Employment prospects on the periphery – The case of Hungary

Abstract

In our country, which is in peripheral situation, employment largely depends on the growth of centre countries determining the possibilities of periphery, unless we do not accelerate our growth exploiting our internal resources. To achieve it the weight of medium sized enterprises ought to be increased by some percentages. In this case the outflow of the most entrepreneur workers would slow down and there would be no need to increase the public work financed from public money at the recent pace. That would be needed in order to get onto a growth path, which converges to the developed world.

Introduction

First let us define the concept of *peripheral status*[1]. A country is in a peripheral status when it does not define its own position, but it depends to a considerable extent on the position of any centre country or a centre country group. This is the case for Hungary. The country's economic growth after World War II was subordinated to the Soviet Union and its economic zone, and today Hungary depends largely on the growth of the centre in the European Union, in particular Germany. A significant Hungarian economic historian aptly characterised the development of the country after World War II with this phrase: "a detour from periphery to periphery."[2] Of course, no peripheral situation means absolute economic determination by another, just as a centre position also does not mean absolute freedom. As Hungary was able to act autonomously in the COMECON environment, so she can now do the same. This study investigates Hungary's needs and possibilities.

Growth prospects

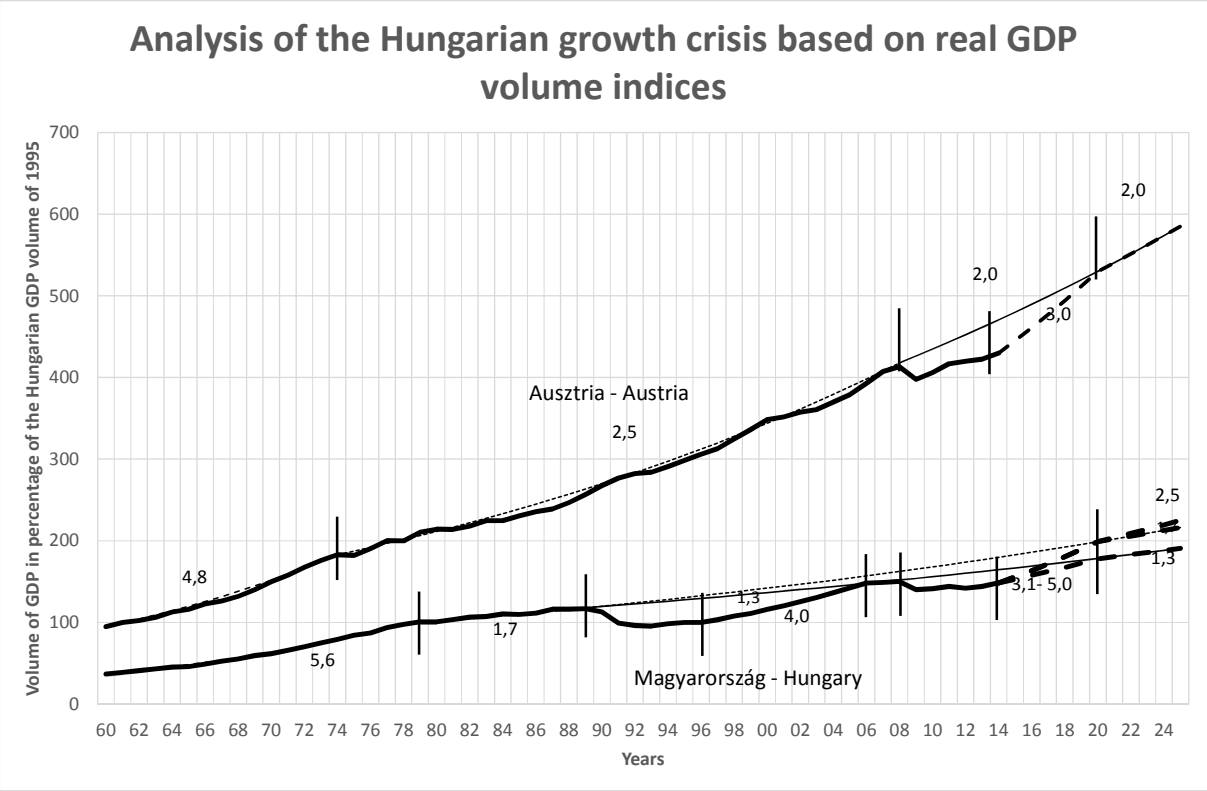
The image of peripheral growth is well summarized in Figure 1. We compared Hungarian development to the development of other countries, and I am convinced that the results can be perfectly summarized by a comparison with Austria. Austria could free itself from those economic handicaps which Eastern Europe could not avoid as a result of the Yalta agreements. Starting from a higher economic development level, and integrated into a more efficient economic alliance, Austria developed faster, and a significant gap evolved between Austria and Hungary. The gap has not closed since the year of regime transformation in 1989, and this is not expected even in the near future.

