hungary: "The State Audit Office of Hungary has initiated and supported the compilation and publishing of a book which is explicitly targeted to the managers of the public sector organisations, and which had been written by excellent experts. There are plenty of books prepared for the private sector managers. Nevertheless, management principles and methods are not fully transferable into public sector organisations. As we know, the measure of success in the private sector is profit. On the contrary, in public sector institutions, the mission of activity is the service of the public benefit. So, there was a need for such a book, which considers the public benefit as a target function and builds all knowledge, a manager has to know, on this foundation. Only this way we hope, that managers of public organisations can be efficient, following the logic of organisational integrity."

Based on this consideration, this book may give a wide basis for further research and economic analysis in the fields of public goods, public finances, ethical service of public benefit and management of public economics. At the same time, the book had been prepared as a textbook as well, for the present and future managers of the public sector. The book, as a whole, is very didactical and well understandable material and it is easy to learn.

György Matolcsy, president of the National Bank of Hungary, sees the rationale of the timeliness of the book very similarly. "It is a firm belief of the National Bank of Hungary, that the increase of competitiveness of Hungary largely depends on the efficiency of the public sector and on the management of it. The National Bank of Hungary, therefore, considers it to be an especially important task to increase and share modern, good quality and competitive knowledge. Strengthening the dedicated, public service oriented, responsible behavior in the public sector has a direct effect on economic and social environment, businesses and citizens as well."

Hungary executed an efficient budgeting reform in 2010. Later it was followed by a structural reform and a strong institutional overhaul and development. After this, the National Bank of Hungary has led a decisive change in monetary policy. Following all these reforms, a result has emerged: the economy could start a new growth on a new trajectory. After a very long time, a solid growth again appeared in the Hungarian economy. All these changes, have arisen from a professional side in a realistic way, may be called as a specific, Hungarian New Deal.

The author of the present paper is actively participating in the Hungarian economic sector and in the higher education. No similar breakthroughs have ever happened during this time. (Several promises could have been heard from different sources about growth during decades…). These results mean a new quality, and the institutional system and people creating and promoting them, have created a new value.

For a better and more objective evaluation of the professional contribution of the book, it seems to be important to emphasize the main factors securing the efficient operation of market economy. Market economy cannot be properly operated without the unconditional respect towards private property. But this is a scarce resource in transition economies. In these new market economies, the system of mutual relationships, a re-distribution of wealth according to merits, a network of offering access to privileges are still very strong and the system does have less respect to private property. Regulations can be treated "flexibly". This inherited culture of re-distribution from earlier times is a phenomenon formed during the decades of state and collective property. A well known saying from those times states: "If something belongs to all of us, we may take it home". The biggest danger for transition economies is not the threat of economic crises, but rather the moral laxity which long-lasted and stayed with us for several years in these societies. Broadly tolerated practices are the unreliable and broken promises, incorrect and delayed financial settlements, bribes and corruption. These are exactly the real problems in the economy, which can be hardly understood by managers arriving to Hungary from more developed countries.

All these externalities practically make the efficient operations of markets and the proper "invisible hand" regulation impossible. Therefore, free market ideologies are not realistic nowadays in Central and Eastern Europe. There is a vast need for the visible hand of the state to help the market operate and serve the public interests, the ethics and the social welfare.

A book: content and authors

The book consists of five major parts. In the first part, authors are dealing with the service of the public good. György Kocziszky and Krisztina Szegedi contributed to this part by one-one chapters, whereas Gyula Pulay wrote five chapters. The first part defines the category of public benefit based on the concepts of public goods. Pulay gives a definition for public benefit as follows: "A totality of objectives, which are in the focus of efforts of a community, members of which are achieving these objectives together by sharing their thoughts, by joint effort and work."

According to a definition, public goods are: "Goods, services, consumption of which does not involve rivalry, consumption by one member does not affect the access of others, and nobody can be excluded from it (as, for instance, a lighthouse)." Pulay has introduced the term of intangible or theoretical public goods. These are: "Principles, values, rights, which are needed to help the public benefit and should succeed in the economy and society. These are, for example, fairness, honesty, reasonability." In economic life, one can find some special public goods, which are not free of charge. He calls them "civilizational public goods", defined in the following way: "A certain group of goods, which are not public goods by nature, namely, there is a possibility of exclusivity and divisibility in using them, but the society considers them to be semi-public goods in a certain quantity and quality and provides them to the members of the society as public goods."

An especially interesting and progressive term for the developing theory of state intervention is Pareto-improvement, which means: "A change in the distribution of goods in a way that it is increasing the utility of consumption of at least one participant, without any decrease of the utility of consumption of other participants."

It seems to be important to point out that public goods in this context are not always necessarily free of charge. The social reproduction of these goods needs resources, just as in case of other non-public goods and services. Public sector can be defined as the producers and distributors of public goods. This activity is becoming more and more crucial during the economic development.

An extraordinarily interesting study can be found at the beginning of the volume. It had been written by Professor György Kocziszky. The chapter titled "Ethics of public finances" gives a definition for the term as follows: "Ethics of public finances: this is an activity of formulating and structuring principles, which are relevant to public finance management and public property administration, including setting objectives, planning, distribution, control of utilization and so on. It is a part of applied ethics."

The writer of this chapter introduces the historical development of ethics related to cultural changes, relationships between morality, ethics and value systems, the ethical public financing system and the analysis and management of special ethical risks. It is right to point out the essential problem of moral order: "Morality, just as land, capital, labor etc., is an independent and scarce resource, which sometimes does have a very limited availability. Because of this scarcity, morality and ethics are upgraded in value systems. They have a price, which is finally paid by the taxpayers, when there are damages made because of the shortage of morality available." His final conclusion is also extremely considerable: "…value system and morality are special resources, because their scarcity can be diminished by technical innovations only to a very limited extent. Instead, improvements in this field need prudent, preventive and integrative institutional and organisational objectives, means and methods."

