

**„THE GREAT TRANSFORMATION” – WITHOUT A TECHNOLOGICAL REVOLUTION.  
THE CASE OF HUNGARY**

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**Abstract**

*The study examines the question of why the Hungarian economy is drifting twenty years after the change of regime into similarly critical situations, than it had directly before the change. Why the indebtedness has not been stopped, why the consolidation of the economy was not successful, and why the undealyable reforms were not set on their way? The authors mark the “one-sidedness” of the change of the regime as one of the reasons of this, meaning that the institutional changes unfolding at the end of the 80’s, the political transformation and the foundation of the fundamental institutions of the market economy were not based on a technological transformation in the 90’s. The variously colored governments remained equally insensitive to the necessity of the IT revolution, and to its consequences. For example, while an information technology ministry had already been in place in the United Kingdom in 1985, in Hungary the various economic plans, documents, governmental programs before and after the change of regime were based on an economic world view that was oriented towards the most traditional market economy. The regime-changers up to date have hardly taken any note of the fact that time had already past over the traditional market economy. The authors connect the deficiencies of the technological background of the change of the regimes with the perceptible (and growing) lagging of our competitiveness in several areas, and that the knowledge economy - compared even with countries starting from similar position – remained vestigial, or it has been growing extremely unevenly in the different areas.*

**Key Words:** Great Transformation, Technological Revolution, Hungary.

JEL Classification: O 17; O 30;

**Preliminary communication**

Received: Mart 29, 2012 / Accepted: May 29, 2012

*“...The Hungarian economy is in a really serious trouble.*

*Despite the reoccurring efforts, the consolidation of the economy has not succeeded; there wasn't a success in initiating a transformation that could have gradually stopped the indebtedness process, and the austerity measures...could be withdrawn...*

*The strength of the current economic policy and economic governance is exhausted in averting the dangers appearing most serious momentarily, and – as a result of the shortage in extra shareable resources – it can even carry out this task only at an ever decreasing efficiency rate”.*

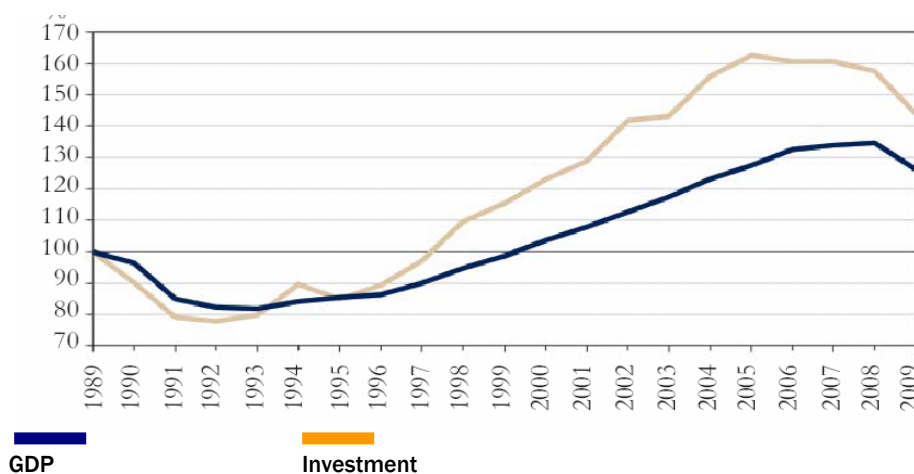
**1. Path dependence: the reproduction of macro-disequilibriums**

The most recent report on describing the current Hungarian economic situation could start with the above quote; however the dating of this quote is not 2012, but 1987. Two and a half decades ago, the Hungarian economy – at least considering the symptoms – struggled with the same serious problems, than today. The above given snaphot of 1987, based on which the untenability of the socialist economic system was first declared, carried the title of *“Turn and reform”*. (Antal et al, 1987). The publishing of the document (or rather manifesto) put together by leading economists was an “overture” for dramatic changes in Hungary. The dramatic changes however – as opposed to the contemporary hopes – *had not led to the mitigation of the macro-*

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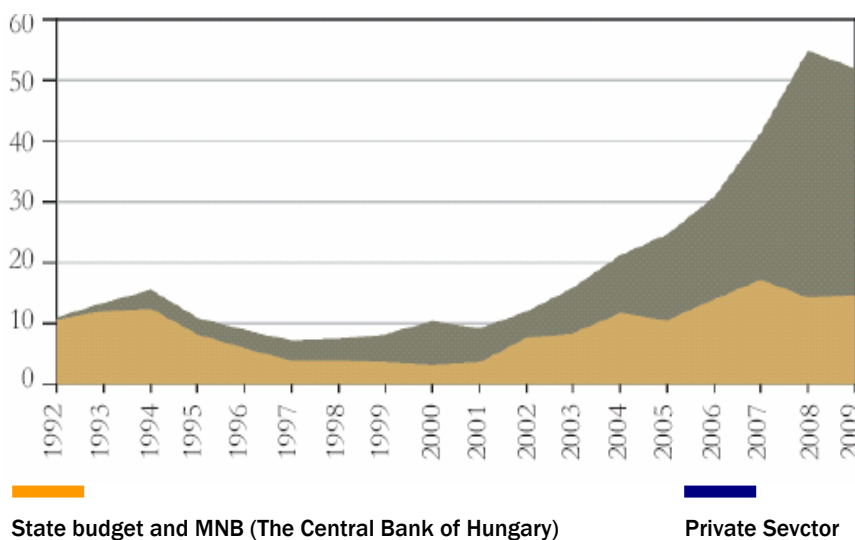
economic problems, the difficulties has reproduced. The bottom of the transformational crisis in 1993 was followed by another decline (Figure 1) from 2005 (thus way before the global economic crisis), while the indebtedness, particularly the indebtedness of households – after a temporary decline – increased drastically compared to the one preceding the political transformation (Figure 2). Although during the past two decades Hungary had significantly narrowed the economic gap compared to the EU average (measured in per capita GDP<sup>1</sup>), the growth did not prove to be sustainable, and it was primarily based on foreign capital.