In Figure 1 we see the long-term development of the Austrian and Hungarian economies between 1960 and 2014, with forecasts to 2025.

During this period, the growth of the Austrian economy has slowed down twice: the first time in 1974, and again in 2009. The 1974 slowdown fits in the general growth rate slowdown that was observed in all developed countries after 1973. The average yearly growth rate of Austria slowed down to 2.5% from the previous 4.8%. This was due to the final termination of post-war recovery and to the emergence of the new world economic order.

[1] The concept of *periphery* I adopted from Artner. See pages 84 and 152 in the cited work.
[2] See the title of Berend T. Iván's book (1999).

Figure 1.



The second slowdown is more important. It was generated by the international financial crisis that erupted in 2008. The small, open economy of Austria sensed this general decline. The present rate is slower than that of the previous one, and it is not clear how the country's new long-term growth rate is evolving. According to the observed data, the recovery process is just beginning.

By *recovery process* we mean when a country's growth rate suddenly speeds up after decline or stagnation, and the country's economy develops at an exceptionally high rate until it reaches the point that it would have reached had there been no decline or stagnation. Generally, when this point is reached, the overall rate slows down (compared to the pace of recovery). The pressing question is this: What rate will be attained after the slowdown? In general, the pre-crisis rate will be restored, but there are examples of acceleration and deceleration as well.

The competitiveness of the Austrian economy is significantly higher than Hungary's. In spite of this, Austria cannot achieve the 2.5% average long-term rate which she had between 1974 and 2008. In order to reach that path by 2020, an average growth rate of at least 3% should be achieved between 2014 and 2020. Then the Austrian GDP would get to the level that would have been reached in 2020 if the global financial crisis had not occurred. However, it is not at all certain that in the future the country will develop with the former long-term rate of 2.5%. It is expected that this rate will be moderated to around 2 percent. To reach the previous 2.5% average growth rate, an acceleration of the growth rate of the world economy would be necessary. The signs of this acceleration are currently not visible.

For a while, the Hungarian economy managed to remain independent from the annual general slowdown of growth rates after 1973. Its GDP grew by 5.6%, which was faster than Austria's growth. But this lasted only for a while. After 1979, Hungary's growth also slowed down, and the slowdown was significantly greater than in Austria. The previous rate of 5.6% dropped to 1.7%. The increasing gap between the two countries also reflects the efficiency gap between the two social orders, and,

inter alia, this led to the regime transformation. This braked the Hungarian growth in 1989 and resulted in six years of decline and stagnation.

In 1996 we started to climb upwards from this hole after very severe austerity measures.[3] Then a recovery period started with average annual growth rates of 4%. This came to an end after 2005, and the economy's long-term growth rate was set on a more humble growth rate of 1.3%. This slowdown in the growth rates is indicated in Figure 1 by two trendlines. The dotted trendline shows the trend in the 1979-1989 period. It indicates how the Hungarian GDP would have been without the change of regime—and if the growth rate of the earlier period would have been sustainable. The thin solid line shows the trend established after the regime transformation. This trend, with its value of 1.3%, lags behind the Austrian trend even more. **This long-term slowdown of growth rate has very important causes, which we will try to identify in the second half of this study**.

Taking into account the available data, we can conceive four kinds of growth variants for the increase in Hungary's GDP after 2014. (At least in the political struggles, the politicians will discuss these four variants.)

