The Causes of Slow Growth in Hungary during the Post-Communist Transformation Period

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Introduction

In his 1966 Inaugural Lecture at Cambridge, entitled *On the Causes of the Slow Rate of Economic Growth in the UK*, the Hungarian-born British economist, Nicholas Kaldor presented a series of „laws" to account for the growth rate differences between Britain on the one hand, and 12 more successful economies like the US, Germany or France on the other. He called his method circular cumulative causation, a multi-causal approach where the interdependencies between the explanatory factors were strong, and where variables interlinked in the determination of the outcome. In Kaldor's interpretation, the UK's main problem was the slow growth of productivity, caused by the slow growth of the manufacturing sector. And why did that matter? Because he found that industrial productivity was positively related the growth of industry – i.e. the law of increasing returns to scale manifested itself in a strong way. The objective, the methodology and central analytical concepts of the present paper are similar. Now we look for the causes of the slow growth of the Hungarian economy. As it will turn out, increasing returns to scale, which Kaldor took from Young (1928) seminal study, occupies a central position in this paper, too.

I. The Facts

1. The Red Queen paradox

For the average Hungarians, the regime change in 1989/1990 has not produced the expected result: the country was unable to catch-up with the Western market economies even after two decades. While fundamental changes did occur at a broad front, our economic rivals moved ahead just as fast, as Hungary did. This is the so called Red Queen Paradox, which has recently become an often used metaphor in everyday life, in economics, in the theory of arms race, in evolutionary biology etc.

The Red Queen is a fictional character in Lewis Carroll's fantasy novella, *Through the Looking-Glass*, which in turn is the sequel to *Alice's Adventures in Wonderland*. Talking to Alice, the central heroin of both works, the Red Queen described her empire as a system, in which "it takes all the running you can do, to keep in the same place". In narrow, economic terms this is a perfect depiction of **capitalist rivalry**: if your competitors are moving ahead, you have to move faster, not to lose ground. In broader evolutionary terms (Valen 1973), the message is: "For an evolutionary system, continuing development is needed just in order to maintain its fitness relative to the systems it is co-evolving with."

1.1.Competition worldwide

While the Red Queen Paradox is not a well-known in Hungarian economic parlance[1], the main message of it did become a frequently used common place in policy discussions: Hungary has to grow twice as fast as the EU countries in order to catch-up with them.

Is it possible to catch-up with the forerunners and leave them behind? The first, intuitive answer is yes. Hungary is a middle-sized developed economy, her per capita GDP level is 25% higher than the world average. Between certain selected years – such as the 1997-2006 period – the Hungarian economy did grow faster than the EU15[2], and there were four calendar years (2002-2005), when the Hungarian growth rate was at least twice as high as the EU15 average. Furthermore, if we disaggregate growth and economic development levels, the numbers show that the Central Hungarian Region's per capita GDP surpassed the EU27 average already in 2004. Why should we have any doubt that the performance of the most developed Hungarian region can be emulated by the country as a whole within the next 2-3 decades? Especially, if we take also into account that Hungary has been benefitting substantial financial assistance from other member states to achieve this goal?

Yet there are good reasons to be wary of all the optimism. *First*, as I showed elsewhere (Mihályi 2011a,b,c), during the last 140 years, Hungary had been unable to sustain high, above-average growth rates for long, except for very short cyclical upswings. Kornai (1972) was right to describe this feature as the alteration of rush and harmonic growth periods. As Figure 1 illustrates the exceptionally high and low growth rates should be interpreted in comparative perspective, as the Red Queen Paradox suggests. In this historically long time span, when Hungary was sometimes capable to produce a high average rate – like the 3.8% in 1950-1973 – our direct competitors, the EU12 countries[3] displayed even higher growth rates. Between 1990 and 2008, Hungary outperformed the EU12, but relative to the world average, the 2.2% growth was not particularly outstanding. If we take the entire period, there were several countries in the world, which were capable to produce 2-3 times higher than average growth rates for a sustained period of time (e.g. Venezuela in 1870-1949, Japan, Taiwan, Hong Kong in 1950-1989, Vietnam, Ireland, and Lebanon in 1990-2008). Hungary was never such a star-performer.

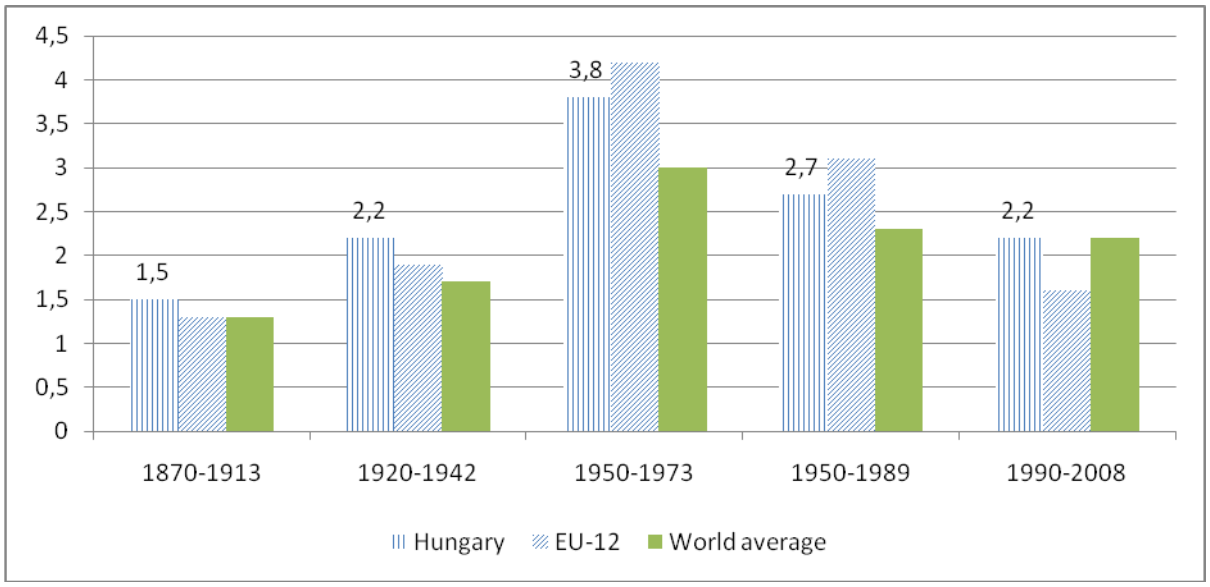
[1] But L. Carrol's name is known, thanks to his first book which was translated into Hungarian already in the 1930s.

[2] EU15, as defined in EU statistics: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, the Netherlands, Portugal, Spain, Sweden and the UK.

[3] EU-12, as defined in Maddison (2010): Austria, Belgium, Denmark, Finland, France, Germany, the Netherlands, Italy, Norway, Sweden, Switzerland and the UK.

Figure 1: Long term growth rates of GDP/head in Hungary, in EU-12 and the world, 1870-2008

(Annual average changes in percentage)



Source: Mihályi (2011a) based on Maddison (2010).

Second, the example of the former German Democratic Republic is also compelling. In spite of the billions of euros channelled from West Germany towards the Eastern *Länder*, the level gap hardly shrunk after unification. Using a sophisticated econometric forecasting technic, Aumann – Scheufele (2010) concludes that it may require another 50 years until the Eastern provinces of Germany eliminate the gap with their Western peers. *Third*, there are important examples even among the developed countries, where the distances actually grew between the competitors. Using the US as a benchmark (= 100), Switzerland once already achieved 93% and then fell back to 81%, Italy slid from 70% to 64%. The case of Japan is even more striking. This one time widely admired country climbed up to 82% by 1996, but then fell by 2008 to 73% of the US income level. And the list of failed catching-up storied can be even longer, if 5-6 Latin American countries and 8-10 African countries were included, where growth was not simply slower than in the US, but the rate were actually negative.[4]

1.2. Competition among the transition economies

Once Hungary joined the European Union in 2004, a new type of rivalry started: the competition among the former socialist countries in catching up with the core countries, the EU15. Hungary was first compared with Slovakia, the Czech Republic and Poland – as the group of the so-called Visegrád-countries –, but later the three Baltic countries were included in the standard analysis. During the first post-communist decade, Hungary always came out favourably from this comparison. But in the next 10 years, this advantage was lost. As Figure 2 illustrates, relative to her new peers, Hungary could hardly make any advancement between 1989 and 2010. In accordance with the Red Queen Paradox, the average GDP per capita level of the EU15 is a slowly rising number, relative to which Hungary advanced merely 1 percentage point in 20 years: from 54% to 55%. In the same period, Poland advanced from 38% of the EU15 average to 55% (total: 17 percentage points). As Figure 2 shows, Hungary's performance was neither too good, neither too bad. Some countries of the