Figure 1 : GDP and investment in Hungary (1989-2009)%



Source: KSH (Cental Statistical Office )Magyarország 1989-2009. A változások tükrében, Budapest, 2010. p. 32.

Figure 2: Net foreign debt of Hungarian economy at the end of year (1989-2009)



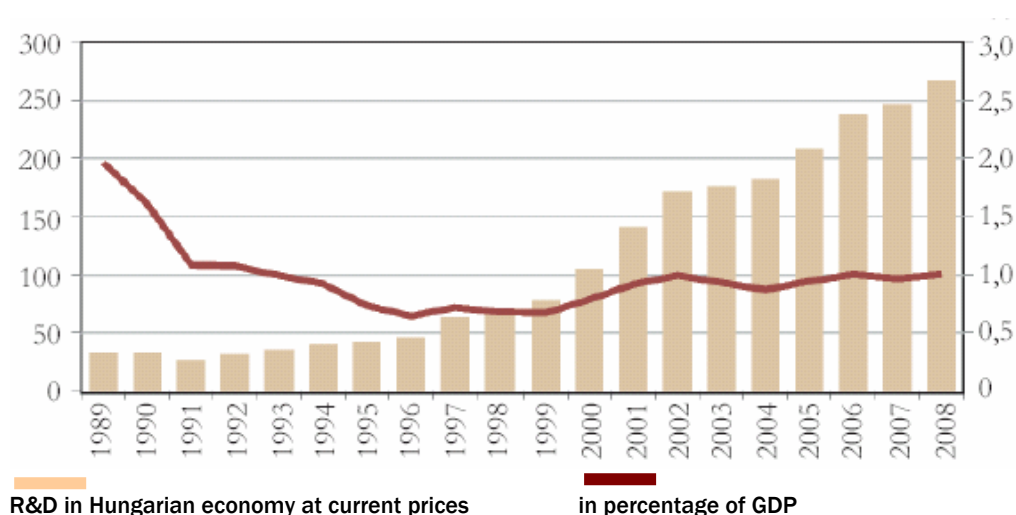
Source: KSH (Cental Statistical Office )Magyarország 1989-2009. A változások tükrében, Budapest, 2010. p. 34.

<sup>1</sup> In 1997 Hungary reached 52% of the average of the current 27 EU member states in terms of per capita GDP, by 2006 this rate grew to 63%. (. (Structural indicators an Long-term Indicators, Eurostat, (<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb010>),

Certain indicators not only has not improved, but they have declined significantly over the two decades. The level of employment among the working age population went from 63,6% in 1990 to 55,4% in 2009, which is remarkably low even in terms of international comparison. During this the unemployment rate went from 1,3% to 10,3% by 2009. (KSH=Central Statistical Office), 2010.p.11)

The decline in the unemployment rate compared to the 1990 level is somewhat understandable, since a certain level of unemployment is naturally comcomintant with the capitalist market economy. However, the halving of the R&D expenditures compared to the GDP during the time period since the change of regimes is less understandable. (Figure 3).

Figure 3: R&D in Hungarian economy at current prices and in percentage of GDP



Source: KSH (Cental Statistical Office )Magyarország 1989-2009. A változások tükrében, Budapest, 2010. p. 32.

The level of R&D compared to the GDP from the nearly 2% in 1989 declined to 0,76 by 2004 and (slightly increased, but far form the 1989 level) to 1% by 2009. One would logically expect that switching to market economy would lead to the appreciation of R&D activity. Since the market economy by definition is an *innovative economy*<sup>2</sup>, it differs from all other economic systems in this regard as well. (Fogel, 1999; Kornai, 2010). Therefore, the fall of the R&D expenditures as a result of switching to market economy can be considered an anomaly in every ways.

During the two decades that has passed since 1990, private property had become dominant, multitude of global firms had settled in the country. As a result of EU membership achived in 2004, essentially the same economic regulations work in Hungary than in the old EU member states. Yet we are still unable to escape the well known macroeconomic ills of the socialist system. Moreover – from the decline in the employment rate to the dramatic drop in the R&D expenditures – still unfavourable macro trends are developing after the change of regimes. All this brings up the question inevitably:

*How efficient alternative is the “exsiting” market economy, if the transitional countries taking this path from time and time again face serious economic troubles, budgetary upheavals?*

<sup>2</sup> Innovation – except the capitalist competitive economy – in all other societies is a sporadic phenomenon. Innovations, if there is any, are exogenous in nature, they do not stem from the essence of the economic relations.

In their own manner, the population of the East-European ex-socialist countries has answered this question: the appeal of the market economy in all East-European countries declined significantly, while in Hungary this was a straight out dramatic decline (See Table 1).

Table 1: Approval of change to capitalism

Country	1991 (per cent)	2009 (per cent)	Change (per cent)
East Germany	86	82	-4
Czech Republic	87	79	-8
Poland	80	71	-9
Slovakia	69	66	-3
Bulgaria	73	53	-20
Lithuania	76	50	-26
Russia	54	50	-4
<b>Hungary</b>	<b>80</b>	<b>46</b>	<b>-34</b>
Ukraine	52	36	-16

Source: The Pulse of Europe 2009: 20 Years After the Fall of the Berlin Wall, Pew Research center, November 2. (<http://pewglobal.org/2009/11/02/end-of-communism-cheered-but-now-with-more-reservations/>)

The significant decrease of the acceptance of the market economy is by itself enough reason to find an answer to our previously posed fundamental question: why hasn't the market economic transformation led to economic stability and successful catching up.