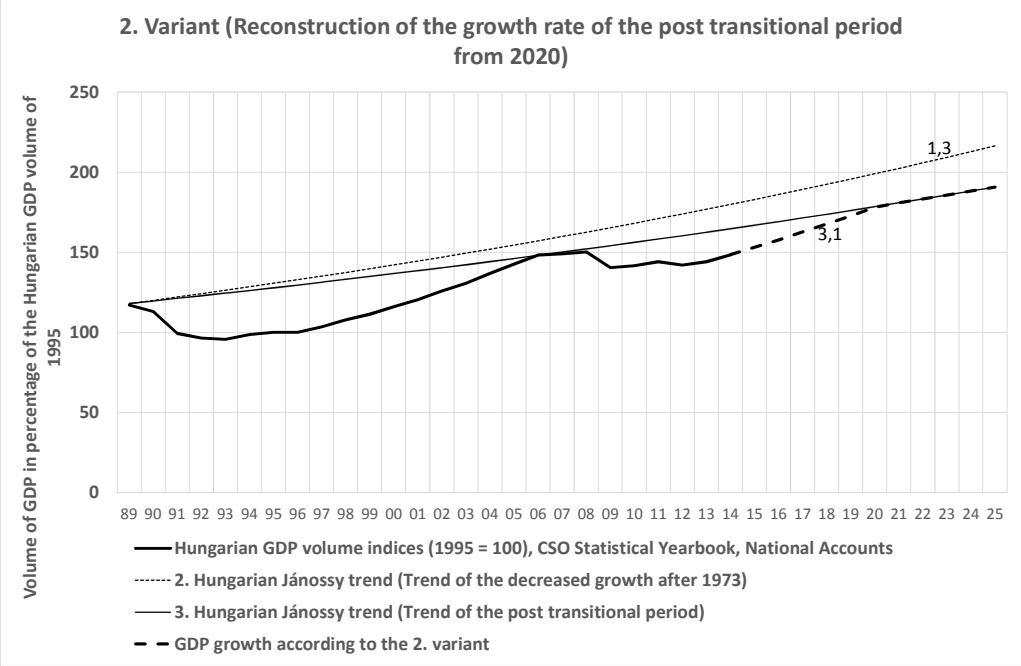
Variant 1: Stagnation with no significant economic growth. (Hopefully this is just theoretical; it will be removed from the agenda and we do not have to deal with it seriously.)

Variant 2: Restoration of the long-term rate of 1.3 % that evolved after the regime transformation.

Variant 3: Restoration of the 1.7 % annual average of 1979-1989.

Variant 4: A long term growth rate that is higher than the 1.7% of 1979-1989, which could create the conditions of a convergence with the Austrian economy and the developed world.

Figure 2.



[3] For undertaking these austerity measures, called the "Bokros package" after the Finance Minister at the time, the voters severely punished the politicians, and the consequences of this are felt in Hungarian domestic politics to this day.

Variant 2 is shown on Figure 2. Here I assume that GDP will grow by an average of 3.1% until 2020, and, when it reaches the trendline of the period after the regime transformation, it will continue to grow with an average annual growth rate of 1.3%.

Variant 3 can be seen in Figure 3. Here I assume that GDP will grow by an average of 5.0% until 2020, when it reaches the trendline of the 1979-1989 period, and that it will continue to grow with an average annual growth rate of 1.7%.

Figure 3.