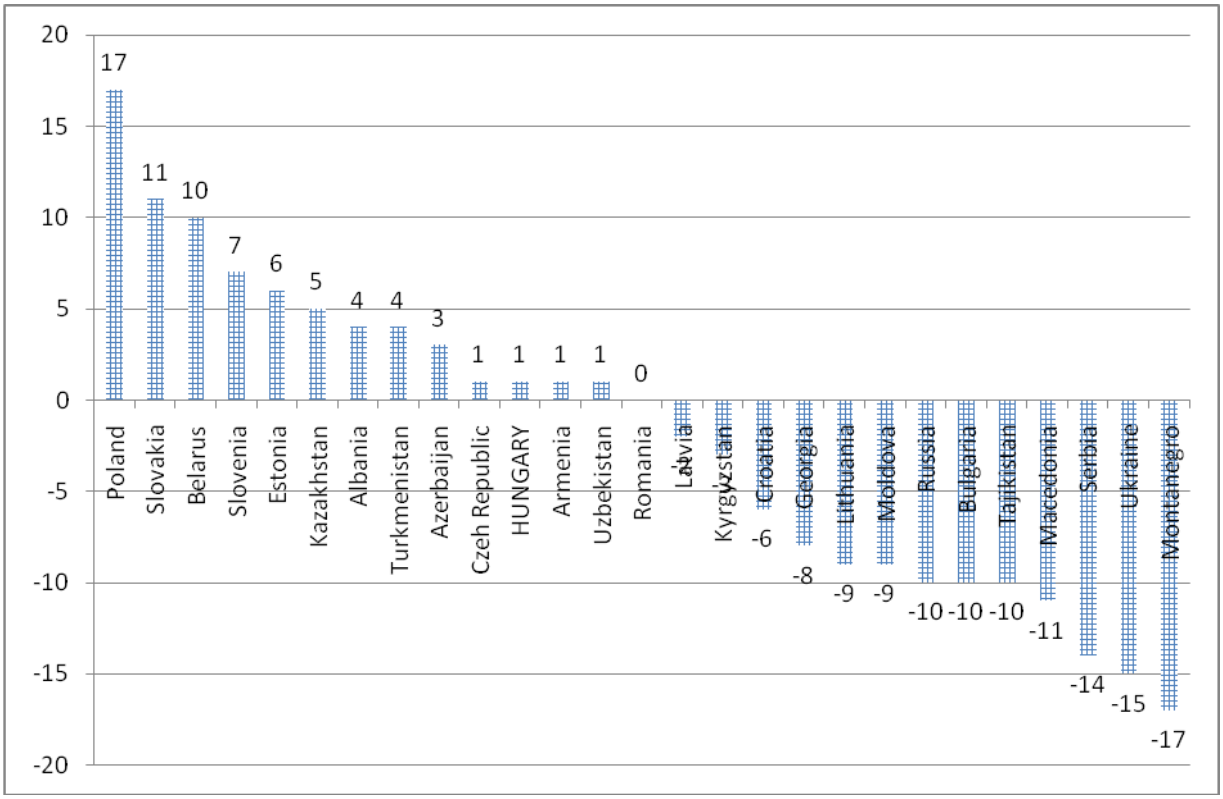
[4] All figures cited in this paragraph were calculated from Maddison (2010).

former Soviet Union and Yugoslavia produced much worse results, while the Czech performance was exactly the same as the Hungarian one.

While the raw data and even the visual presentation suggest that Hungary's performance in this kind of Red Queen Race was just about "normal", this is not the way as the men of the streets perceived this. When it comes to comparison, people usually disregard the weaker competitors and envy the stronger ones. There are not many Hungarians, who can be impressed by a scholar or a politician saying, that Russia or the neighbouring Ukraine displayed even worse performance than "we did". People point at Poland or Slovakia, which were able to reduce significantly the gap which separated them from the more advanced EU countries. For the average Hungarian, the case of Slovakia is even more relevant, because this country was not only better in relative terms, but she actually surpassed Hungary in absolute terms already in 2007.

Figure 2: Economic convergence of selected transition economies towards the average of EU15 between 1989-2010

(Percentage points, GDP/head at purchasing power parity, EU15 = 100)



Source: Author's calculations based on Darvas (2011) raw data and methodology.

2. Natural endowments and economic policies matter

Since the seminal study of Kaldor (1966) already referred above, the framework and the toolbox of analysis have been enriched significantly. When countries at comparable levels of development are assessed today, the "laws" which might explain the differences are formulated at least in three separate dimensions: (i) natural endowments; (ii) economic policies; (iii) balance-of-payments; (iv) supply-side analysis. In the next few paragraphs, the "laws" (i) - (iii) will be only briefly discussed in order to

leave space for the fourth explanatory dimension, the mechanisms determining the supply-side of the economy and the changes in productivity.

2.1. Unfavourable geography

During the 1960s, in many parts of the world including Hungary, the success of the Japanese economy was used to belittle the importance of natural endowments. "Japan has no raw materials, nonetheless she is producing miraculous growth rates" – sounded the verdict at that time. After the first oil shock in 1973, and the rapid enrichment of some OPEC countries after that, this alleged "law" went slowly out of fashion. Beyond the oil-rich Arab countries, the example of Norway, the UK – and more recently – the post-communist Russia must have convinced everybody by now that the availability of raw materials is a major source of economic rent, which can greatly contribute to the growth of a country. And the same, or almost the same, holds for monopoly rights (such as sea ports, maritime transit routes, summer beaches, winter ski resorts, etc.). In this context, it is worth mentioning how in his latest book Jeffrey Sachs (2011) challenged the conventional view regarding the Europe vs. USA comparisons. According to him, America's long-standing advantage in GDP per capita has been also in its geography rather than its economic system. America has vastly more land and natural resources per person than Western Europe does. This has been the source of its enduring advantage, rather than the allegedly better incentive mechanism, the lower taxes, the better institutions or the restrained activity of the state.[5] Without any further illustration and/or explanation we had to suffice here with the statement that the weak economic performance of Hungary is *partly* due to her unfavourable resource endowments.

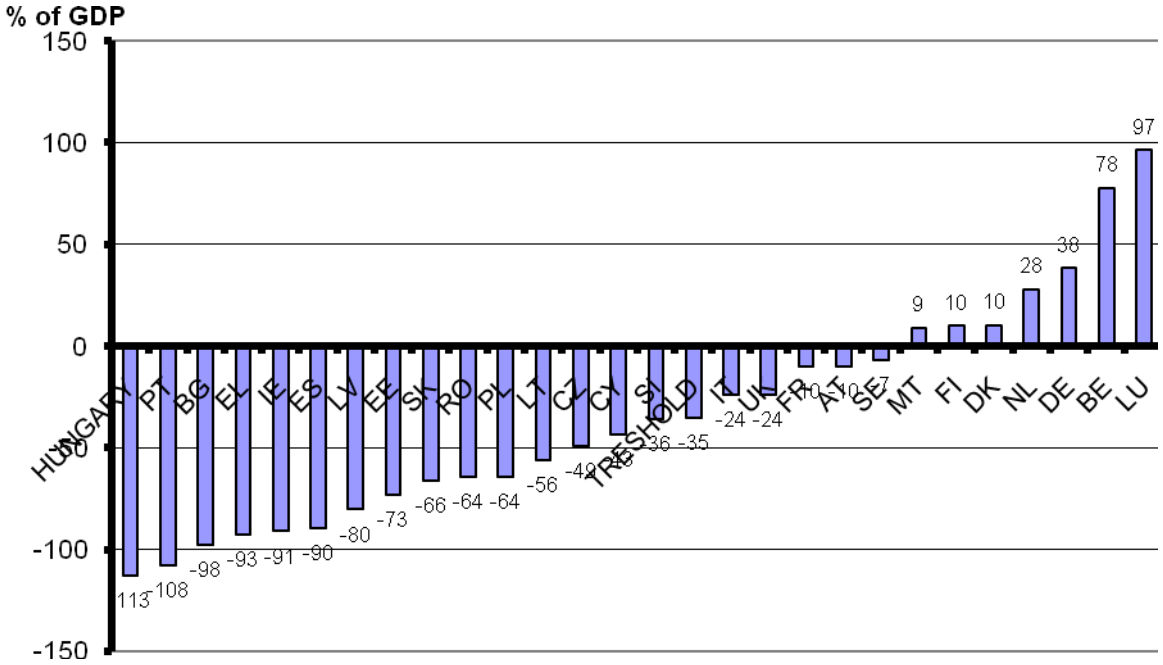
2.2. Inapt economic policies do harm

The importance of appropriate fiscal and monetary policies in determining the growth trajectory of a given country has also become a common place since the 1960s. This understanding has been forcefully supported by the recent worldwide calamities of the post-Lehman period. Partly due to her size and partly due to her poor resource endowment, Hungary has been traditionally a very open economy. Currently, the combined value of its exports and imports is equal to 140% of the annual GDP. In this context, it is important to refer back to those years – already mentioned above – when the Hungarian GDP growth figures where two-times higher than in the EU. Precisely these years were the ones, when the country's balance-of-payments displayed a deficit of 7-8 % in four consecutive years. Moreover, it is important to emphasize a not often mentioned fact. During the last 10 years, it was not only the central government which was tempted to reach out for these low-hanging fruits, the local governments, the business sector and even the household sector pursued the same strategy. Everybody was borrowing and – apart from the central bank - nobody was willing and/or capable to accumulate significant foreign (reserve) assets. As a result, Hungary has the worst position among the EU-27 countries, when the net international positions are compared (Figure 3). The country's total net debt was equal to 113% of its annual GDP, a figure far more worrisome that of Romania or Poland (64%) or the Czech Republic (49%). Thus, considering the entire 1990-2010 period as a whole, the contribution of these regulatory policies was not really positive – to say the least.[6]

[5] This is not a new idea in Sachs' academic *oeuvre*. See Gallup – Sachs – Mellinge (1998).