The second main part of the book focuses on management of resources. Its four chapters cover public funds allocation, property management, data management and control, and human resource management. Authors of this main part are Diána Orosz (two chapters), Attila Péterfalvi, Júlia Sziklay, József Poór and Mártonné Karoliny. Diána Orosz has defined the term of public fund, as a resource for basic financing of public expenditures related to performing public services and tasks. In her study she introduces the private and public legal aspects of income generation, the sub-systems of the state budget, and the process of its formation and control, according to the pending legal regulations.

There is a special maximalism in requirements set towards managers of public organisations. According to the wording of the author: "…the legally determined obligation of a manager of a public organisation is to issue regulations, administer processes and lead control inside of the organisation, which secure the transparent, regular, controlled, efficient, effective and useful utilization of given resources. These processes have to cover all activities of the public organisation, either related to a public activity for public benefit, or to the management activity itself."

The most recent reference of this study is to draw attention to the strict legal regulations of the formation of state budget: "According to the regulations of the Fundamental Law debt has to be kept under 50% of the GDP. Or, until this goal is achieved, public debt in percentage of GDP has to be decreased in each and every year."

A study from József Poór and Mártonné Karoliny, introduces important fields of public human resource management, including planning, controlling, field of work analysis, competence analysis, selection, task of ensuring resources, performance management, compensation management etc. The sub-chapter introducing differences between private and public sector tasks is really very interesting.

As an addition, it is worthwhile to mention two different theoretical and practical models of public sector related to human resource management. These two models are the centralized (carreer oriented) and decentralized (position oriented) systems, which are present in international context in public HR systems. In a career-oriented system, a high level of special expertise is required from candidates applying for public sector positions, and they are selected based on a competitive exam. Necessary degrees are exactly required, but then, the career path is legally guaranteed for the members of public sector managers' community or faculty.

Under the second version, the position oriented model, employment is more flexible. Candidates are selected only for a certain position. Decision on employment is made by the top manager of the public organisation. Both models have significant advantages and disadvantages compared to the other model. Major advantages of career-based system are accountability, high level of expertise, but, disadvantages are less flexibility and sometimes a low level of performance. This model is the preferred one nowadays in Hungary as well. (See more analysis on the two models in a study by Balázs, 2014.)

Thirdly, the most complex and the longest part of the book examines topics of public administration and management with a considerable care. This part has eight chapters (studies), authors of which are: Károly Barakonyi, György Norbert Szabados, Csaba Berde, Erika Garaj, Antal Tóth, László Domokos, Melinda Nyéki, Katalin Jakovác, Erzsébet Németh, (in two chapters), Csaba Hatvani, Margit Horváth, Csaba Lentner and Bianka Parragh.

Károly Barakonyi emphasizes the importance of strategy formation and strategic management in public sector and in public finances. According to his opinion, crises, which are shaking the world from time to time, would be avoidable or at least weakened in several cases, by using proper strategic management methods. His vision is really considerable and respectable. In his approach, the best option of economic policy is probably not the defensive strategy against all negative external and internal effects, but the offensive, pro-active strategy in economic policy for the achievements of targeted objectives in managing the economy.

Bianka Parragh and Csaba Lentner have contributed to the main topic of this part by a supplementary chapter. This study introduces the process of employer-employee debates, the theory of interest coordination, consensus seeking, and participation. A more practical description is given on the basis of principles and regulations of these processes in Hungary. The chapter demonstrates the system and methods of labour relations, including strikes. It goes into details related to the basic statutes of Hungarian Government Officers' Faculty, its tasks, ethical codes and principles. Finally, it gives an outline on interest-representation and interest-enforcement activity of chambers of commerce and business.

One excellent example of applying specific scientific achievements on the public sector, is a study written by László Domokos and his co-authors. This chapter of the book covers risk management problems in public organisations. A very interesting and innovative approach helps to describe and introduce organisational questions, process management, decision making and monitoring aspects of public management. This study considerably enriches the domestic (Hungarian) professional literature in risk management analysis.

Fourth main part of the book bears the title "Continuous innovation". In principle, it analyzes organisational behavior, process- and quality management, and innovative capacity of the public sector. Authors of this part are Gyula Bakacsi, Antal Tóth, Ferenc Farkas, Csaba Makó, Miklós Illésy, and Mariann Veresné Somosi. Professor Bakacsi describes the essential specialties of organisational behavior in the public sector. He has a rich methodological and theoretical background and he is familiar with the main specific features of this field as well. He points out: "Public service management has a major challenge: on one side, highly qualified and motivated employees can behave as independent problem solvers. On the other side, task-oriented management is also necessary, as objectives of the public organisations are determined by the external environment and/or by supervising authorities." Furthermore, he says (without comment): "Public servants have a responsibility to remain on the level of an executive manager, otherwise they step over to the realm of politics."

A very interesting final conclusion can be found in the chapter "Innovation management", by Csaba Makó and Miklós Illésy. They call forth the attention that in Hungary, the percentage of employees taking part in innovation development, is much lower than in the European Union (as an average number), and, it is even lower than in the transformation economies, post-socialist countries. They express a very definite opinion on an important issue: "Contrary to common beliefs, innovative activity of the public sector is considerably high; nevertheless, there are plenty of un-exploited possibilities yet."

The fifth part of the book focuses on: "Efficiency of management work". Authors of the three chapters are József Nagy, Gyula Király, and Erzsébet Németh. The study written by József Nagy, titled "Management style and organisational culture" is calling forth attention by its motto already. A saying from Emil Tonk is as follows: "Those who think that obtaining knowledge is expensive, do they count the costs of being ignorant?" In this study, the reader can follow the main theories of management and managerial styles. The author emphasizes that most important managerial capacities and competences are equally important in both the private sector and the public sector. The study analyzes different generations: baby boomers, X, Y, Z generations all having their specific features from the points of view of manageability, controllability, administrability. Conclusions of the study in this regard, are in conjunction with the accumulated empirical evidence in higher education.

Closing conclusion of the study points out, that organisational culture is considerably important in public management: "In the public sector, the new public administration culture represents an opening towards the value system of service providing firms. Ethical behavior and personal integrity are in the focus of efforts. This may mean a strong organisational culture, securing ethical behavior in critical situations as well."