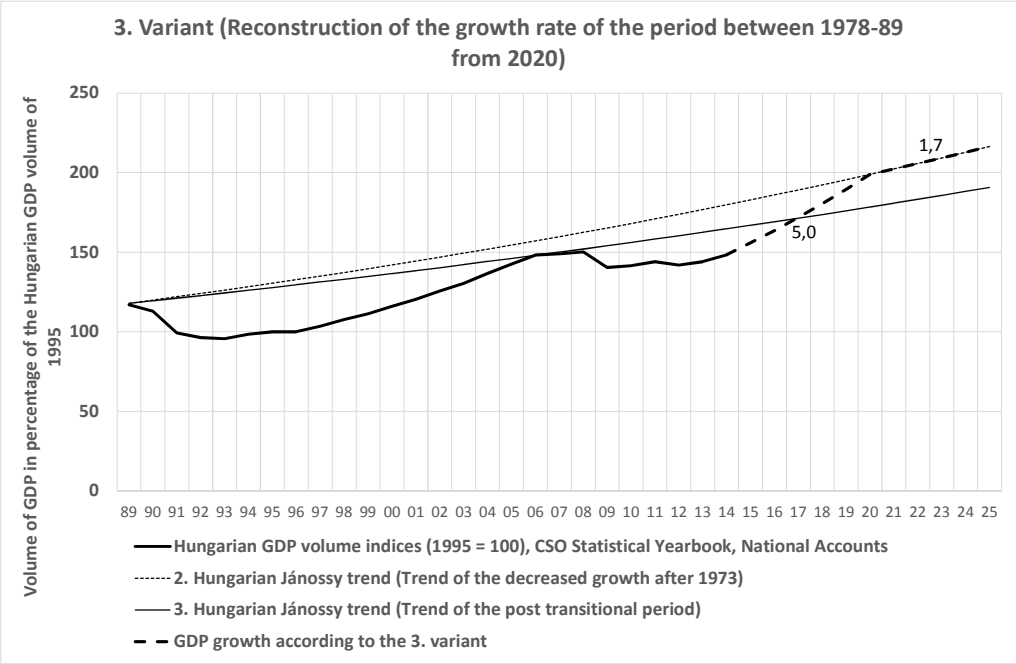
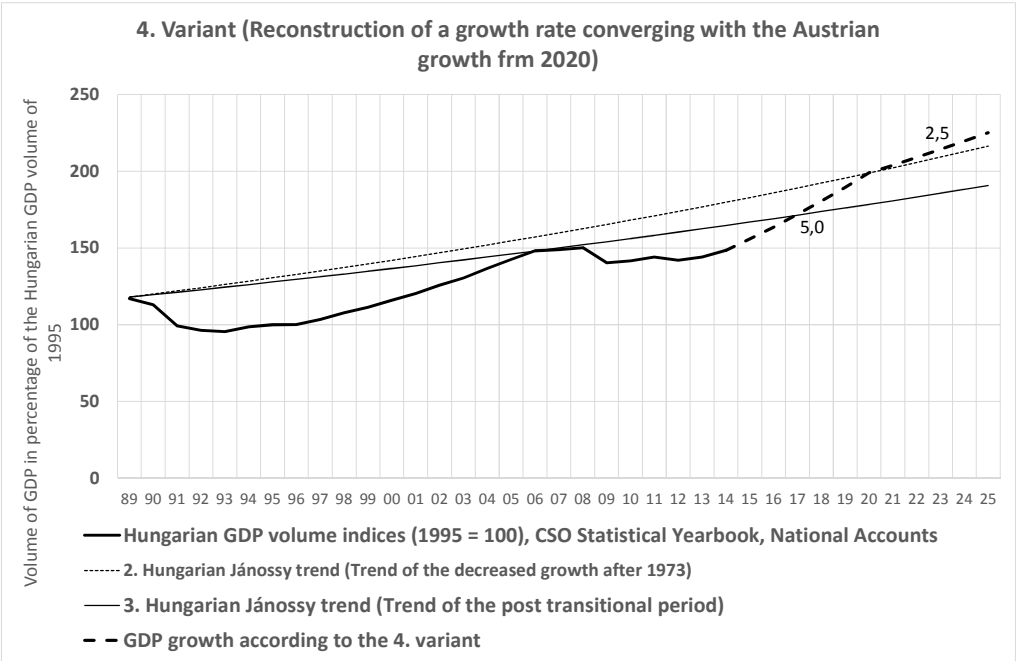


Figure 4.



Of course, we would be happiest if we could accomplish Variant 4, in which the average yearly 5 % growth rate up to 2020 would later drop not to 1.7 %, i.e. to the growth rate before the regime transformation, but, because of the establishment of a more effective social order, we would have a higher rate of around 2.5 %, ensuring a convergence. This can be seen in Figure 4.

Our growth is currently showing an early quickening after a lasting crisis. Based on the best of our knowledge, however, **by 2020 one can forecast only the continuation of the year 2006**, whose exact trajectory can be seen in Figure 2. The stable conditions for a growth higher than that are not yet visible. The trajectory of actual growth will be somewhere between the zero growth of Variant 1 and the growth of Variant 2. Perhaps this statement seems to be too brief and unfounded, but, with the help of a model to be described later, I will also prove that in the Hungarian economy—supposing the current processes remain unchanged—there are no conditions to support growth significantly higher than 2 %.

The peripherality in the story is clearly traceable. Until 1989, a centre incapable of long-term sustainable development and a Hungarian leadership politically and ideologically interwoven with it hindered efficient growth. After 1989 this situation significantly changed, but by the time the country was integrated into the division of labour of a more advanced Centre Group, the latter's crisis had blasted its growth. The big question is this: What was the role of the Hungarian leadership in this setback?

Employment prospects

But GDP only partially describes development in the last period. The price of the transformation—the biggest transformation loss—can be seen more transparently in Figure 5.