[6] From the recent Hungarian assessments available in English language, see e.g. Antal (2004), Szapáry (2006), Győrffy (2009), Csillag – Mihályi (2008), Török (2010), EEAG (2012).

Figure 3: Net international positions of the EU-27 in 2010



Source: European Commission (2012a) p. 4.

With the benefit of hindsight, we can apprehensively state that in terms of GDP growth the ballooning indebtedness of Hungary brought very disappointing results. As we will see soon, the borrowed money was used chiefly to sustain consumption rather than to finance productive capital investments. With this strategy, the country reached the wall. Neither the markets, nor the international financial institutions are likely to be willing to finance additional (net) borrowing. The period of deleveraging is ahead of us. It will hurt.

3. A simple decomposition

Let us start the analysis with a trivial identity:

$$\frac{GDP}{Head} = \frac{GDP}{Total\ population} = \frac{GDP}{Workers} \text{ x } \frac{Workers}{Population\ in\ working\ age} \text{ x } \frac{Population\ in\ working\ age}{Total\ population} \qquad [1]$$

where

$\frac{GDP}{Workers}$ = productivity

$\frac{Workers}{Population\ in\ working\ age}$ = employment rate

$\frac{Population\ in\ working\ age}{Total\ population}$ = dependency ratio,

and then take the first derivatives of the three components in equation [1]:

$$\Delta\frac{GDP}{Head} = \Delta\frac{GDP}{Total\ population} = \Delta\frac{GDP}{Workers} \text{ x } \Delta\frac{Workers}{Population\ in\ working\ age} \text{ x } \Delta\frac{Population\ in\ working\ age}{Total\ population} \qquad [2]$$

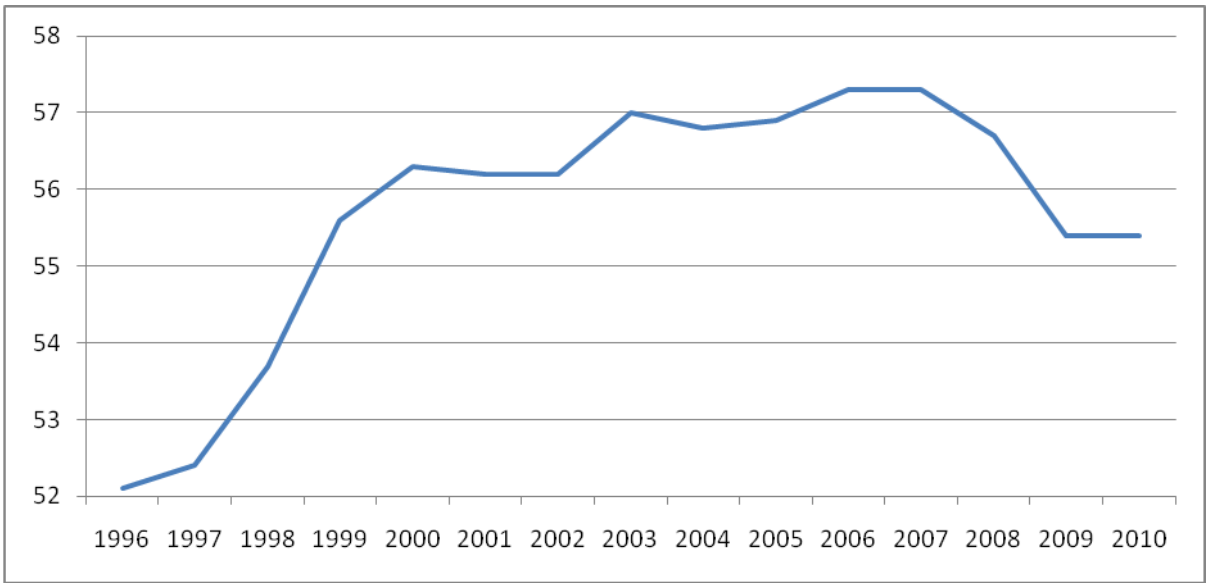
From the evidences presented in the previous sections, we can state without any additional investigation that Hungary suffers from two not-necessarily-related problems expressed in equations [1] and [2]: the low level of economic development and the slow annual increase of it.

Starting backwards the analysis of the three components, the assessment of the *dependency ratio* (as defined here for our purposes) is relatively straightforward. In 1980, 10 years before the regime change, the share of the 15-64 age group in the total population was 64.6%. This number rose to 66.2 by 1990 and to 68.7% by 2011. This is a change in the right direction, thus the growth problem of Hungary couldn't origin from here! During the last 10-15 years, the participants of the Hungarian policy discussions heavily focused on the *employment rate*, the second component of equation (1). Even those economists who fundamentally disagree on each and every details of fiscal and monetary policies, tend to accept without further analysis that this is the largest problem of Hungary. Indeed, the EU-wide international comparisons unequivocally show that Hungary "excels" with its lowest figure. According to the Eurostat methodology, the Hungarian rate was 55.4 in 2010, exactly 10 percentage points lower than the EU15 average (66.4%) and the absolute lowest figure among the member states.[7] However, as we can see from Figure 4, the underlying trend is favourable. Except for the last three years, the trend is rising.

[7] Malta used to be behind Hungary, but there the figure rose from 55.0% in 2009 to 56.1% in 2010. Among the OECD countries, Italy and Turkey have slightly worse numbers than Hungary. (OECD 2012, p. 25)

Figure 4: Changes in the Hungarian employment rate, 1996-2010

(In percentage of the 15-64 age group)



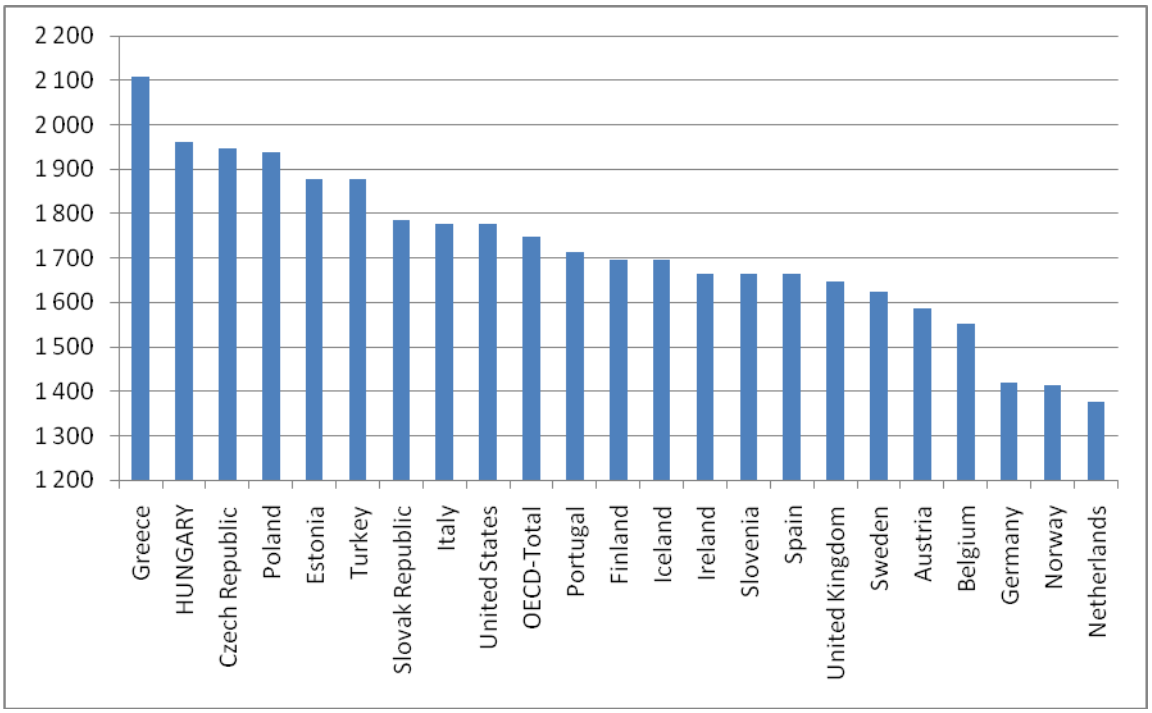
Source: http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tsiem010 , downloaded on 1 March 2012.

More importantly, what matters for the volume of production (GDP) is not the absolute number of workers, but the amount of work these people perform in terms of working hours. The employment rate is low in Hungary, because part-time employment is unpopular in our country.[8] However, those who work in Hungary, they do it for 1 961 hours in a year, well above the OECD average of 1 749 hours. Perhaps it is surprising: Greece is the only country which has a higher figure. As Figure 5 on the next page proves, the Dutch, the Germans or the Norwegians are all below 1 500 hours.