## 2. The one-sidedness of the change of regimes: the deindustrialization of the „industrial society”

We may find the explanation *in the one-sidedness of the change of regimes and in dual economic structure*. The formal development of the market economic institutions, *the political-economic transformation in Hungary was not accompanied (or just partially) by deeply penetrating economic activity, by a „technological transformation” encompassing all production and service: a rapid and unambiguous switch in terms of technology from a sterile, peculiar socialist industrial society to information capitalism*<sup>3</sup> (commonly known as „information society”)<sup>4</sup>. The transforming countries had not aimed at the then developing information capitalism, rather they found the most traditionally interpreted capitalist market economy as a model worth to follow.<sup>5</sup>

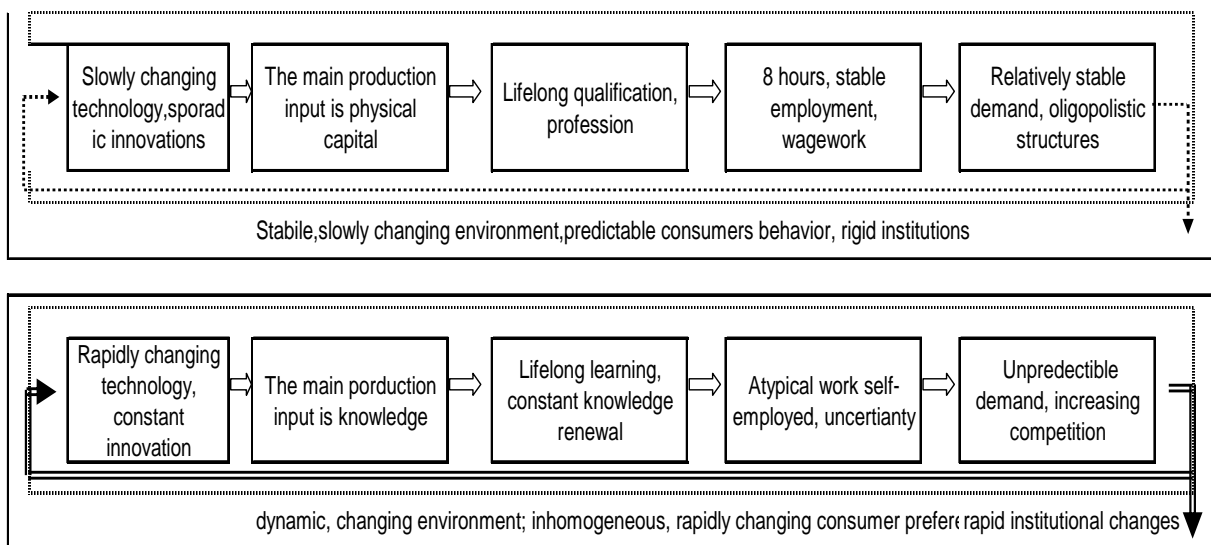
<sup>3</sup> The term „Information capitalism” is coined by Peter Drucker: (Drucker, 1993) “While the world economy will remain a market economy and retain the market institutions, its substance has been radically changed. If it is still “capitalist,” it is now dominated by “information capitalism....The industries that have moved into the center of the economy in the last forty years have as their business the production and distribution of knowledge and information, rather than production and distribution of things.” (Drucker, 1993, p.182.)

<sup>4</sup> There has not yet developed a commonly accepted definition for information society. The famous researchers of the topic (Castells, 2005; Negroponte, 1995; Shapiro -Varian, 1999) differ in their interpretations, and offer various names for information society. They have however a more or less common agreement that the workings of the economy is radically differ from the earlier formation (termed industrial society). The basic production process is the production of information, and the rest all depend on this. Among the production inputs, *knowledge becomes dominant*. Accordingly, those who are working with information, in other words the knowledge workers among the employed (self-employed) have increasing weight. Market transactions are also significantly differing from the ones a half century ago, just as the operational systems of the firms (flat organization, networking, outsourcing). The *space and time coordinates of the economic interactions* has changed as well. The economic space is becoming virtual; the processes that take place in real time are increasingly less place dependent. However, in this paper we are not discussing these later factors.

<sup>5</sup> Paradox: while numerous signs had indicated the technological transformation in the world economy, there was no discussion of this during the debates preceding the change of regimes. For instance, in the document called “Turn and reform” mentioned in the introduction, which tried to develop a strategy for the market economic transformation for

At the end of the 80's and at the beginning of the 90's a double transformation was happening in the world. The *technological transformation* in the developed countries was coupled with the *political-economic transformation* of the socialist countries (not independent of the formal). The technological transformation – thanks to information technology, nanotechnology and bioinformatics – created a new basis for the entire economy, and with the help of the world wide web, it has reached around the entire globe. Between the two types of transformations there is a causal connection, a strong interaction exists.<sup>6</sup> (Csaba, 1994). In Figure 4. we are contrasting in a model-like manner the characteristics of the industrial economy to the characteristics of the information economy, in order to show the real state of the Hungarian economy, and to show the place of the country in the race of the European technological transformation.

Figure 4: The traditional industrial capitalism and the information capitalism (knowledge economy)



The *transformation of the technological basis of the economy is moved by innovations*, all other phenomena originates from innovations, which is summarized in the model of innovation capitalism. Today, in a normally functioning modern economy, especially in the developed countries, 60-80 percentage of the growth in the gross domestic product (GDP) is provided by innovation. Arrows of Figure 4. show the causal relations: neither the spread of lifelong learning, nor the flexibility of the 21st century working conditions cannot be understood without the infocommunicational innovations.

the long run, we cannot even find a single reference to the IT-revolution, even though it had been taking place in full swing. In 1985, the British government already had an information technology minister.