Changes in GDP growth allow us to differentiate four separate periods of employment. Before 1989 the country insisted on maintaining full employment, which meant employing 5.5 million people. This proved to be unsustainable after 1989, and in the next seven years employment decreased well below four million. The transformation cost is clear: 1.5 million people were forced out of work. Unemployment—unknown in the previous regime—appeared, and inactivity increased, or at least there was an increase in the number of those whose source of livelihood was not exactly known. The political leadership tried to mitigate the tragedy with early retirement, but that only partially eased the tensions.

After 1996 the country began to adapt to the new economic environment. The GDP growth rate began to prosper, which brought a mild increase in employment and a decline in unemployment. However, inactivity remained high for a long time. The renewal could not absorb this population due to the inadequate qualifications of the unemployed.

This undoubtedly positive change was again stopped by the global financial crisis of 2008. Employment fell, unemployment sprung up again, but inactivity slowly began to dwindle. In the diagram we can see that the number of full-time students constantly grew during this period, and the resulting increase of skill level has gnawed away at the dark array of inactivity. It is a big question how employment, unemployment, and particularly inactivity will grow in the future. Our study focuses mainly on this.

It is clearly visible that the effects of early retirement disappear, but due to the (for Hungary) unfavourable demographic processes, the massive number of pensioners did not decrease. The proportion of recipients of maternity allowances is constant due to a low birth rate. It is encouraging

that the number of full-time students is increasing, but as we will see, this is the overture of another negative process.

Figure 5.