In sum, the proportion of Hungarians who work is on the rise, and those who work, work far more than workers in other countries. If the country's GDP is low, the problem must be hidden elsewhere.

[8] In 2010, the share of part-time workers was 5.5% in Hungary and 21.4% in the EU-15.

Figure 5: Average annual working time in selected OECD countries, 2010
(Hours per worker)



Source: OECD http://www.oecd-ilibrary.org/employment/average-annual-working-time-2011_annual-work-table-2011-1-en, downloaded on 1 March, 2012.

Table 1: The relationship between total working time and economic development in 2008-2009

Country	Annual working hours per population		GDP/Head
	Hours	Percentage	1990. international dollars (PPP)
	[1]	[2]	[3]
Czech Republic	946	127	12 868
Portugal	900	121	14 436
Slovakia	837	113	13 033
Romania	832	112	4 895
Norway	816	110	28 500
Austria	816	110	24 131
Poland	816	110	10 160
Greece	811	109	16 362
...	...		
HUNGARY	**744**	**100**	**9 500**
France	707	95	22 223
Belgium	702	94	23 655
Italy	692	93	19 909
Turkey	650	87	8 066

Notes: Annual working hours are calculated in [1] for the entire population, including everyone. Data reflect the amount of work performed in the first quarter of 2009. Thus, they show the stand of the labour market *before* the international financial crisis. GDP/head data in [3] refer to the year 2008.

Source: [1] and [2] own calculations from Eurostat (2009), [3] Maddison (2010).

As the numbers in Table 1 also show, the variation of annual working hours around the calculated base for comparison (Hungary = 100) is in a rather narrow range (87-127%) and the absolute numbers in col. [1] are not correlated with the broadly varying GDP/head figures. Take, for example, Norway, Austria and Poland. The number of working hours per head of the total population is almost exactly the same in the three countries, while the GDP/head figure in Austria is twice as high as in Poland, and the Norwegian figure is three times higher than the Polish one. Thus, we can now safely state as a conclusion that in the case of Hungary, the low level and the weak dynamics of *labour productivity* are responsible for the country's poor overall economic results.

II. The Problem is Labour Productivity

4. Education is not the answer

Many policy makers and good-willing political commentators honestly believe that more *higher education* is the No. 1 recipe for growth. The opposite is true.

In search for explanations and solutions to combat relative economic backwardness, most observers tend to overlook the positive legacy of socialist central planning. From the vintage point of the present paper, it is important to underline that higher education was a top priority of the fallen system. As a result, 20 years after the fall of communism the population of the former socialist countries still has significantly more years of schooling than capitalist countries of similar development levels. Russia is a perfect illustration. According to OECD (2009), in Russia 54% of the 25-64 age cohorts possess a higher education degree, in stark contrast with Japan and the US (40%) or the Swiss data (30%). Precisely because the socialist planning system used to look at higher education as a merit good, it was provided free of charge. From the perspective of Hungary, the comparison with the neighbouring Austria is noteworthy. The share of adults with a university degree is about 18% in both countries, while the difference in per capita GDP levels is more than 2:1.

In this regard, the situation has only worsened after 1990. In the 2010/2011 academic year, 1 out of 3 university students was enrolled to some kind of part-time, distance learning programmes, rather than into a regular, full-time one. In 1990/1991, this proportion was only 1:4 (Figure 6).[9] This tendency has led to numerical overproduction of university graduates, to further fragmentation of the higher educational system and - as Polonyi - Tímár (2001) warned long time ago - to deteriorating quality throughout the entire network.[10]

Table 2: The number of independent tertiary education institutions, 1970 – 2008

Year	Number of institutions
1970	74
1980	57
1989	57
1990	77
2000/2001	62
2004/2005	69
2005/2006	71
2007/2008	71
2010/2011	69

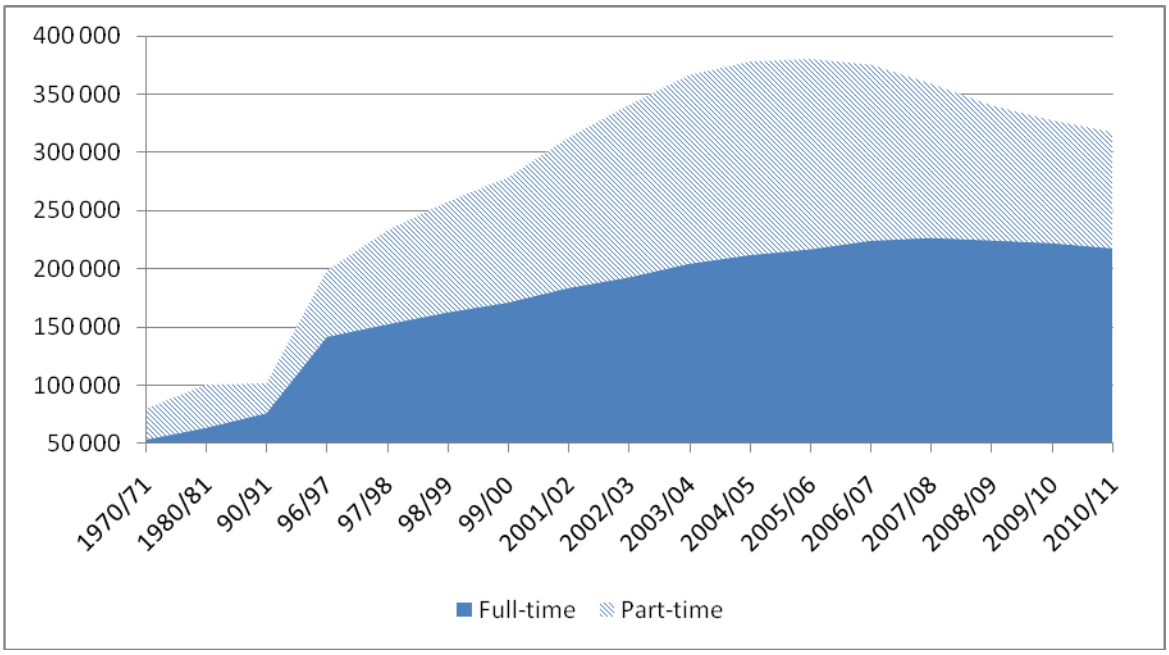
Source: Central Statistical Office. Statistical yearbooks, various years.

[9] It is noteworthy, that there are only few degrees which can be earned in full-time university programmes only, such as medicine, architecture etc.

[10] It is more appropriate to state that Hungary, like many other former socialist countries, is suffering from a "quasi-development" problem (Jánossy 1969). A lot of education input in the statistics, but poor economic results because of the poor quality of teaching.

Figure 6: The composition of students in higher education, 1970 – 2011

(Number of students)



Source: Statistical Yearbook, 1991. p. 254., Fazekas – Kézdi (2011) p. 203.

Anecdotal examples suggest an additional problem: part-time university students are usually not very effective workers, because they have to divide their attentions and energies between two places: the working place and the university.

Since the regime change, a lot of Hungarian workers possessing only 8 years of schooling are unable to find jobs, because the jobs they are traditionally looking for are now fulfilled by others possessing a degree from middle-schools (4 years of additional schooling). On the basis of this experience, many experts are convinced that the government must channel additional resources to expand the *secondary schools*. The argument is that without a good middle-school education, the upcoming generation of young people will not meet the diverse skill requirements of the labour market. This paper is not the proper place to go into the details of this debate. But perhaps it is enough to state that while in Hungary only 1/3 of this social strata are employed, in other EU-countries like Portugal, Greece or Denmark 2/3 of the workers with merely 8 years of schooling do find a job on the market.

We have a precise and detailed picture regarding the knowledge levels and the competences of the future generation Hungarian workers – i.e. those who have just completed the 8-year long mandatory *elementary schools*. The results of the 2009 PISA-test Programme[11] show that competences of the average Hungarian 15-year old students in reading, mathematics and natural sciences are comparable with the OECD country-averages. In most comparisons the Hungarian students are at par with their peers studying in Sweden, Denmark or France. In 2009, the Hungarian students were even ahead of the Americans in science and mathematics.