<sup>6</sup> The socialist system, despite switching off market forces, was a functional version of the industrial system for decades; however it was incompatible with the information economy. “The empire simply lagged behind in the electronic revolution, even though social and developmental factors were fundamentally transformed by changes similarly significant to the invention of the wheel or the steam engine. During the decades of the 70's and the 80's, when the overweight of the third sector accompanied by globalization and financial innovation, and the flow of technology, capital and knowledge became the force behind the new type of development, Russia remained a closed, state controlled, late industrial society.” (Csaba, 1994, p. 42.). Although, Hungary thanks to various reforms was putting pressure on these frames, and it was much more open to Western technology and even to Western capital than Russia, still it is true for the Hungarian case as well that it could not break out from the relations of the industrial society. This diagnosis not only pertains to socialist area of the 80's, but unfortunately it is still appropriate, when describing the situation in our days.

If we compare the parameters in Figure 4. with the Hungarian economy, we can state that in terms of its substantive characteristics it stands closer to the model of the industrial society, in spite the industrial shrinkage that followed the change of regimes. The weight of the industrial sector in the economy between 1989 and 2009 declined by more than 10 percentage points, (from 35,5 to 24,9%), while the proportion of the service sector increased by more than 25 percentage points, from 40,5 to 67,4%. Nevertheless, the Hungarian economy is a special „*deindustrialized society*”, even if it seems as a paradox. Deindustrialization in Hungary in fact – as we will prove later – has not opened the road to a developed information economy (knowledge economy). During the past two decades, the proportion of commerce, public service and the financial sector within the vigorously spreading service sector has dynamically increased, while transportation and communication sectors have stagnated.

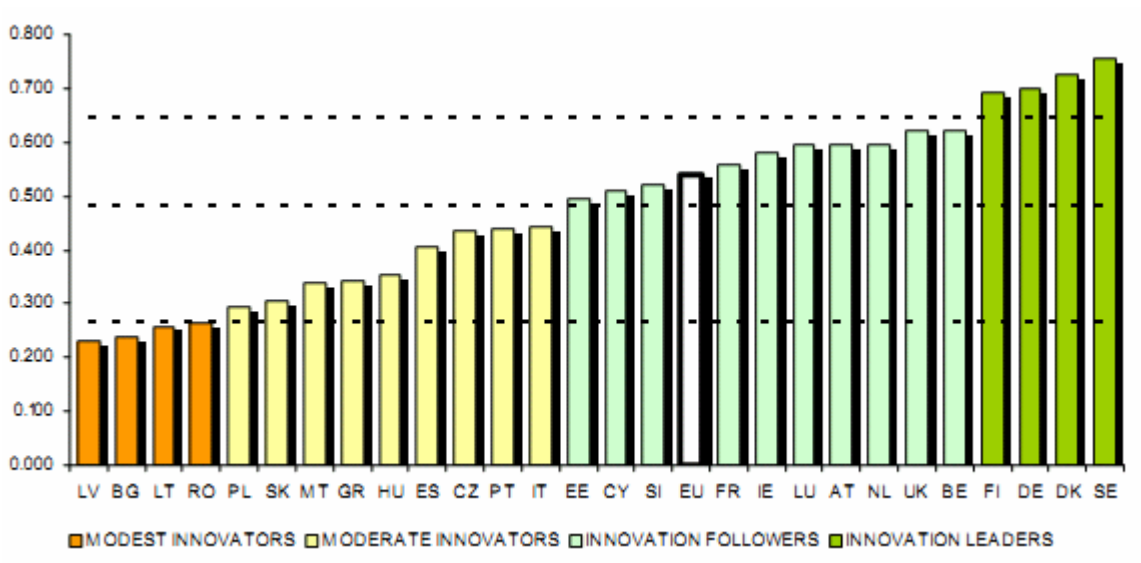
The characteristics of the Hungarian economy only in a narrow segment at best cover the information economy parameters found at the bottom of Figure 4. International firms operating in the country, which (even if not necessarily considering their production installed in Hungary) are keeping up with the global technological transformation, *work as enclaves*, almost completely isolated from the rest of the economy. (OECD Reviews of Innovation...2008, p. 61). The technologies of the 21st century and sporadic innovations are almost exclusively connected to the global companies settled in the country. The Hungarian economy has been a dual structure in this sense too.(Makó-Illésy, 2006) The next figure shows the low level of innovation in the Hungarian Economy in international comparison, and at the same time its strong concentration in the hand of mostly foreign owned big corporation.

This statement is supported by evaluations of the OECD Country Report of Hungarian Innovation Policy: „The overall level of innovation activity as measured by most standard indicators of innovation input, output and even technology diffusion (such as ICT-related indicators) has remained comparatively low in the economy at large. The weakness in recorded innovation activity seems to be at least partly due to the fact that much of the observed innovation activity and research and development (R&D) in particular are concentrated in some large, export-oriented, often foreign-owned enterprises, operating in a limited number of manufacturing industries, and - to a lesser extent - in some parts of the services sector. In contrast, a vast number of small and medium-sized enterprises (SMEs) record no or only feeble innovation activity. What seems to be lacking is a strong segment of the medium-sized innovation-oriented firms which play an important role in many of the more innovative OECD-countries.” (OECD Reviews of Innovation, 2008, p. 61). With some simplification we claim that *the breaking out of the outdated model of the industrial, and surpass the dualism of the Hungarian economy society depends on economic innovativeness.*

The surpassing of the heritage of the socialist industrial society (and the reproduction of the macroeconomic problems) can be only achieved by the acceleration, the spread and the stable stream of innovation. We are quick to say that our claim was not born out of some kind of *technological determinism*, since in the following section of this paper we are trying to show exactly to which social factors the proneness to innovation can be traced back to, and what social determinants block innovations. However, the social factors explaining innovation, or the lack of it, are not changing that fundamental thesis, according to which *in the sharpening global competition only those countries stand a chance, which are characterized by permanent and accelerating innovation.* As far as the innovativeness of the Hungarian economy is concerned, the so called Summary Innovation Index (SII) provides us with a snapshot. (See Figure 5.).