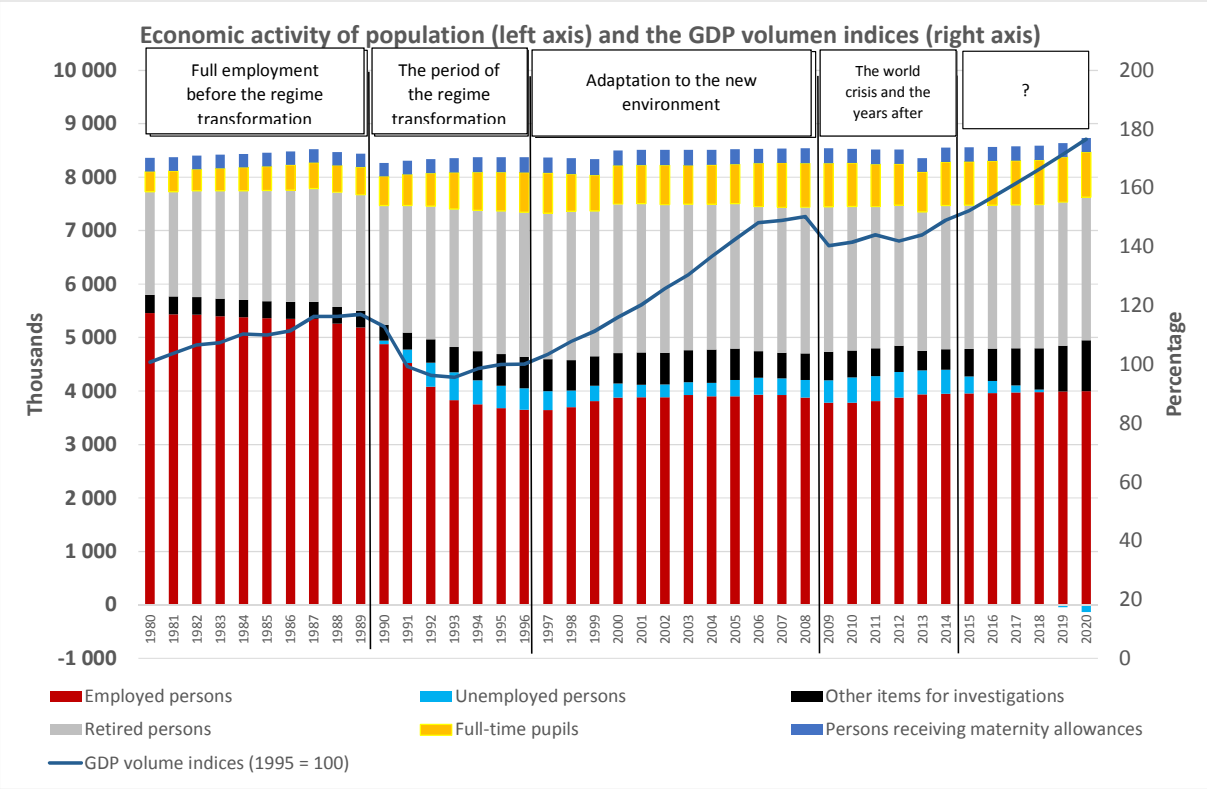
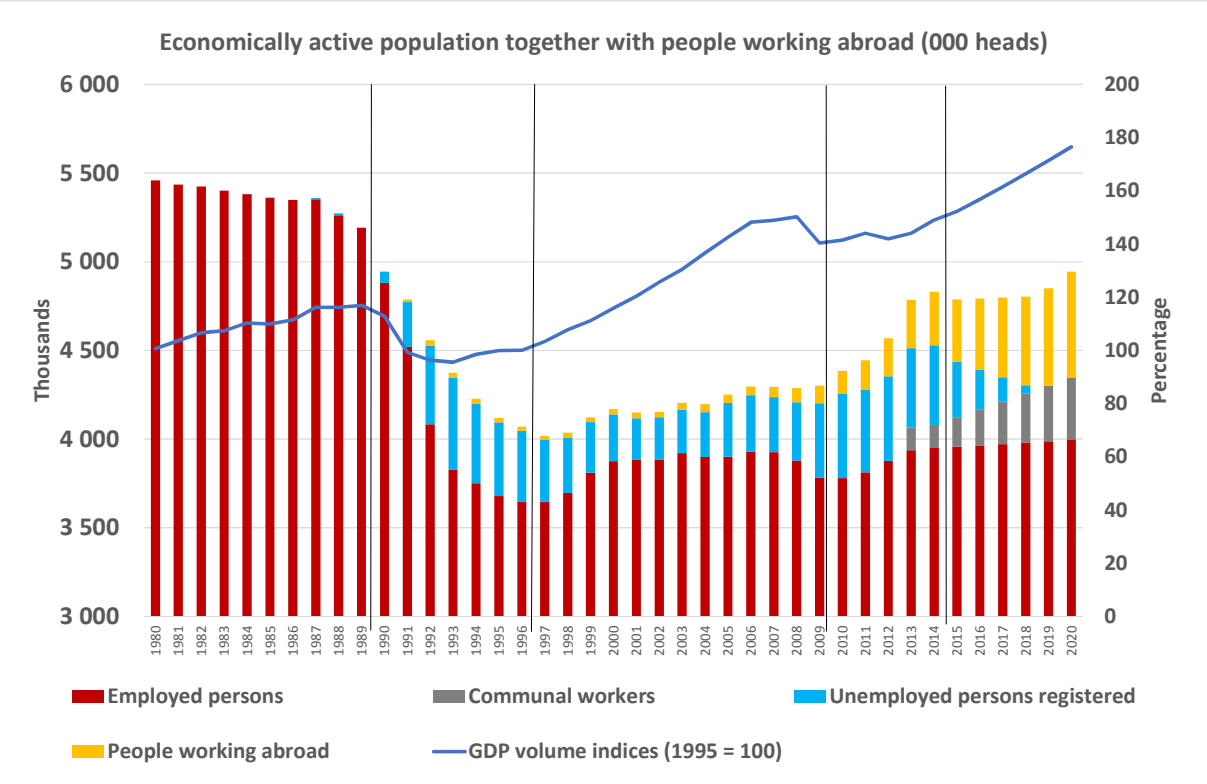


Figure 6.