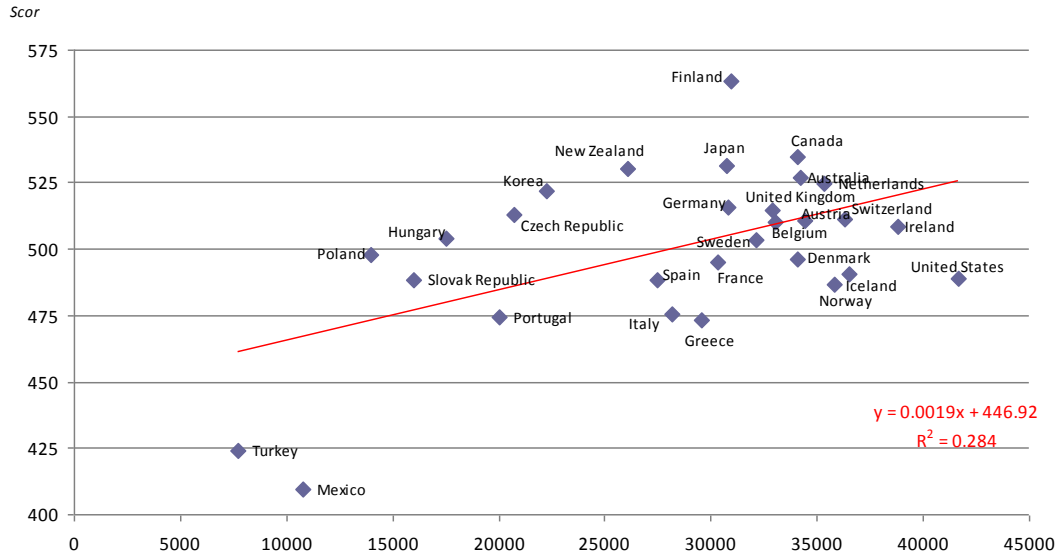
As the regression calculation in Figure 7 shows, there is a logic according to which some countries are significantly above the regression line (Hungary, Czech Republic and Poland), while others are below it (Italy, Greece and Norway). The former group of countries all transitional

[11] The Programme for International Student Assessment (PISA) is a worldwide evaluation in 65 countries of 15-year-old school pupils' scholastic performance, performed first in 2000 and repeated by the organizer (OECD) every three years.

economies with a long tradition of socialist central planning. The second group proves that in striving for economic growth and development, countries with favourable natural endowment can compensate for the lower quality of their labour force.

Figure 7: PISA-test results and the OECD countries' economic development levels

(Results from science of 15-year old students in 2006 and per capita GDP levels at purchasing parity rates)



Source: OECD PISA 2006 data base, Table F2.12a. http://dx.doi.org/10.1787/141844475532. Downloaded on 19 November 2010.

5. In- and outward migration - an underutilized potential

In many countries outward migration is an important source of economic growth. In such cases, the economic rationale is that in a more advanced economy, the migrating labourers can generate more value added than at home, and from this higher income their home country benefits through the repatriation of the higher earnings (remittances). It is a well-known example, that at the turn of the 19th and 20th century, such migration greatly contributed to the overall development of Hungary. This was also the policy successfully applied by Italy during the late 1950s and by Yugoslavia in the 1960s. After joining the EU in 2004, the legal conditions of outward migration have changed favourably, but unlike other post-communist countries, Hungarians didn't move in significant numbers. In 2009, for example, Romanian and Polish workers sent home € 2.9 bn and 2.7 bn, respectively, while in Hungary the net balance of remittances was minus 50 mn €.

Another way of enhancing a country's growth potential is the import of labour. After World War II., Germany, Spain, the UK and Ireland have used slightly different policies, but they all benefitted for some time from the use of under-qualified, but inexpensive workers from Southern Europe. Such a strategy is pursued currently by Russia and to a smaller extent by the Ukraine, exploiting the labour reservoir of the ex-Soviet republics (Tajikistan, Kyrgyzstan, etc.). The United States is also a net importer, but her strategy is – not fully, but to a large extent - based on brain drain. Highly qualified intellectuals are imported from Europe, the Middle East, China and India.

While some experts have already started to make forecasts about Hungary's future immigration needs[12], the present situation is very unfavourable both in labour market and social-cultural dimensions. In order to become an attractive country for immigration, unskilled foreign workers should calculate with a **net saving** of €500 – 1 000 per month. But our tax and benefit policies that compress wage distribution is a major hurdle. Depending on the exchange rate, the average net wage is €460, the official gross minimal wage is €320. In Hungary today, for a single worker without children earning the average wage, take home pay is only half what it costs to employ him. From such a low net income, there is no way to save enough for the family back home. Qualified foreign workers, in theory, could aspire at higher amounts of savings, but for them the barriers of the Hungarian language are almost insurmountable. In addition, the Hungarian public is notoriously intolerant *vis-à -vis* the foreigners, and the ethnically different people in particular, therefore it is highly unlikely that in the near future any political party would dare to start the political discussion on the benefits of immigration.

While the politicians' caution and fear from public sentiments are understandable, from a growth perspective simply discarding the possibility of both types of migration (inward and outward) is a luxury that Hungary can hardy allow for itself in the future.

6. Our answer: Far too many micro-firms

Behind the averages, there is always some variation. There are two dimensions, where these variations are obtrusive. Firstly, productivity differs ferociously according to the size of firms. Secondly, but chiefly as a consequence of the first finding, there are huge territorial differences within the country.

6.1. The missing increasing returns to scale

During the last 20 years, many studies proved that there were large and growing productivity differences in Hungary between the large firms on the one hand, and small- and medium-sized companies (SME) on the other. As a static fact, this is not a specific Hungarian puzzle, the same has been established by international comparisons (Lewis 2004, McKinsey Global Institute 2010, EC Enterprise and Industry 2010). However, it is important to underline that before 1990 large (state owned) enterprises had played a dominant role in the Hungarian economy and the regime change brought a reversal in this regard. Partly, this was unavoidable. Moreover, like nearly all industrialized nations, Hungary has also witnessed a shift in labour from the secondary sector, where firms were generally larger, to the tertiary sector (services), where they are smaller.[13]

But more than this happened. As the Hungarian saying goes, we fell at the other side of the horse – i.e. from one extreme position the country moved to the opposite extreme. In 1989, there were approximately 2 500 enterprises with more than 250 employees, the latest figure for 2009 was 870. Then, the number of sole proprietors was 300.000 (1988), today the number is 1.4 million (2010). In other words, there is a continuing fragmentation of the nation's entrepreneurial capital stock. In 2008, the annual value added of a Hungarian micro-enterprise was HUF 4.5 mn per employee, while in large ones the same figure was HUF 8.2 million. The trend is negative. In 1998, the difference was only 150%, 10 years later it was 182% (Pitti 2010a). If we look at the 2009 data of the top 200 non-

[12] Polónyi – Tímár (2001) calculated that the Hungarian labour market would need 20,000 immigrants per year for the next 40 years.

[13] In Kaldor's time, the share of the secondary sector (manufacturing + construction) was 31% in UK's total employment, but then started to fall rapidly. By 2010 it was somewhere around 15% only. In Hungary, after the rapid restructuring of the entire economy, the contraction of the secondary sector didn't start until 2002, and it was very slow even after that. In relative terms within total employment, the share was 29.6% in that year and the 2010 figure was only slightly lower (27.1%). In other words, it still matters a lot, what is happening in these two traditional sectors of the Hungarian economy.

financial Hungarian firms, the average per capita output in this elite group was HUF 67 mn, while in the rest of the economy the corresponding figure was HUF 21 mn – i.e. the difference is three-fold. It is alarming that since about 2000, the absolute number of middle-size and large companies have been falling. The same holds for the changes in the structure of employment. This is the opposite of the European trends. While elsewhere the process of concentration prevails, in Hungary the fragmentation of resources are to be observed almost everywhere.[14] (The Hungarian categorization of micro, small, medium-size and large firms is fully in line with the methodology of Eurostat. For detailed comparative data in all the four enterprise categories used in the EU, see Appendix).

The size problems have a very important sectorial dimension, too. The productivity gap is not so worrisome in *industry*, because many firms today are run as subsidiaries of western multinational companies. The sheer fact that foreign-owned manufacturing companies still operate, as well as many anecdotal evidence suggest that in these subsidiaries the productivity of the Hungarian employees is the same, or even higher than in Germany, Austria etc., where the mother companies have their headquarters. But the situation in the construction industry is alarming. Currently there are 100,000 domestic companies operating (at least on paper) within the sector, in 1990 their number was slightly more than 5,000. Today among the construction firms there are only 250 which are large enough to be qualified as a shareholding company, all the other enterprises are limited liability companies owned by a single proprietor, a family or a very small number of connected entrepreneurs. The situation is even worse in *agriculture*, where 40% of the country's agricultural land is cultivated by people who call themselves "farmers", although only 3% of them have a specialized degree from a tertiary educational institution. This is a politically vocal and therefore important social group of 5-600,000 agrarians.[15] Since these "farmers" are under-qualified they continue to produce what they have seen from their fathers: grain. There are approximately 180,000 farmer households which are currently registered as grain producers. In a country of the size of Hungary, 180 large farms would be probably already too much. Under such conditions, it is fully understandable why the total output of the Hungarian agricultural sector has been in a free fall since 1990. In 2010, the level was the same as in the early 1970s, in spite of the gigantic government and EU subsidies.

The productivity gap is likely to be even more substantial in certain parts of the *service sector*, where 63% of the jobs are to be found. In some areas, the multinationals have a strong and exclusive presence (e.g. banking, telecommunication), but in other areas (e.g. catering, retail trade) small Hungarian firms and public institutions dominate the job market. The problem in retail trade or catering is striking for any client with open eyes. In small Hungarian owned shops or restaurants, one can often see assistants and waiters doing just nothing, because the premise is simply empty. By contrast, did anyone ever see a McDonald's or a Tesco hypermarket in which employees were not busy all the time? And these observations are not just anecdotal evidences. According to the Central Statistical Office (KSH 2010) in retail trade the number of outlets in 2009 was 2.5 times more than in 1989, while the total turnover at constant prices grew only by 5%! The same source shows the same tendency in catering. In 2009, there were almost twice as many functioning restaurants, coffees, etc. than in 1989, although the turnover in volume terms actually fell by 15%. The same holds for public sector employees, which is very high in international comparison.[16] Two third of them are working in the very fragmented Hungarian local government institutions (e.g. general administration, education, health).