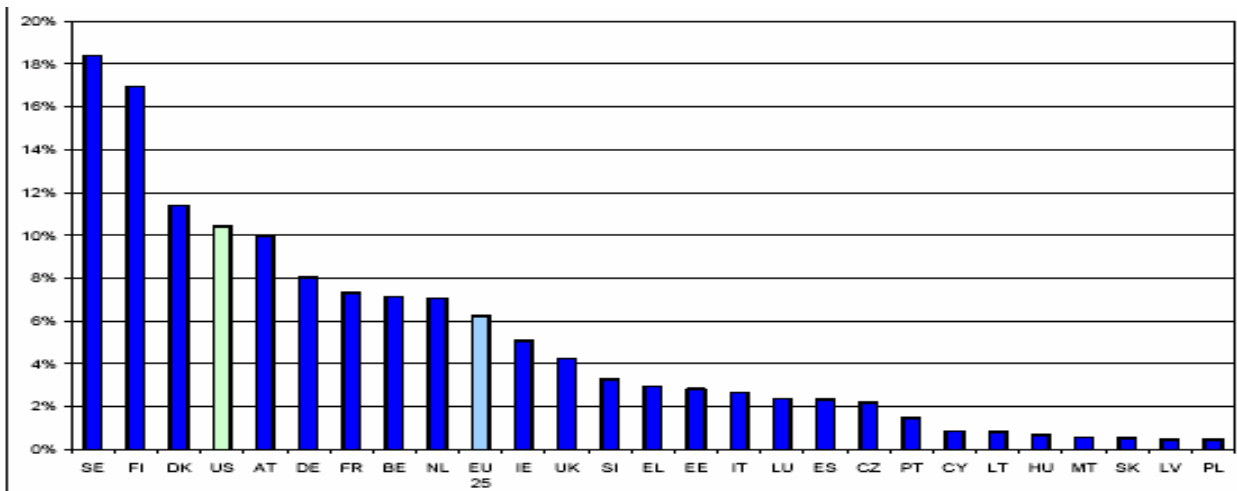
From the above figure we can read out only a relatively modest innovation activity, rather than a permanent, strong innovation. The innovation activity seems to be even more modest in the ICT-sector ( See Figure 6), while the contribution of the ICT businesses to the GDP is very impressive: 11 % . (OECD Reviews of Innovation... [2008] 150. o.)

Figure 5: Innovation performance of EU27, Summary Innovation Index ( SII), 2009



Source: innovation union scoreboard 2011. The Innovation Union's performance scoreboard for Research and Innovation, 7 February 2012

Figure 6: ICT Business R&D Intensities in EU 25 and the US BERD/VA (2004)



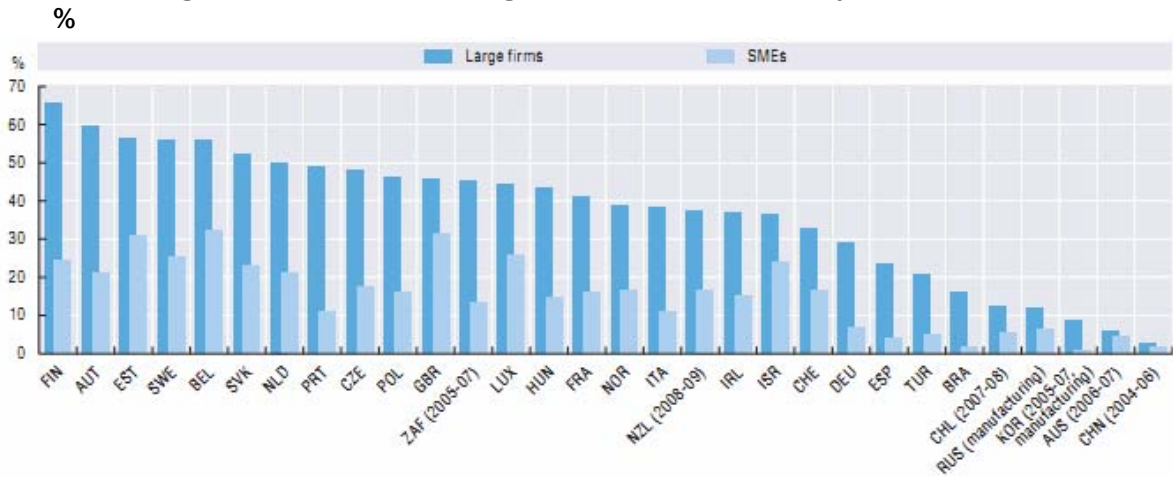
Source: IPTS-REDICT based on data from Eurostat, OECD, EU KLEMS and national statistics. In: Preparing Europe's digital future. 2010 Mid-Term Review, p. 26.

While in the case of the innovation leaders Sweden and Finland the rate moves between 16-18%, and the EU's average surpasses 6%, in Hungary it does not even reach 1%. This can be explained by the fact that in the country's IT sector a large proportion of the activities are the assembling style activities carried out for global firms, where not even the possibility of innovation arise.