A book: evaluation and recommendations

This book has been a considerable effort from all points of view, towards constructing the missing theory of "public benefit", and the principles of its application. The starting points are the principles of public goods and public interests. It adds to the scarce domestic (Hungarian) professional literature on topics like ethical behavior and integrity. The book also gives an excellent text and educational material for tutors and for public service management, and an input support to responsible public decision making. There is an obvious intention for more efficient enforcement of public benefit and for protection of cleanliness of public service. Intentions to prevent and fight corruption, and to promote efficient and optimal utilization of public funds, are also included in this effort. All these intentions and efforts are in essence constructive, positive and honest. Credit is due to the book's professional experiment, which should be appreciated, in which prominent contributors from several different professional fields are involved. The book is about to search for new paths, and for efforts to go further. Summaries, lists of terms, control questions, recommended readings and lists of references, located at the end of every chapter, help a lot in understanding, learning and applying terms. This also facilitates its use as a textbook for studying, making the text really didactic.

The uniform nature, vision and standardized level of quality of chapters are a considerable success of the experiment. Despite the large number of authors, the volume is of high quality standard, strongly forming opinions and firm beliefs.

It seems to be natural, that such a large scale, innovative, gap-filling experiment in professional literature, and its various parts, may and will have critical responses as well. However, one can only hope, that these critical observations and debates will remain on the field of professional, constructive, creative discussions, and do not step over to the slippery soil of ideological and political remarks.

The editor, Mária Bábosik, and her work have to be appreciated. Her task could not be easy at all, considering the large number of contributors and the colorful, huge volume of the materials piled up together. Majority of the authors have expressed several innovative thoughts in a consistent way. Most of them remarkably contributed to the development of this scientific and professional field.

While reading the chapters, in the mind of the reader, several considerations emerged. The following observations scratch the surface only, but these are constructive proposals for further development of this material.

1) Every thesaurus and encyclopedia of this kind, embracing very broad fields of research and study, gives a momentary cross-section of the present state-of-the-art and the standing of science and profession. This is true in the present case as well. In the first part of the volume, there are theoretical definitions which may need further clarification. Regarding the theory of public goods, we can say, that a more exact terminology would be beneficial. We should differentiate "real" public goods from those, which are not free of charge, and there is a problem in their utilization: the conflict with "fare-dodgers" or "freebie passengers". Perhaps, it would be appropriate to select free public goods from those which have to be paid for. The latter items do not fit into the definition of public goods, as they may have exclusive access and do not have unlimited availability.

2) Sub-title of the book promises to deal with public finance administration and management. Despite this important promise, public finance is being analyzed only in a few chapters. Of 27 chapters, only 2 are dealing with this important matter. Public financial management does have a sophisticated structure and a complicated system, related to central banking, state budgeting, monetary and fiscal policy etc. This may be the next task for analysis and the future path for new research started in this volume. Efficiency of government policy, for example, is a competitiveness indicator in certain indexes, such as WEF (World Economic Forum) Competitiveness Index.

3) Besides management, marketing also appears in most of professional analysis and literature. Public service and its management are very scarcely known for the public opinion: it is a foggy, secret, mystic phenomenon. The shift of organisational culture towards service-oriented activity, development of client-oriented public administration, makes it necessary to make an attempt to summarize the principles of non-profit marketing activity in this field. Public management has to be transparent and acceptable for the public opinion as well. The shortage of marketing philosophy and references is a problem in a management textbook.

4) There are several chapters in the book, which approach the problems of public management starting from the general topics of management. Special problems of public management are only mentioned and analyzed at the end of the studies. It is recommended that a more explicit, consistent and relevant orientation of the research should be set for further research.

5) Last, but not least, digital world and the applied informatic solutions should have received more focus in any management textbook of the 21st century. No public administration system can work without them, so they would deserve a part of this research and educational project.

Again, it has to be emphasized, that these observations do not diminish the values of this very innovative, new professional achievement. These recommendations are pieces of advices only for future research and further development.

I recommend the book for those who have a keen interest in public service, either in the theoretical research, or in the practical work. Especially recommended is this book to public servants and those who prepare for public service work. Besides them, all economists, legal experts, managers and social science experts may take use of it.

An event and a book: evidences on results and impact

The conference held on 25th January, organised by the State Audit Office, has provided evidences related to the impact of the publication of this volume and its utilization in public management education, during the relatively short time after its publication.

Lecturers of the conference did point out that the model of organisational integrity has an essential philosophy, and this is following the leadership of positive values, and avoiding any situation leading to corruption acts. Moreover, strengthening this integrity is the responsibility of managers of public organisations.

From an organisational integrity point of view, lecturers, especially György Kocziszky, focused on the compliance system of public managers. In this model, a manager or an employee of a public organisation most fulfill three requirements, which are: 1) knowledge of legal regulations and following them, 2) knowledge of ethical regulations and following them, and 3) professional suitability.

It has been emphasized that there is a shortage in higher education in Hungary: ethics is not a regular course in business programmes. This is also a critical observation which has to be dealt with.

As a result of the organisational integrity project, and also of the publication of the book presented at the conference and also in this present article, a joint research activity has been initiated between the State Audit Office and the Miskolc University. The University introduced a special postgraduate programme in its offer, titled ”Public service analyst”. Hopefully, other universities will join this initiative.

Besides, part time trainings have been organised for the first managers of four different professional fields in the public services. 18 top leaders of county museums have already successfully graduated from the programme with success. In three other fields there are similar trainings, including institutions of child care, social institutions and maternity homes. These institutions went through audits by the State Audit Office beforehand, and the managers are now being trained for the proper practices.

All these programmes can and use the book *Management for the Benefit of the Public* with success and good result.

State Audit Office has had a project to strengthen organisational integrity culture in public organisations since 2009. The original objectives were to map corruption risks and to promote the integrity based cultures and that way of thinking in the public service. Gyula Pulay in his lecture mentioned some indicators of the development since then. He said that National Bank of Hungary and the State Audit Office together, initiated a surveying process for measuring integrity level of public organisations. Participation in surveys was voluntary for the organisations. Number of participants had been 1462 in 2013. Since then, this number has grown up to 3346 in 2017. The number of public institutions having a Code of Ethics also has grown by 19% in the same period.