The issues discussed above have important territorial (regional) dimensions, too. Since 1996, the Hungarian Statistical Office has been regularly publishing GDP/head time series for the country's seven administrative *regions*. Figure 8 exhibits how large these inter-regional differences are. Without going into a detailed demographic analysis, we note that the employment ratios and the dependency

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[14] At the very top of the company pyramid – firms with more than 5,000 employees – there is a positive change, but not sufficiently strong. In 2004, the number of such privately owned firms was 11, while in 2009 14 such firms were registered.

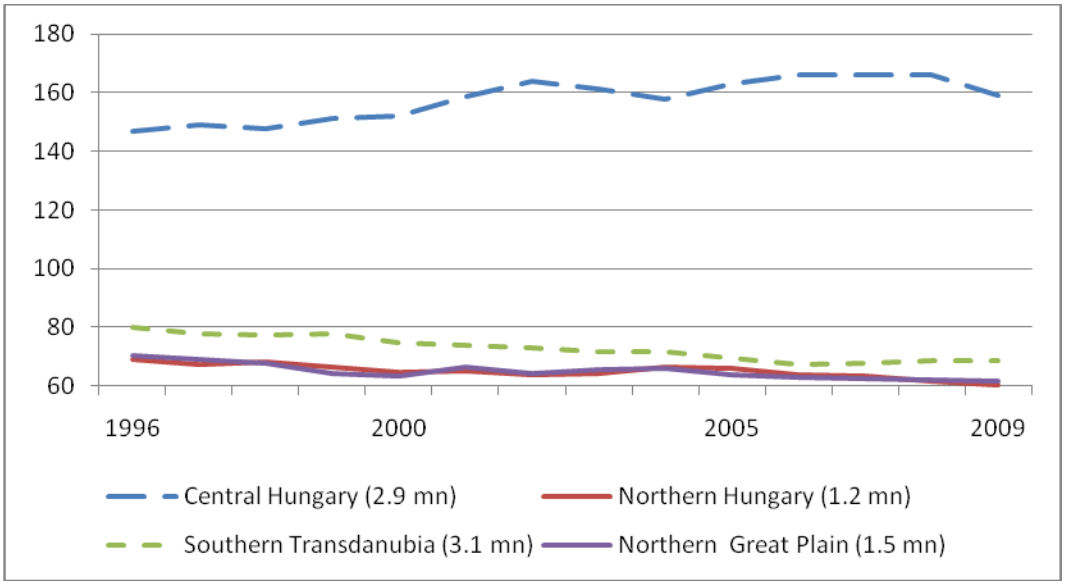
[15] Land ownership is even more fragmented than land cultivation. The number of registered farm land owners is 3.3 mn. According to the 2010 National Farm Survey, 60% of them are subsistence farmers – i.e. they don't even intend to market their own produce. From the total amount of labour used in Hungarian agriculture, only 25% is wage labour, 75% is provided by the land-owner and his family members.

[16] According to the 2008 OECD data, 20 % of the Hungarian labour force is in the public sector, surpassed only by France and four Scandinavian countries. OECD (2012) p. 46.

ratios do not display such large variations among the regions. The variation is caused by the variation in labour productivity.

Figure 8: Regional GDP/head differences

(In percentage. National average = 100)



Note: For the sake of visibility only four of the seven regions are shown. The numbers in bracket show the population size.

Source: Fazekas – Kézdi (2011) p. 312.

The advantage of the region of Central Hungary, which includes the capital city of Budapest, is a historical heritage. But ethnically Hungary is a homogenous country, thus the differences don't come from such differences among the seven regions. We strongly believe that the labour productivity gaps are caused by the laws of increasing returns to scale. Apart from Budapest, there is no other city in Hungary which is large enough to be successful in the Europe-wide competition. Almost all big firms are located in Budapest or in Central Hungary. In other towns, everything is too small, narrow and disconnected: the labour market, the local demand, the logistic network and the spectrum of amusements offered.[17] For a long time it was a widely shared opinion was that the construction of motorways from Budapest towards the seven most important borders-crossing points will equalise the investment climate throughout the country. The motorways are now up and running, but the hopes didn't fully materialize. Most of them are almost empty for most of the time.

6.2 The consequences

The low level and the slow growth of productivity in the SMEs - and in micro-firms in particular - have at least three devastating dynamic corollaries at the macroeconomic level. Each of them is important, but in this paper only the third point will be discussed:

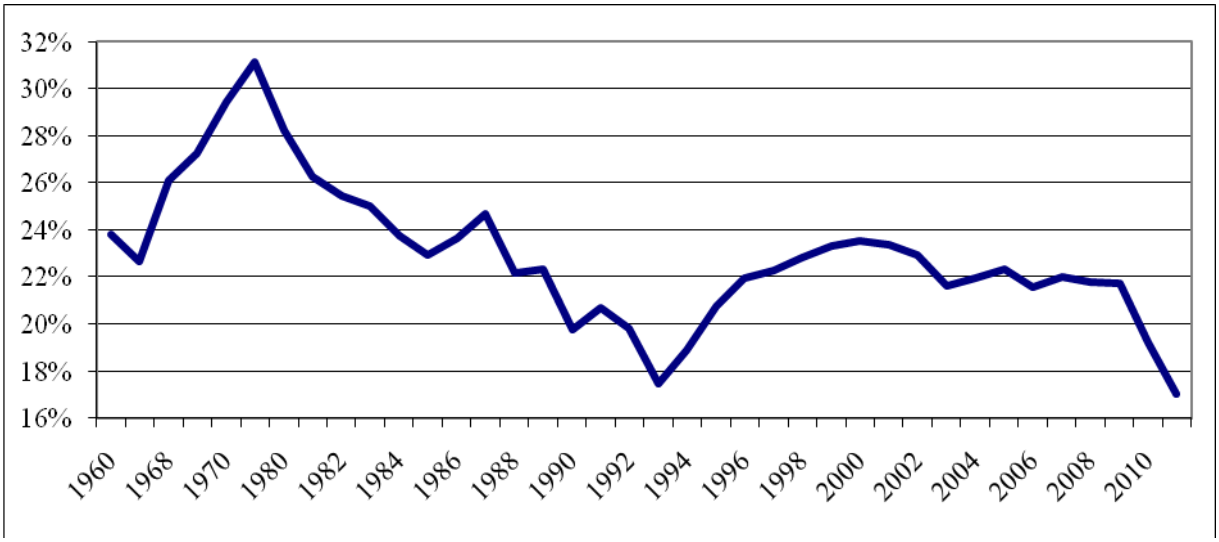
[17] The country is too small to make a domestic airline network viable. Only Budapest has an international airport deserving its name. In 1990, the nation's capital had more than 2 million inhabitants, today it has only 1.7 million. The other larger towns have been also shrinking in size. The second largest city is Debrecen with a population of 200,000. This is the only town – outside of Budapest -, where guests can find a 5-star hotel. Here is a telling comparison with the US. According to a recent McKinsey (2012) report using data for 2010, 84% of the American GDP was generated in the largest 259 US cities, with a population of 150,000 or more.

i. SMEs can't play a serious role in vocational training;
ii. SMEs cannot be properly taxed, therefore the authorities have to rely on other taxable sources;
iii. SMEs have weak incentives to invest and to grow.

If production capacities are under-utilized (like in retail trade) and yields are low (like in agriculture) than unit cost and therefore prices are bound to be excessive, which then inhibits the growth of demand. If there is no demand, the firm or the farm cannot grow. As Gábor (1994) noticed rather early on, the Hungarian SME-s have been suffocating in this vertiginous vicious circle for two decades. There are very few successful SMEs, capable to grow and reach the size and maturity of a publicly traded firm. Between 2000 and 2009, there were only 22 IPOs on the Budapest Stock Exchange, while Prague can pride with 95 such transactions.

In societal terms, the size distribution of firms has a strong influence on the distribution of the fruits of economic growth. Since SMEs are operating with narrow profit margins they don't generate sufficient investable funds. This is the explanation of the downward sloping investment curve in Figure 9. At this point we have to invoke the concept of circular causation again. If the level of investments is low for a prolonged period of time, the capital stock will be outdated and this will negatively impact on labour productivity. This relationship holds strictly at the firms' level, but also at the macro level, if externalities are taken into account.

Figure 9: The share of gross accumulation within GDP, 1960 - 2010



Source: Central Statistical Office.

In European EU27 comparison, the Hungarian SMEs have the worst record in innovation. In the latest, 2011 edition of the Innovation Union Scoreboard, four statistical measures are used to assess the SME sector's contribution to innovation (Table 3). Out of these four, Hungary occupies the very last position in two and its scores and rankings are disappointingly weak in the other two categories, as well.