We may measure the progress on the road driving towards the information society by the degree of networking. The network society expression is often used as the synonym for information society (Castells, 2000). Networking is the unsurpassable requirement of modern economies. This robust trend of the information economy is especially strong in the area of

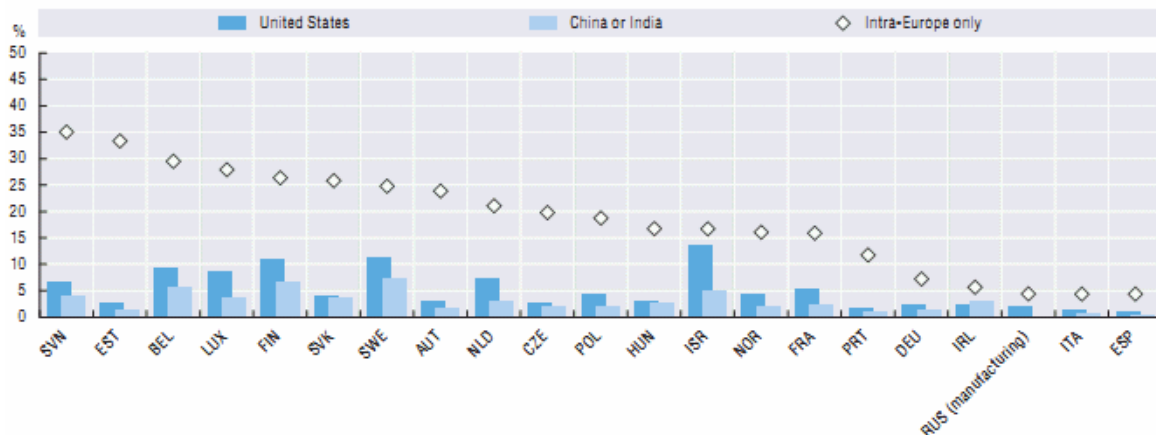
innovations, since in many cases even global firms cannot innovate by themselves. In the current world economic environment the solution is provided by the so called “open” innovation formula, which accelerates and at the same time makes innovation activities more efficient. In international comparison Hungary can be characterized by the following parameters (See Figure 7, Figure 8).

Figure 7: Firms collaborating on innovation activities by size, 2006-08



Forrás: OECD(2011): Science, Technology and Industry Scoreboard, 2011.p. 107

Figure8: Firms engaged in international collaboration by partner country, 2006-08. As a percentage of innovative firm



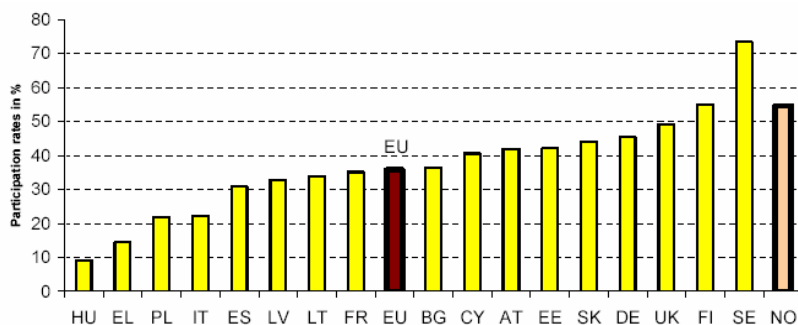
Source: Forrás: OECD(2011): Science, Technology and Industry Scoreboard, 2011.p. 107

Zoltan Csizmadia, who dedicated an entire book to relationship between networking and innovation, set out from a pessimistic hypothesis, according to which “the domestic innovation processes are moderately influenced by the various type of innovation cooperations with different functions that are based on and coordinated by social-institutional network of relations. This assessment applies to the entrepreneurial sphere, and to the institutional system aimed at servicing, helping and mediating it, as well as to the connection points between the two power spheres.” (Csizmadia, 2009, p. 15) His hypothesis was justified in the course of the research; moreover it was supplemented by that “even during the one and a half decade one could not have observed the dynamization of the inter-firm cooperation. Few and primarily two-actor cooperation are characteristic, the complex developmental and innovational networks are missing, in addition the majority of the cooperating firms maintain partners inside of closed economic/market field.”



(Csizmadia, 2009, p. 188.) As the figures show, Hungarian businesses, especially the SMEs are rather weak in collaborations, which is a serious obstacle in their innovation activity. Information economy characterized by permanent innovation demands constant relearning from economic players, employees, in other words lifelong learning when moving towards the information economy becomes a general requirement. The rate of those partaking in formal or informal education, or attending trainings is by far the lowest in Hungary among the 18 EU member states. Sweden’s rate is more than seven times, while Finland’s rate is more than five times exceed the Hungarian rate, and even Poland surpasses it twice. (See Figure 9.). These data show as well that Hungary in terms of innovation rather follows the pattern of the industrial society, than moving towards the information economy.

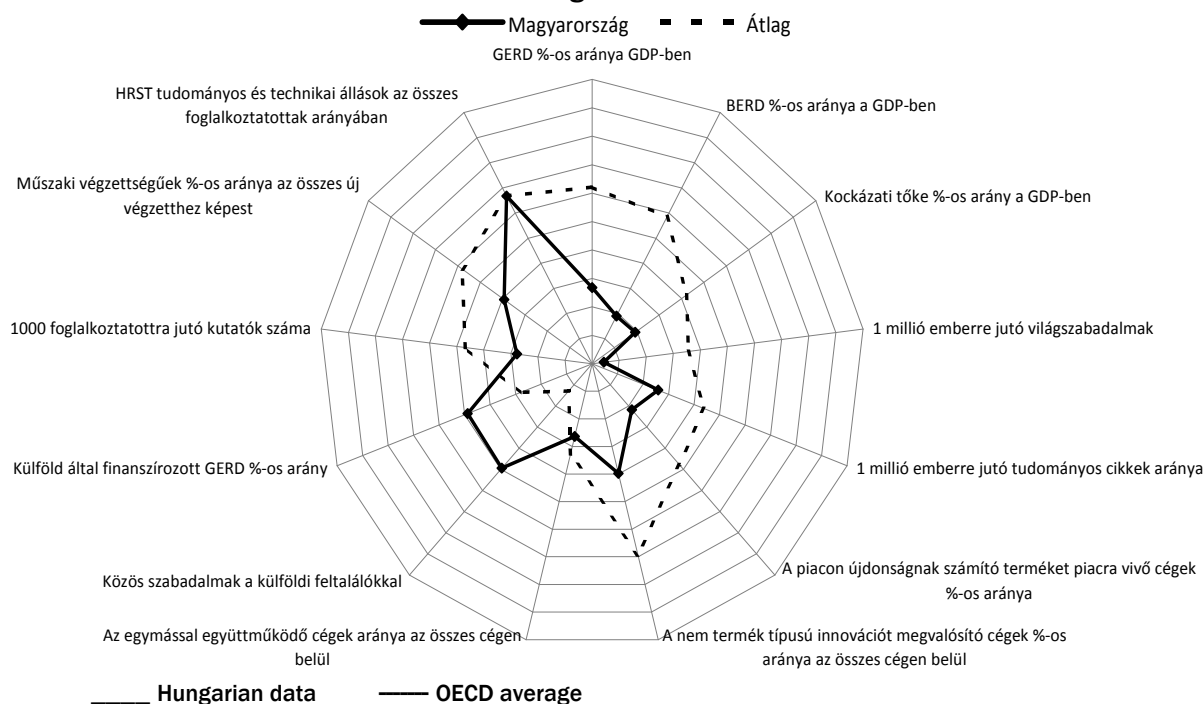
Figure 9: Participation in formal or non-formal education and training age 25-64 (%), 2007