Lecturers emphasized also the importance of values in the public service. Probably there is no "good state" without good public servants and managers. This was the message of this book and takeaway from the conference event as well.

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Ernő Huszti[1]

On the Change of Regime in Public Finances and the Theoretical and Practical Features of the Hungarian Method

Reflections on a Book by Csaba Lentner Entitled *Change of Regime and Financial Policy*

Summary

In the period after the 2007-2008 crisis, the practical methods and academic schools advocating that economic growth and financial stability are maintainable through the state's proactive and reasonable economy engineering also strengthened in Hungary. One of the most prominent and trendsetting professors of these efforts is Csaba Lentner, who outlined, in his book *Change of Regime and Financial Policy*, ideas worth familiarizing with and inviting professional discussions. More than a quarter of a century after the change of regime in Central and Eastern Europe, the applied economic policy models and system taxonomies are repeatedly compared and new comparative methods emerge overwhelmingly, confirming the significance of and academic grounding for statecraft, including public financing and good governance.

Journal of Economy Literature (JEL) codes: B1, E5, E6, F4, G01, H2, H6, P3, Q1

Keywords: public finances, planned economy, neoliberal concept of transition to a market economy, life after the subprime crisis, unconventional monetary and fiscal mechanisms, Central and Eastern Europe, Hungary

Introduction

The author presents the main economic policy developments between the end of the socialist planned economy and 2004, and then in the period between 2010 and

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2016 (making reference to the fiscal exhaustion between 2002-2010). The analysis of the two disparate periods provide a good opportunity for the evaluation of the characteristic feature of Hungary's various financial policies.

The essence of the book is a comparison of the repressed role of the state (or its theoretical alternative practiced at that time) seen from the moment of the change of regime, on the one hand, and the theory and practice of the unconventional, in other words, proactive government action. Ultimately, three decades are overviewed, and they include, at the last two-thirds (in 2007-2008), a grave world economic crisis that impeded the appropriate management of Hungary's economy development and rendered adjustment to the changes more difficult, sometimes even appearing impossible. All these placed Hungarian fiscal and monetary policy under double pressure, which had to be fended off. The author gets the point: which are more reasonable in an emerging market economy (once pursuing a Soviet-type planned economy), i.e. in Hungary: the conventional economic policy instruments fitting in the neoliberal system of the Washington Consensus or the regulatory and controlling toolkit of a proactive state?

Dynamics in public finances

With the exception of its last chapter, the assumptions made in a successful book of an identical title *(Change of Regime and Financial Policy)* and published by Akadémiai Kiadó in 2005 are repeated to confirm them and present the need for and implementation of changes.[2] The author presents the achievements of the period and his expectations of key changes in finances, as an overview was indispensable, and some of them (as it becomes clear from the last chapter of the book) still remain unsolved to this date. The author raised a series of pivotal questions in relation to privatisation,[3] the transformation of agriculture, taxation and the one-tier banking system, the European Union, economic growth, financial equilibrium, etc. He did so before the onset of the global economic crisis, which had lasting impacts felt to this very day. He was compelled to highlight the problem of increasing government indebtedness, and the most significant unsolved issues of the financial sector that are in harmony with the national financial policy. "Raising the budget funds required for the permanent disbursement of government subsidies, and the elaboration of financial policy instruments providing a basis for raising liquid funds from commercial markets indispensable for lending to businesses are among the most urgent duties in the new millennium", the author thought in 2005 and his ideas proved to be forward-looking (Lentner, 2005a, p. 233).

In preparation for the first part of the book, the author published several studies between 1990 and 2005.[4] Already at that time he was seeking solutions for problems like the need to set up an efficient system of financial institutions, the insufficiently clarified questions of Hungary's accession to the European Union relating to the financial sector, the challenges Hungary may face at the turn of the millennium, the evaluation of the financial strategy implemented at that time, the possible solutions that may be included in the political and economic toolkit, etc. Already back then (in 2005) he raised the possibility (or need) of departing from the wonted financial policy principles and methods, and solidified economic constraints.

I consider it very important that he includes the general government as part of fiscal policy and practice (just as I do and profess), as no efficient financial policy can be developed without this approach. The author's demand for the development of an adequate tax policy through the enforcement of the "needed but sufficient" principle is especially important, as in the absence of the latter permanent GDP growth may be impeded.

After the change of regime, the slight contradiction in financial conditions was manifest mainly in the hectic budget changes. This was solved by a series of budgetary reforms (1995, 1998, 2000-2002), however, for various reasons they remained below the expectations. In that period the activity of the two-tier banking system could already be evaluated: if the government and the National Bank of Hungary (acting as a "bank of banks") correctly established credit relations and the conditions of lending, appropriately regulated the monetary base required for the economy, and if it was sufficiently prepared for the interrelationships to be necessarily set up in relation to the international payment transactions and with the state (budget).

Banking policy and economic policy up to the 2004 accession to the EU

In view of the above, the author goes into details as to the structural problems of the two-tier banking system established after 1987, addressing the difference between the financing policies of foreign- and Hungarian-owned banks and the companies and corporations operating in the key sectors of the national economy. As a result, numerous companies without sufficient coverage were granted plenty of funds in the form of loans, while others, primarily small and medium-size enterprises, were unduly elbowed out of lending. All this adversely affected both industry, especially agriculture,[5] and services, including employment, which resulted in enormous losses in government revenues, further increasing the budget debt. Meanwhile, the financial institutions still in Hungarian hands, already undergoing transformation and struggling with numerous weaknesses, suffered enormous losses as a result of their freezing of their allocated loans. Due to its significance, the author returns to this problem in various contexts, as in his opinion Hungary became particularly exposed to international capital, increasing the threat of an economic paralysis.