Table 3: The relative position of Hungarian SMEs as enablers of innovation, around 2010

Share of …. (in percentage of the total number of SMEs)	*EU27 average*	*Best performing country*	*Hungary's absolute figure and ranking among EU27*
…SME's innovating in-house	30.31	46.03 (Germany)	12.60 (27th)
…innovative SME's collaborating with others	11.16	22.23 (Belgium, Denmark, Estonia and UK)	7.15 (19th)
… SME's introducing product or process innovation	34.18	53.61 (Germany)	16.82 (27th)
…SME's introducing marketing or organisational innovations	39.09	53.02 (Luxembourg)	20.52 (24th)

Source: European Commission (2012b) pp. 62-63. (Annex A).

Those who know the Hungarian economy from close may object the above presented causation, by saying that there are still many *large publicly owned companies and institutions*, particularly in such capital intensive industries like transport, healthcare and education, thus a lot of investments and R & D must be financed by these public actors. Unfortunately, this objection doesn't hold. These companies and institutions – precisely because they are publicly owned – have been always forced by the government to operate with low profit margins in order to keep their prices and/or fees low. Therefore, without external support[18] the investments these players can finance are negligible at the macroeconomic level.

6.3 How did we get here?

If the consequences are so serious, it is imperative to understand how micro firms became so weighty in the Hungarian economy very soon after the regime change and why could they preserve their positions up to present times. The problem itself is known in other countries, too. As shown in the Appendix, Portugal and Greece have also far too many very small firms and – according to many experts - this explains to a great extent these countries' anaemic growth and low productivity. Furthermore, the Portuguese story is similar to the Hungarian case to the extent that after the fall of the Salazar dictatorship consecutive governments had pursued a deliberate policy of demonopolization. But the similarities probably end here. It has been shown convincingly by Braguinsky *et al.* (2011) that in Portugal the survival of the inefficient small firms is chiefly explained by the strong protection for regular workers in the labour code and other legislations which had been instituted as a reaction to the anti-democratic constraints of the overthrown dictatorship. The labour code does cause problems in Hungary too, but in our view it is not the main explanation of the distorted company structure. In Greece, the rigid product market rules seem to be the culprit. As a recent McKinsey Report (2012) shows, Greek licensing and operating processes are extremely cumbersome. In a direct, regression-based comparison the Hungarian data look lot better.[19] While these international comparisons are always informative, to understand the Hungarian case, we have to look for explanations elsewhere. In our view, there are at least four other causational mechanisms which mutually reinforce each other and thus fatally undermine productivity growth at the macro level.

[18] In this regard, the availability of EU assistance funds is of major importance.

[19] McKinsey (2012) p. 20.

During the first period of the socialist planned economy, the state merged into newly created SOEs all the previously existing privately owned SMEs. Subsequently the administrative prices guaranteed that profits were all taxed away from the society and then redistributed as investments for the benefit of SOEs. Under such circumstances, the service sector shrunk and this brought a deterioration of the quality of life for the consumers. As SMEs disappeared, many consumer goods and services became entirely inaccessible or accessible only in few places. As it is well-known, there were long queues in shops, at lunch time clients couldn't find a free table in restaurants, etc. After 1973, the situation improved somewhat in this regard, particularly if Hungary was compared to other socialist countries. But only the regime change in 1989 opened the gates in front of the owners of SMEs. The huge **pent-up demand** quickly created its own supply.[20] The mushrooming SMEs had a significant contribution to consumers' welfare, although this wasn't and for methodological reasons couldn't be measured as a part of output. This kind of statistical distortion holds even today, when wage or consumption figures from the pre-1990 figures are compared with current data.

After the initial boom, the continued hypertrophy of micro- and small firms was largely due to the new legal environment. As land ownership has been constrained since 1994, lax tax- and credit-rules and subsidized investment moneys are continuously pumped into the system, the micro-ventures look competitive from the consumers' perspective. The explanation is that ½ or 2/3 of the activities of the micro and small enterprises are in the **grey and black economy**, and this allows them to offer bargain prices. Hence, the large firms operating in the "white" economy cannot translate their higher productivity levels into lower prices and thus outcompeting the small firms. In addition, the small firms use fixed capital sparingly which is logical from their owners' perspective. This is even more true, if the ageing of the owners is also taken into account. As the tax returns show, the small firms write off much more fixed capital than they actually replace. These mechanisms, as already mentioned, don't cause much obstruction in the manufacturing sector, but they are strongly present in agriculture, in retail trade, in the construction industry and in the areas of health and culture. Since the manufacturing sector is relatively small today (15-17% of GDP), its high and growing productivity cannot improve sufficiently the economy-wide average.

The third reason which explains the survival of so many SMEs is that the customary market-clearing mechanism (the big fish eat small fish) doesn't work effectively. Thanks to the **lax accounting rules**, the owners of small firms are able to hide their families' personal consumption costs as the costs of their enterprises.[21] This is possible because, in small firms all the book-keeping and the access to the firm's bank account are singlehandedly controlled by the owner-manager, which is inconceivable in middle-size firms with more than 50 employees. In this way, the true proceeds of the small firms are 50 to 100 per cent more than the reported profits. The flip side of this situation is that the more competitive, larger firms cannot buy these smaller firms, because the owner of the small firm would like to receive 5-10 times of his *true* annual proceeds, while the potential buyer, a larger company can offer only 5-10 times of the *reported* annual profits. Moreover, the widely used cost-hiding practices prevent *horizontal cooperation* among farmers, shopkeepers and even professional service providers, like physicians, nurses, translators or artists. Since everybody has something to hide from the eyes of the taxman, they are all afraid to show their contracts, invoices and bills to each other. Without such openness and transparency in the administration, they cannot cooperate with each other in the daily actual work either.[22]

Finally, the honest, but **erroneous conviction** of Hungarian policy makers needs to be mentioned according to which the continued support of SME-s is necessary to create new jobs. Like in many other countries, there is a widespread and repeated claim both in the business community and in government that most new jobs are created by small businesses. In static terms, this is true for Hungary as well. But "young" firms should not be confused with "small" firms. As everyday

[20] By 1994, the first year when such figures were released in comparable form with later data, the number of registered business units was already above 1.0 million.

[21] A few typical examples: the office is operating in the apartment or the family house of the owner, the family car is legally owned by the firm, the phone costs of the entire family are assumed by the family company, eating-out costs of the family are billed as client-related expenses, etc.

[22] For a general discussion on the importance of cooperation see also Győrffy (2009) and Szalavetz (2010).

Hungarian experience suggest – and rigorous econometric investigation for the US proofs (Haltiwanger, 2010) – most of the new jobs are created by the young firms, which happened to be small at the beginning, and not by those small ones which remained small even 5-10 years after their establishment.

7. Summary and conclusions

This paper argued that Hungary has no other growth reserves than a more efficient allocation of the existing human and capital stock. Overall labour resource utilisation is comparable to the peers, because the low participation rates are fully compensated by the higher average hours worked. Inward and outward migrations are promising, but untapped channels. As for capital, the problem is that the country lacks large-scale enterprises, which maximize worker output through economies of scale and scope. Thus, there is a need for ownership concentration of fixed capital, as well as of the natural resources (e.g. agricultural land and forests). Such a strategy would require, first, a fast consolidation of micro- and small enterprises into transparently functioning middle-size and large firms. Paraphrasing the famous Marxist slogan, the new slogan should sound like this: "***Small entrepreneurs of Hungary, unite!***"

Once this is achieved by means of legal and administrative changes, Hungary will be once again an attractive investment opportunity to foreign investors. If the Hungarian labour force in the service sector, in agriculture and elsewhere will be able to generate extra profits for the owners of capital, the necessary financial means will be amply supplied by the world capital market. In practice, this will mean green field investments and privatization of existing assets as well.

In other words, low productivity in certain – but not in all - parts of the Hungarian economy is the primary, structural barrier to overall economic growth. The labour participation issue is merely a symptom and – to a considerable extent - the result of government induced administrative distortions. The country's low employment rate cannot be addressed before an adequate amount of new jobs is created as a result of massive productivity and profitability boost. This boost can no longer come from debt- and consumption-driven output growth, but rather from private sector investments in machinery and infrastructure. No doubt, a shift from consumption to investments, from wages to profits is politically difficult. Thus, there is a price to be paid for the acceleration of economic growth, just as there is a price to pay for the failure of catching-up with the EU15. But first, the society has to change its mind-set. Today, the majority of Hungarians doesn't understand that production *per se*, good intentions and diligence don't represent true values. If they, as consumers don't buy something that is being produced (e.g. expensive Hungarian agricultural products), or don't buy tickets to half-empty passenger trains in the country side, or don't enrol into the small country-side universities – than the continuation of such production or service provision is simply a waste. And eventually the price of this is that the country as a whole will remain unable to catch-up with our envied neighbours, like Austria or even Slovakia. Both the public and the political elite of Hungary should understand and accept that there is no such societal objective for which is worth to sacrifice the growth of labour productivity. At the present, we are very far from this.