Forrás: Boateng [2009] p. 1

Only a few characteristic R&D factors make the picture a bit brighter. For example, the rate of employment in the scientific and technological arena is close to the OECD average, and we even surpass that in the area of the research financed from abroad. (See Figure 10).

Figure 10



Source: OECD, Science, Technology and Innovation Outlook, 2010. Paris, 183.

However, these “good” performances to a certain extent bring up efficiency problems (like the discrepancy between the high level of the HRST indicator and the low innovation capacity) and to a certain extent can be connected to foreign capital. These more favorable indicators do not change fundamentally our claim, that the low level of the country’s innovation potential not only causes temporary difficulties, but it also makes the long term prospects of Hungary quite gloomy ( Pitti, 2010.)

When we trace back our current macroeconomic troubles to low innovativeness – as we emphasized earlier – we are not at all doing this under the rubric of *technological determinism*. It is far from us to simplify matters this much! We are not forgetting the other side of the coin as well, the institutional determinants of technological progress, and what is more we consider it as a highly important factor, a *final explanatory factor*. The reproduction of bad macroeconomic constellation is traced back to the generally low levels of innovativeness, while the low innovativeness is traced back to limited availability of resources, to the limited competition for the resources, in other words to the institutional system of the economy. In the last part of our paper, we will shed light on this.

### 3. The complex institutional determinants of innovations

New technologies – as several institutional economists and economy historians convincingly proved it<sup>7</sup> –, do not appear and spread in a society accidentally, rather they are the *consequences of the complexity of social relations*. Conversely, we can blame the institutional setting for that certain societies remain sterile in terms of innovation, perhaps they are even unable to accept new technologies, and they are fatally drifting off the main path of development.

„Economists have thoroughly documented that no one factor explains economic development – not capital accumulation, human capital, resource endowments, international trade, or geographical location to name a few prominent examples. Instead, *the complex ways that societies structure human relationships* – the institutions that shape economic, political, religious, and other interactions – *appear to be the key to understanding why some societies are capable of sustained economic and political development*” (North – Wallis – Weingast, p. 3.).

The extent of capital accumulation or the human resources of the country *by themselves* do not explain neither the fast, nor the dragging, crisis burdened development. Without the complex analysis of the institutional arrangement in the case of Hungary we cannot provide an answer to that: after the the change of regime – contrary to expectations – why technological progress had not really accelerated, why economic development came to a halt from time and time again, and why all of our economy’s innovation indicators are so bleak. Certainly, in this short paper we cannot attempt to provide a thorough analysis of the active institutional system. In relation to the institutional system, we are formulating only *two fundamental statements*:

1. thesis. The *formal implementation* of market economic institutions – from competition regulations through progressive income tax to strict consumer protection rules – do not mean the efficient workings of those.

Limited access orders provide order by using the political system to limit economic entry to create rents, and then using the rents to stabilize the political system and limit violence. We call this type of political economy arrangement a *natural state*. It appears to be the natural way that human societies are organized, even in most of the contemporary world. In contrast, a handful of developed societies have developed *open access social orders*. In these societies, open access and entry into economic and political organizations sustains economic and political competition. Social order is sustained by competition rather than rent-creation.” ( North – Wallis – Weingast, p. 3.).

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<sup>7</sup> Here, it is enough to refer to the prominent authors cited by Douglass North and his co-authors (North 1981, 1990, Acemoglu, Johnson, and Robinson, 2002; Greif, 2005; Rodrik, Subramian, and Trebbi, 2004).

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2. thesis. In terms of complex institutional system, Hungary has not yet departed from that insitutional arrangement, which is characterized by the lack of (or stronly limited) real competition for resources, and which is called by North and his co-authors as „limited access society”.

Behind the almost complete set of the formal market economic institutions are standing the vestigial real market economic institutions, numerous institutions are only existing as hollow frames, which are by far only partially filled with real content.( *Sajó* [2008], *Fleck* [2008]; *Krekó – P. Kiss* [2007]; *Szántó-Tóth* [2008]; *Tátrai* [2006]; *Belyó* [2008]) Under the term insitution we do not mean the operational rules declared or formaly legislated, rather we use this term in the sense of Schotter’s classical definition, according to which

“A social institution. A regularity R in the behavior of members of a population P when they are agents in a recurrent situation  $\Gamma$  is an institution if and only if it is true that and is common knowledge in P that 1. everyone conforms to R; 2. everyone expects everyone else to conform to R; and 3. either everyone prefers to conform to R on the condition that the others do, if  $\Gamma$  is a co-ordination problem, in which case uniform conformity to R is a co-ordination equilibrium; or 4. if anyone ever deviates from R it is known that some or all of the others will also deviate and the pay-offs associated with the recurrent play of  $\Gamma$  using these deviating strategies are worse for all agents than the payoff associated with R.” (Schotter, 1981, p.11)”<sup>8</sup>

We qualify the insitutional system emphatically *based on real, observable regularities*, and not based on declared rules that are rarely upheld by many. Numerous elements of the “streamlined” market economic institutions introduced after the change of regimes and the EU accession, do not work efficiently: Quite a significant part of these real interactions are taking place through crossing these frames or partially or completely circumventing them. The formal and the real institutional systems through out the years and decades have not got closer, indeed in a certain sense they have got further apart from each other.