The role of gold in the central bank's reserve appreciates at certain intervals, and is given less priority at other times. I agree with the author that in the two-tier banking system recently introduced in Hungary at that time, the central bank also followed the international trend of the day, by considerably reducing its gold reserve, while e.g. the US did not take any such action.[6] Although we witnessed a doubtless demonetisation of gold, the author clearly calls the attention to the need to strengthen the role of gold among the assets that serve as central bank reserves. The reason is that he was afraid that private capital would ceaselessly purchase the central banks' gold reserves, and thus they would be withdrawn from the national monetary aggregates. If this actually happens, central banks, in this particular case, the National Bank of Hungary, lose one of their most important market controlling instruments, and the purchasing power of currencies (in this case, the forint) would depreciate considerably. At present, particularly in the light of the most recent world economic crisis, to contest the soundness of these assumptions might be dangerous.

Currently, bank transfers cannot be skipped during international capital transfers, they are simultaneously national and international, due not merely to their ownership structures but also to their financing, capital accumulation functions and role played as incentives to save. The author reminds us that in the interest of our competitiveness, membership in the EU notwithstanding, the country cannot dispense with strengthening its central banking and commercial banking positions, a favourable modification in the national wealth, and the reinforcement of the instruments used for state intervention, not merely for the purpose of defence but also to bring the adjustment mechanism to success.

Based on several decades of my central banking experience, I can only agree with the author, who quotes the opinion of Imre Menyhay: "the current liberal variety of democracy brings the powerful and unilateral appreciation of the individual desire to make money and wealth in its train, which... might manifest to the detriment of the society's community values" (Menyhay, 1998). All this entails increase in insolvency, in the number of cash payments circumventing banks, and aggressive personal endeavours to make money and wealth. Actually, this was the fact that made thing difficult for the budget and the central bank. Nevertheless, I must add that this was not some conscious "behaviour based on theory", the stakeholders simply abused the situation that had evolved, as the support programmes launched by the state became dependent on and monetary policy was characterised by an ad hoc operation adjusted to government cycles. This made both continuity and transparency unpredictable, rearranged the market in favour of businesses operating with foreign backing and to the detriment of Hungarian ones. As a result, the latter were compelled to permanent borrowing, even in the case of uncertain repayment capacities, and this caused serious damage to the intermediaries in the banking system. In the author's opinion all this greatly hindered and simultaneously undermined the creation of a middle class in Hungary on the basis of independent domestic businesses.

As Hungary had traditionally been compelled to raise capital from abroad, in his assumption the Hungarian economy is fundamentally dependent on the global economy, and thus the options of a spectacular development and of recession are given simultaneously, and give rise to vulnerability in economic and social relations and a weak capability to enforce national interests. Thus particular attention must paid to the conditions and opportunities of using external resources, and to fiscal, monetary and, not least, social stability.

The author thinks that "During the decade past, the world economy and more specifically, the European Union have become points of attraction and directions of closing the gap" (Lentner, 2016, p. 278).

However, this compelled Hungarian economic policy to change the paradigm, irrespectively of the nature of developments in the world economy. The official economic policy coined this as the "Hungarian model", focussed, in the author's opinion, on a "conservative" state-engineered economic policy, the maintenance of the external and internal financial equilibrium, and ensuring an appropriate external capital and financial stability.

As an indispensable precondition of the above requirements, Hungary must have a relationship with the international capital markets and financial institutions. The several price explosions seen in the world market prices from the early 1970s had serious impacts on all the continents of the globe. Countries were divided into two major groups: those that instantly responded to the crises developed their economic policies with due consideration to them, contained growth (primarily investments), tightened their fiscal and monetary policies to prepare for the expected recession, modified the conditions of distribution and redistribution, increased price levels etc., while those that considered the grave consequences of the crisis as merely transitional and made a kind of fetish of the trend that had evolved.

Hungary belonged to the latter, and "once the fixed exchange rate system collapsed, real sector performances are considerably exceeded by financial sector growth overheated by speculation" (Lentner, 2016, p. 290). Nearly after a decade, in the absence of the required internal accumulation, Central and Eastern European countries made efforts at closing the gap to their external markets using external development resources. The capital adequacy of the banking system, which had been restructured and turned into a two-tier system, proved to be insufficient to meet the increasing demand for lending, and this led to the relocation and market acquisition of foreign banks. In our days (in 2017), however, the relationship between financial institutions and their customers may already be considered consolidated, thanks partly to the consumer protection activity of the National Bank of Hungary, as "the MNB forces financial service providers to act fairly, placing emphasis on the increased protection of defenceless consumer groups" (Lentner, 2016, p. 316). The European Union has also recognised the necessity of modernising financial regulation, and stressed the significance of a more efficient banking regulation. The author gives practical examples from the period preceding 2013, when in the absence of sufficient authorization the Hungarian Financial Supervisory Authority was unable to make efficient achievements.

Enforcement of the proactive state model

In the last chapter of the book, the author sums up the historical background, reasons, aims and achievements of a change of regime in public finances, in comparison to certain international cases.[7] An implicit agreement has been reached among the economists advocating diverse views on the absence of a coherent economic policy, the unsatisfactory management of the 2008 crisis, the deficiencies of power techniques, the quality of state involvement, the role played by international economy and the financial institutions, state indebted ness and the draining of state property, etc. "Hungary has sunk into a complete debt trap. At the level of the general government and of families and households" (Lentner, 2016, p. 304).[8] In the author's opinion, the diverse expert conclusions clearly reveal that "only a strong and well-organised state capable of proactively intervening in economic and social procedures can efficiently enforce the interests of the national economy, the market participants and families" (Lentner, 2016, p. 304). Due to the essential assumptions and the presentation of the unconventional instruments and methods, Csaba Lentner's book can be rightly listed among Hungarian scientific works of taxonomic significance.[9]

Then the author goes on to give details of the current state of the more important components of fiscal policy, such as an acceptable share of all in taxation, the policy of opening up new markets, the reduction of public utility fees and personal income taxes, the moderation of the burdens of FCY loan debtors and SMEs, the favourable developments in the labour market, and not least, the favourable position of the external debt and the budget. Based on all these he establishes that: "Fiscal consolidation provided a good basis for launching a change in monetary policy"[10] (Lentner, 2016, p. 308), which comprised four elements:

1) mitigation of the base rate,
2) the funding for growth,
3) the self-financing and
4) the corporate social responsibility programmes.