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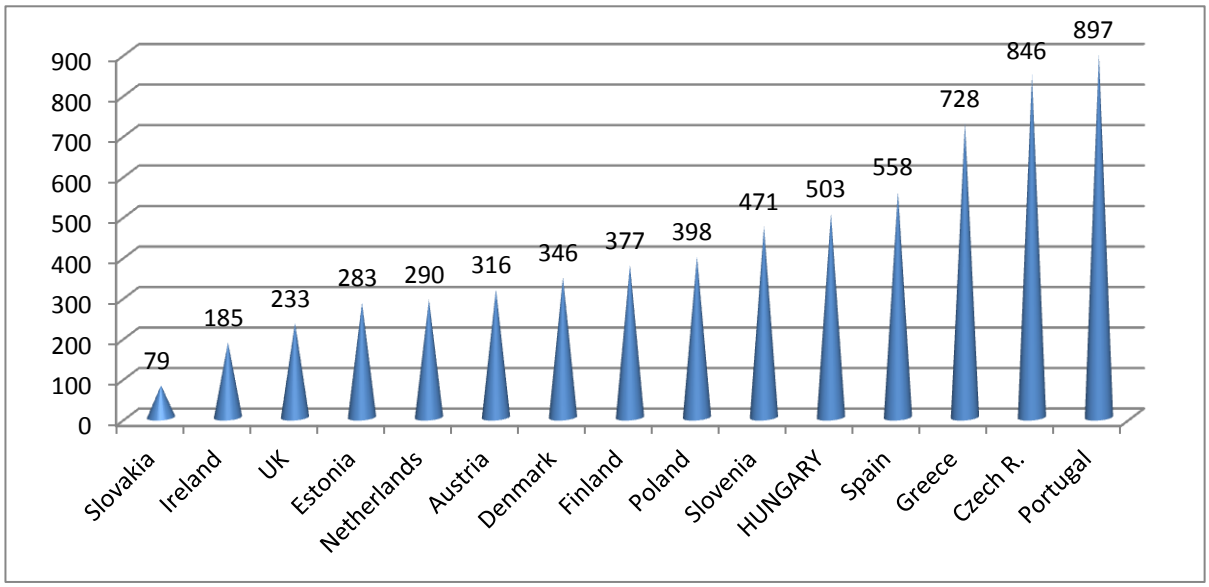
Appendix

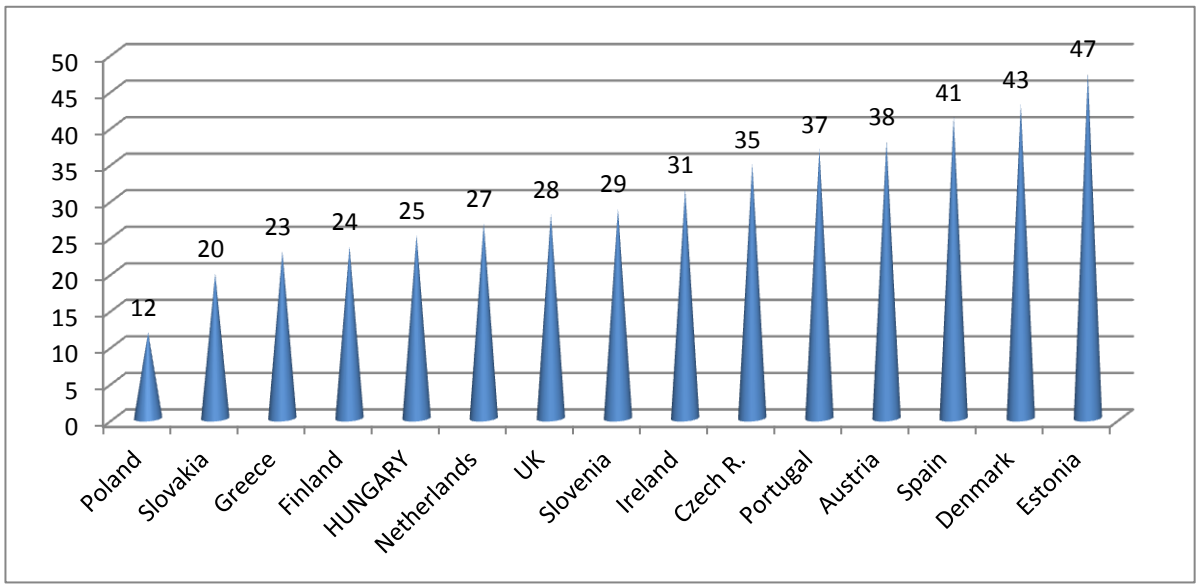
The number of micro, small, medium and large firms in selected EU member countries in 2009

(Per 10.000 of population)

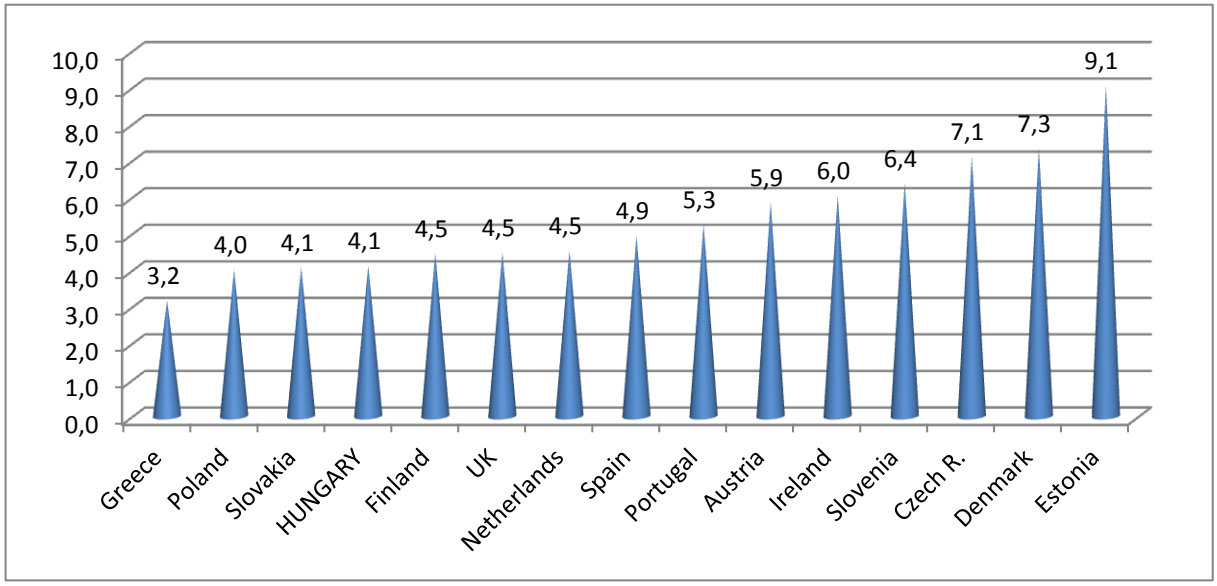
Micro firms (Employment: 1-9 workers, Annual revenue: > € 2 million



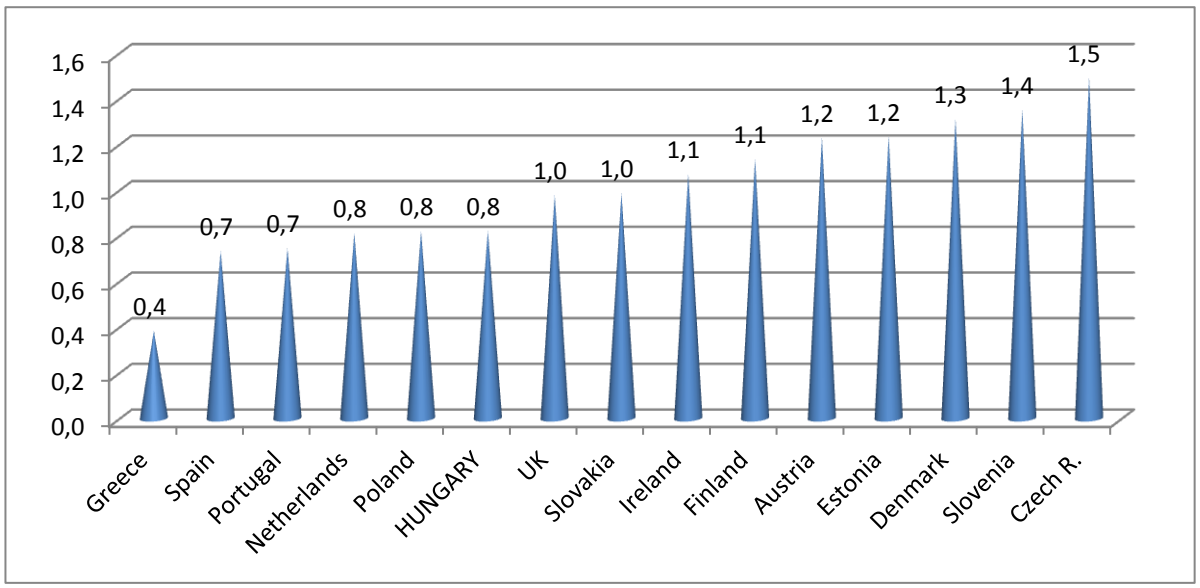
Small firms (Employment: 10-49 workers, Annual revenue: > € 10 million



Medium size firms (Employment: 50-249 workers, Annual revenue: > € 50 million



Large firms (Employment: > 250 workers)



Source: Author's calculation based on EC Enterprise and Industry (2010) Small Business Data Base.