And the dog is burried exactly there! Behind the formal behavioral rules similar to those in developed market economies stand radically different behavioral patterns and regularities. If we examine more closely what reasons are behind the failure to assimilate to the developed innovative economies, we find the following objective and behavioral factors, which are evidently not independent of each other (Table 3).

Table 3: The explanatory factors of the Hungarian economy’s weak innovativeness

<i>Objective explanatory factors</i>	<i>Behavioural factors</i>
Strong path dependence, the survival of certain features and elements of the socialist institutional structure(favoritism in the distribution defencelessness if customers, hypertrophy of bureasucracy	Low inclination for risk taking
Corporate competitiveness is even today widely determined by the relations to the state, and based less on productivity and innovation	A considerable part of the companies and the population cannot secede from the state
A quite significant part of the market players’ real budget constraint is soft	Irresponsible covenant, contracts, rules not being adhered, low payment morals
During the last two decades the government’s success has just loosely depended on the successful functioning of the economy	The low degree of mobility
	Low tolerance level

<sup>8</sup> Schotter bases his own on David Lewis’s definition, and in essence he formulates for institutions, what Lewis created for conventions (see Lewis, 1969, p. 44.).

The competition impeding factors of Table 3 need no explanations, in the case of most factors the relationship is clear between the given factor and the weakness of the propensity to innovation. The connecting element between the various objective and subjective factors is *the income attainable without performance or innovation*. From the subjective factors however, the relationship between *mobility* and innovation, *tolerance* and innovation is not that trivial, thus it worth to shed light on these relationships in a few sentences.

In a book (Brenner, 1994) Reuven Brenner supports with many examples that *innovations appear, when people face diversity*. With this he explains that through history always those countries or regions were the leaders in innovation (from Venice of the middle ages through Holland to California), which because of their geographic location (island or sea shore) had natural and frequent encounters with strangers. Strangers taught the locals that “it is possible in other ways”, and they forced them to deviate from their rutin. For this however, there was a need for *tolerance* towards other rutins, habits, ideas. (The relationship is of course bidirectional, frequent meeting with diversity develops tolerance.) In the big continental empires (from the 17<sup>th</sup> century China to the 20<sup>th</sup> century Soviet Union) in contrast we could see examples of a halt in development. Isolation makes societies *barren and rigid*, meeting with strangers would protect them from rigidity. Openness and tolerance are not only needed when facing strangers, but also to accept and tolerate innovators and innovations. If “difficult people” are handled with distrust and even with belligerence, then implicitly this “does not provide wings” to innovations.

The lack of mobility limits innovation following the same logic as the isolation from strangers, because of intolerance towards them. Mobile people will not wait until “diversification comes to them”, instead they go search for it, when they acquire experience from abroad, or perhaps as immigrants they adapt into a community – quite different from their home community – (or even if they just move from one part of the country to another). All sociological surveys indicate that in Hungary – in comparison to international data – the tolerance towards strangers is quite low ( Decső-Sík, 2007), and – even compared to either the Poles or the Romanians – spatial mobility is unbelievably low.

The privatization of the economy, creating a capitalist basis, by itself does not make the economic actors innovative. If the producers and the service providers have to innovate in order to make profit, then they will innovate, if they need to invest, they will invest, but if they get away with utilizing their social capital or with a well fortified monopoly, then they will not feel any inclination to innovate. If they can increase their companies’ profits without boosting consumer surplus, or without giving an adequate answer to market demands, or even without anticipating that, then they will not innovate. We also know from socialism that the soft budgetary constraint or the dependence on state subsidy do not favor innovation. Any number of campaign may be initiated to increase R&D, any kind of spectacular innovation or information strategy may be developed, any amount of EU-subsidy may be utilized, *the innovativeness of the economy can increase by only the rate in which the limiting factors compiled in Table 3. are diminishing: that is the rate by which the budgetary constraint is hardening, the role of social capital and the dependence on the state weakens, and at the rate by which the propensity to risk taking and mobility increases*.

The limiting factors of innovation are not independent of each other, rather they form a system. Behind these factors stands a social structure, which forces the access to resources and opportunities between narrow bounds, in which the opportunities are by far not equal, and what North and his co-authors in their aforementioned book call “limited access society” or “a social structure based on limited access”.

#### 4. Conclusions

In the global competition of the 21<sup>st</sup> century the key to success is innovation. The seemingly invincible, from time to time reproducing macroeconomic difficulties of Hungary are closely related to the limited competitiveness of our economy, which can be primarily traced back to low innovativeness.

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The innovativeness of an economy is not an exogenous endowment, rather it can be explained by the institutional structure characteristic of the country, in other words with the complexity of economic relations.

The implementation of the formal institutions of the market economy does not yet mean that these institutions are the observable regularities of the real economic behavior, and their introduction does not guarantee their efficient operations. The same formal institutions (for instance a contract) work completely differently in an “open society”, than in one, where people’s access to resources is limited.

The real relations and the behavioral patterns behind the formal institutional structure do not really favour innovation.

We can only expect substantive steps forward in economic innovativeness and in the increase of competitiveness, and in the overcoming of economic difficulties being reproduced since the change of regime, if these limits weaken, the dependence from the state weakens, social capital becomes less decisive, the budgetary constraint becomes harder, tolerance and mobility grow.

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