In addition, the National Bank of Hungary assumes responsibility for the environment, the society and sustainable long-term development, but does not abandon education, science and financial awareness raising, consumer protection etc. either, in other words, it supports value preservation and creation.

Thus the author ascertains that as a result of the fiscal consolidation that had been accomplished by 2013, and of the change in the monetary regime, between 2013 and 2016 the financial position of the various groups of money owners (budget, local councils, companies and the population) could be considered balanced, while the banks and companies with foreign interest had to make sacrifices. The need for a change of perspective in economic policy, claimed by the author in 2005[11] on the basis of theoretical functions set up in an empirical approach for the portfolio (government securities market) and foreign direct investments, was proven in 2016, as evidenced in the last (20th) chapter of Lentner's book. In 2005, the author wrote that the foreign direct investment flowing to Hungary from the beginning of the change of regime had, in a certain sense, dynamised the economy, however, the tax policies applied byt the various governments only imposed very moderate taxes on international companies and investments, which after some time, in terms of contribution to GDP, gave the backbone of the Hungarian economy. The tax revenues not received by the budget and the weak tax payment capacity of state-owned companies and Hungarian SMEs against a background of increasing financial demands by those falling out of the labour market, domestic companies, local governments and the social supply system, generated a deficit in public finances and consequently, sovereign debt. A financial deficit evolved along with a debt trap arising from the insufficient budget organisation, which was then followed by social deficit and a social dissatisfaction trap. In order to raise funds to cover the growing deficit, an increasing amount of foreign loan had to be borrowed, and after some time the FDI received in Hungary was exceeded by the amount of funds allocated to the market of government securities. The debt service resulting from the increasing indebtedness deprived welfare, healthcare, education and a more pronounced support to Hungarian businesses of considerable funds. Thus essentially, foreign direct investment operating at minimum taxes (unadjusted to the actual tax payment capacity) did drive the economy (GDP and exports), but simultaneously it generated government deficit with the "approval" of the inappropriate economic policy applied by the government. The ever rising interests paid on the foreign loans (portfolio investments) raised to finance the increasing current deficit and government debt reduced the stability of the macroeconomic environment, and the funds available for training employees and improving the healthcare system. In order to improve the deteriorating situation, the author recommended (back in 2005) that the economy should be consolidated by levying taxes in adjustment to the tax payment capacity of foreign direct investments and providing tax benefits to Hungarian residents to rev up solvent demand, consumption and thus the economy (based on J. M. Keynes's model). After this improvement in the stability of public finances, as a result of healthcare and education run from more money, foreign banks and corporations, which have sacrificed part of their profits in the budget balancing process, will subsequently be able to have access to higher trained and healthier employees, and thus their presence in Hungary will be given new content and a more favourable climate for long-term operation. The temporary profit sacrifices repay as a result of the new tax policy. Thus instead of extensive conditions (tax benefits), the relocation of foreign investors can be improved through qualitative factors (more stable general government, higher trained and healthier labour). This is, in essence, the author's theory of the relocation and integration of international companies (from 2005), which can also be interpreted as the theoretical foundation of the economic policy that unrolled after 2010 and which was proven correct by the author in his new book.[12]

The book presents the readers with the changes and dynamic in Hungarian economic policy, provides a theoretical explanation for and confirmation of the prevailing practice, in numerous cases also including criticism. The author himself is a practical expert who has been active during the past decades, but worthy of a scientist well-established as a university professor, he analyses the intervention methods used by economic policy and the inseparable financial management, and their social impacts. In the publisher Akadémiai Kiadó's (official) notice released in 2005 (for the first publication), the author's readiness and ability to change was marked as his most outstanding merit and virtue, and this also characterises the Hungarian economy.[13] Recalling the communication of Akadémiai Kiadó, now in 2016 and 2017, when the enlarged monography, accessible in a printed and an electronic version, is quoted as a reference, it can be repeated that a solid piece of work has been made.[14]

Csaba Lentner's overview of several decades presents us with numerous examples within the scope of the main trend, and they require thorough consideration and a profound knowledge of fiscal and monetary processes. He explains his ideas on the basis of an enormous Hungarian and foreign literature, and even skilled practitioners will not find it easy to read. This, however, does not reduce the author's merits and the book can serve as an excellent source for those studying this topic or are interested in Hungary, or more generally, in the transformation of the post-soviet region.

Lentner, Csaba (2016): Rendszerváltás és pénzügypolitika [Change of regime and financial policy]. Akadémiai Kiadó, Budapest, 336 pages.

Notes

1 The author headed a department at the National Bank of Hungary for several decades and he was one of the fathers of the theoretical foundations underlying the two-tier bank system. In the first half of the 1990s he acted as the managing director of the Hungarian Credit Bank, and then as the Deputy CEO of the Hungarian Trade and Credit Bank. He is an honorary university professor at the Corvinus University of Budapest and at the Budapest Business School. He received the Silver Cross of Merit of the Republic of Hungary. Field of research: banking regulation, measuring money demand and supply, and monetary governance. Major works: *Antiinflációs útkeresés – monetáris politika és gyakorlat Magyarországon* [Anti-inflationary reflection – monetary policy and practice in Hungary]. KJK, Budapest, 1987; *A makropénzügytan alapjai* [Fundamentals of macroeconomic finances]. Veszprémi Egyetemi Kiadó, Veszprém, 1998; *Banktan* [Banking]. Tas Kiadó, Budapest, 2002; *Pénzpiacok szabályozása Magyarországon* [Regulation of financial markets in Hungary]. (Co-author with Csaba Lentner, Pál Kolozsi and others), Akadémiai Kiadó, Budapest, 2006; *Egy valuta története* [The story of a currency]. L'Harmattan Kiadó, Budapest, 2011; Bankmenedzsment. Bankszabályozás, pénzügyi fogyasztóvédelem [Bank management: Bank regulation, financial consumer protection]. (Co-author), Nemzeti Közszolgálati és Tankönyv Kiadó, Budapest, 2013. Publication presenting his academic achievements: *Pénzügypolitikai stratégiák a XXI. század elején. A pénzügyi intézményrendszer, a tudomány és a felsőoktatás szolgálatában* [Financial policy strategies in the early 21st century: The system of financial institutions in the service of science and higher education]. A book in honour of Professor Ernő Huszti on his 75th birthday, ed. Csaba Lentner, Akadémiai Kiadó, 2007.

2 "...I confirm that my criticism and predictions for the future have stood the test of time and are still correct today..." (Lentner, 2016, p. 5).

3 In relation to the privatisation procedures taking place in Central and Eastern Europe, he quotes the apposite idea of the Polish economist, Lewandowsky, which says that "privatisation is the sale of companies of unknown values and not owned by anybody to buyers who do not have money" (Lentner, 2016, p. 14). The author had a similar opinion: "...according to the government's solutions, ultimately the Hungarian nation will remain without any assets at all, but the internal and external sovereign debts will continue to rise..." (Lentner, 2016, p. 21).

4 See literature at the end of the article.

5 In 2005, agriculture provided no more that 4 percent of GDP and 8 percent of the country's total export, and the number of employees dropped significantly in this sector.

6 I myself believe any gold reserve kept in the central bank's vault in addition to a specific amount (required for safety reasons) is just as "dead" as the vault, it does not generate any income, and so it should be reasonably allocated.

7 In Csaba Lentner's interpretation, in the fiscal policy line, the change of regime in public finances took place in 2010, following more than two decades of chronic weakness in public finances under a neoliberal management, after its fate was sealed by the 2007-2008 crisis. In the author's terminology the expression "change of public finance regime" includes the transformation of taxation and a shift in government finances towards a stricter regulation and central economy engineering after 2010, and the policy of the central bank operating with multiple mandates after 2013.

8 The author considers consolidation successful for all the three areas, in a manner that generates a combined impact.

[9] Without attempting to be exhaustive: Matolcsy, 2015; György and Veress, 2016; Pogátsa, 2016.

[10] This was reinforced by the communication of the Monetary Council of the National Bank of Hungary, published in the second half of 2010, stating that "it can be established that as a result of the global upturn, recession has come to an end in Hungary".

[11] Lentner, 2005, Chapter 17, with special focus on pp. 265-267.

[12] Moreover, certain segments in the new type of economic policy (bank policy, bank regulation, public finances, consolidation) are also analysed in the author's books published after 2010.

[13] https://akademiai.hu/1881/gazdasag/tovabbi_konyvek/rendszervaltas_es_penzugypolitika_1.

[14] In view of the significance of the content of the book, owing to the good offices of publisher, the author's ideas are also accessible for reading in an electronic format at: https://mersz.hu/dokumentum/dj231rep__1/.

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János István Németh

1956 in the Oral Tradition in Sokorópátka

A Review of Adél Vehrer's Book

Summary

In her new book, Dr Adél Vehrer, ethnographer, associate professor and an emblematic personality of her generation in this discipline, explores the essence of the national unity created during the 1956 Hungarian Revolution and Freedom Fight, an event that also influenced international history. This review aims to highlight the correlations in this complicated process, in the hope that the book, while serving our generation, will be a curiosity in the future. The English translation of the book was published simultaneously with the Hungarian version.

Keywords: 1956 Hungarian Revolution and Freedom Fight, folk tradition

In his works, historian Elemér Mályusz focused on the development of a theoretical basis and methodology for research in ethnic characteristics. He elaborated this programme at the request of historian and ideologist Gyula Szekfű, and published it in his study entitled *A népiség története* [The history of ethnic character] in 1931. The essence of his idea was to renew Hungarian historiography using a uniform, standard method, and to incorporate the results in historiographic summaries with interdisciplinary cooperation, including ethnography, linguistics, sociology, etc. Reliable Hungarian historiography and awareness of the national identity can only be expected if comprehensive research and processing are carried out for every settlement with a common approach. Local communities should be informed of the national events and the local conditions should be incorporated in general processes. Thus the national identity will be deeply rooted in Hungary, and changing regimes and political courses cannot easily wipe it out.

The 2016 support programme implemented by the Memorial Committee established for the 60th anniversary of the 1956 Revolution and Freedom

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Fight also encouraged this history writing programme. The local events of the revolution and freedom fight need to be disclosed and communities encouraged to keep the memory of those glorious days alive. As the revolutionaries' generation are passing away, we are in the very last hour to collect information through personal interviews. Adél Vehrer's book entitled *1956 in the Oral Tradition in Sokorópátka* is among the achievements funded in the frame of the programme and confirms that the Memorial Committee made the right decision.

The author uses the conventional methods of ethnography to discuss the topic. She was a student of Bertalan Andrásfalvy, and still an undergraduate when her first book describing the life of Lajos Tuba of Sokorópátka was published. Her doctoral thesis was published in 2004 by Gondolat Publishers in the series *Doctoral Masterpieces* under the title *Templomos lovagok az európai néphagyományban* [Knights templar in European folklore], and became a milestone in the research of historical legends in Hungary and abroad. She published a similarly significant summary entitled *Népi kultúra. Néprajzi alapismeretek.* [Folk culture: the fundamentals of ethnography] in 2009.

In her new book Adél Vehrer divides the dramatic events that happened to the informants living in Sokorópátka during the 1956 revolution into three major units. The book presents the suffocating atmosphere of communist dictatorship in the 1950s, the second describes the revolution, and the third recalls the retaliations and prison memories after the fall of the revolution and depicts, based on personal recollections, the period up to the change of regime.

Every part of the book bears a marked imprint of anxiety: "Sixty years have passed since the earth-shattering days of the 1956 Revolution and Freedom Fight in Hungary and almost three decades since the change of regime. Yet, while reading these recollections, we feel that the first half of this period affected people's lives far more, as the individual tragedies and post-revolution ordeals crushed souls, fates and communities, while the global consequences of the changes after 1990 did not have a similarly deep impression on individual lives. Fear, deeply committed to the memory, is still concealed, more or less latently, behind the recollections of 1956 in Sokorópátka" (p. 118).

The 1950s destroyed almost every element of traditional peasant live. As a result of the complete expropriation of land without compensation and the obligatory surrender of any surpluses of all kinds of agricultural produce, the peasantry had to strenuous effort to survive and suffered the most severe humiliation. The author recorded the recollections of József Nagy, Tihamér Pintér, Zoltán Dénes, István Kovács and Lajos Büki, who took part and acted bravely in the events of the 1956 revolution in Sokorópátka and then suffered from political reprisals. Adél Vehrer has arranged the texts in an excellent dramaturgical order, interconnects the ideas in a clear style, identifies new correlations and places them in a historical perspective, compiling the interviews and documents peculiar to the era into a book that provides the reader with new information and experience.

Right from the first pages the reader has the impression of watching a well-cut, exciting and thought-provoking film. The literal quotation of the series of the informants' stories gradually expands our understanding of the contemporary village society, and the distress caused by defencelessness increases. The author makes us see fallible human beings, the moral fibre of the peasantry even in the most difficult situations and, sometimes, even the humorous side of life in the midst of dramatic events. In what follows a taste is given of the stories from the 1950s. "I do not remember who determined the quantities to be surrendered, but I can recall this saying: 'Part of the grain was destroyed by drought, the other part by the barge and the third part must be surrendered.' It was a cruel world! Once old Pista E. accompanied the executor, a woman who was in charge of 'sweeping the loft' [i.e. confiscating even next year's sowing seed]. My mother told her that our loft was empty but she insisted on going up. 'You can go up but then I will take the ladder away!' my mother told her… Finally, the bailiff decided not to go up" (p. 17).

Today's young and middle-aged people may know precious little about "black [i.e. illicit] pig-slaughters". The following quotation provides a glimpse of how things were going: "During the Rákosi regime 'black pig-slaughters' were made. We were not given permit to kill a pig. My dad was afraid, and I was not bold enough to apply for it either. We were scared. The moon shone into the pigsty and my dad hit the pig on the head so that it did not have the chance to let out a scream. We took the pig into the pantry and scalded it. In my grandfather's house there was a big chimney where we could smoke the pig. No one ever found out what we did" (p. 21).

As we get closer to the starting date of the revolution, recollections increasingly change, from one minute to the next, a Wagon Factory worker, a farmer, an actor, an engine driver or a shop assistant becomes a revolutionary who stands up boldly for a morally righteous case and is ready to risk his or her life. The most exciting moments in the book are those when the informants remember the life altering moments. As almost all the people recalling the 1956 revolution in Sokorópátka commuted to Győr for work, they also remembered the revolutionary events in Győr. Several previously undisclosed findings are described in the book as a result of Dr Adél Vehrer's thorough research in public record offices and court archives. They include a description of the arrival of István Török, a tragic hero of the revolutionary events in Győr, at Sokorópátka in the days when the revolution was put down, his meeting with the participants of local events, and of the revolutionaries from Tatabánya, who played a key role in the "battle at Écs" and wanted to organise further resistance. The events described for the first time include the burning of compulsory grain and animal surrender and confiscation documents at the village hall, which was rigorously retaliated after the fall of the revolution. After a few months of silence, reprisals reached this formerly peaceful village located at the periphery of the county. All the informants recall retaliations in the same way. The terror machinery was cynical, cruel and unlawful in every respect, as illustrated by a brief excerpt: "They put them on a truck and transported them to Győr. As they were going, the truck stopped and one of them was taken off, his ass kicked, a bullet fired in the air, and they went on. The men on the truck said: 'Well, one rogue has gone.' They went on and another man was taken off. The quilted-coat men were militiamen, party leaders and functionaries who established this paramilitary organization and made this show… They did not shoot anybody dead but made the band frightened" (pp. 39-40).

In this machinery, courts sanctified retaliations. *Adél Vehrer* has filled gaps by describing the mechanism and ideological basis of judicial practice, documenting trial proceedings and publishing complete texts of original court decisions, which represent exceptional value.

The local community readmitted the young people released from prison, and in the village they did not suffer any moral or financial disadvantage to their families, relatives, friends or acquaintances. On the other hand, their integration into the society outside the village was difficult. Unforgettable stories depict these hard years spent in fear and circumspection.

In her book the author guides the reader through Sokorópátka. Owing to the dynamic and stressful text, the reader just cannot put this book down as the intention of the author achieves its objective, while she recognizes exciting relations and the dramatic nature of everyday events in the deep and the universal human message reflected in the uniqueness of the fates of people living in the village. This book can be translated into any language because readers would understand in exactly the same way the tragic of human destiny written in a suggestive manner.

It is a pleasure to see the fortunate combination of values when the profound knowledge of facts and methodology are coupled with emotional commitment. This affection is clearly recognizable in every line, as summed up in the Epilogue: "The suffering and poverty of family members without a father, with a sibling or child missing after 1956-1957 are also present in the recollections. The family and the broader community of the native land shared the consequences of cruel sentences imposed for "crimes" that had never been committed. This book is a tribute to the nameless crowd" (p. 120).

With this book Sokorópátka came within view in international science through the presentation of its dramatic past from a historical period which was crucial for the nation. The book was warmly welcomed by the villagers, occasionally in tears, and the disclosure of the events that happened in Sokorópátka has added new details to the history of the 1956 revolution. Under the guidance of the author, it leads the reader "from a brook to the vast ocean", as her motto says.

The book is supplemented with an Appendix containing numerous valuable documents and photographs. It was published in English under the title *1956 in the Oral Tradition in Sokorópátka* simultaneously with the Hungarian edition so that the world can become familiar with the events that happened in Sokorópátka.

Vehrer, Adél (2017): 1956 in the Oral Tradition in Sokorópátka. Bodnár Stúdió Kft., Győr, 141 pages.

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