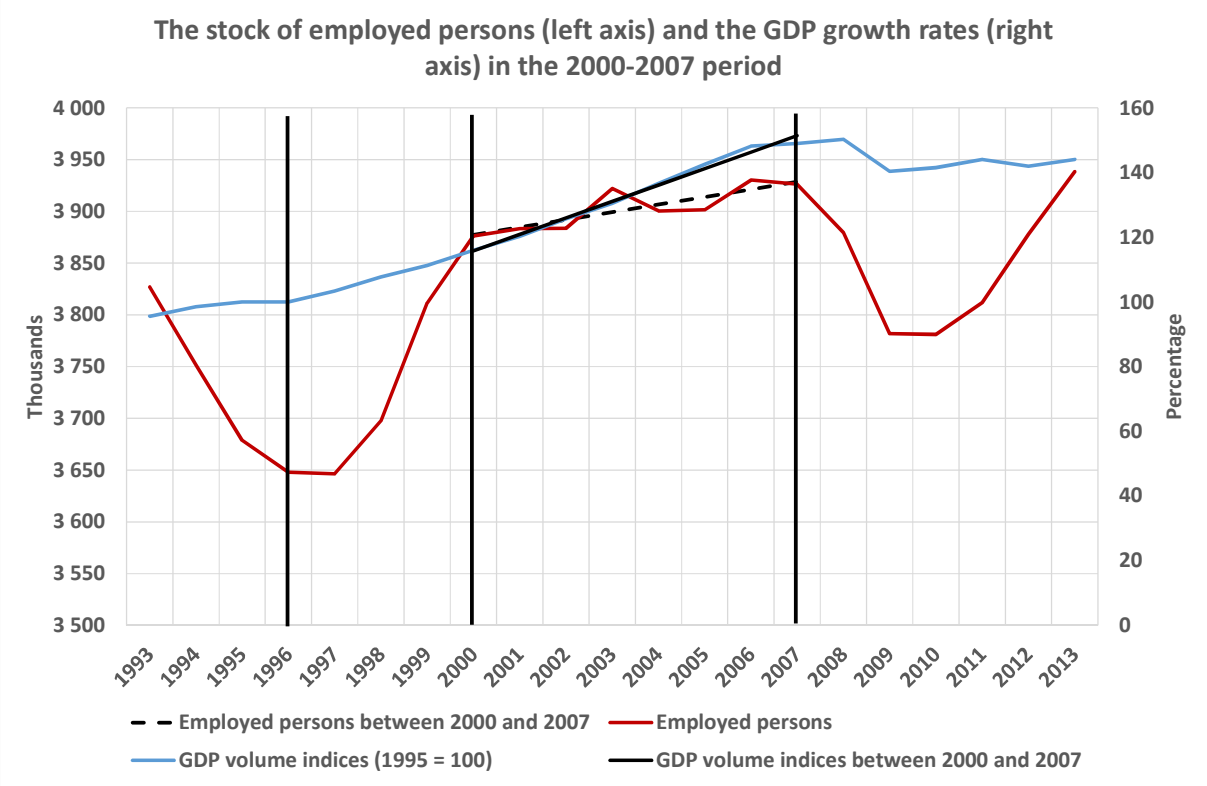


In Figure 6 we can see the new processes. The outflow of the more educated and entrepreneurial labour force to countries abroad started, and to decrease unemployment the Hungarian politicians invented a new secret weapon: public work projects. Both are suitable to reduce inactivity, especially if the public works contain some compulsory elements. The main problem, however, is that none of these can really be beneficial, because

- the people working abroad will bring benefit to the country only if they come back,
- the public (or communal) employment does not create productive employment, and
- the major problem remains: the primary labour demand, employment in the real sense, does not grow satisfactorily—even if GDP growth recovers.

The latter can be proven on the next chart. Figure 7 reflects that, when GDP growth deteriorates, the employment level also falls. In those periods when something disrupts economic growth, there is no clear picture about the relationship between GDP and employment. After the regime transformation, there was just one period when both GDP and employment grew: 2000-2007. Then the volume of GDP increased by an average of 4 percent, but the employment due to this productivity grew by only 0.2 percent. For this reason, the dashed-line trend of employment is less steep compared to a solid black trend line of GDP.[4]

Figure 7.



[4] Strictly speaking, for the observation of the joint movements of the two categories even this period is not reliable, because the first half of the period was a recovery period, and in the second half both the growth rates of GDP and the level of employment took their long-term values, and then the international crisis disrupted the process.

This is a sad message: Even if GDP growth reaches previous levels, employment is not guaranteed to follow, and it will likely turn out as shown in Figure 8—unless we do something more. The black line covering the later phases of the employment curve represent the trendline of Hungarian employment in the case of "healthier" development. This trendline was obscured by the former full employment under socialism. However, after the regime transformation it became visible. This line does not rise above 4 million, and so why would those who went abroad come back?

Figure 8.

From now on, our main question is this: Can we do something else? And if we can, would it be enough to bring home those who went abroad, and would it allow us to avoid using public works and other such problematic solutions, and instead return these jobs to where they belong under normal conditions?

GDP growth, employment, and the activity of enterprises

To further investigate the above question, we will need a production function (a model) that connects the production of GDP (or the value added[5]) and the use of labour with enterprises.[6]

[5] For those readers who are less familiar with national accounts, it is important to mention that the value added produced by enterprises is identical to GDP. The enterprise value added usually means production of GDP. This is not generally known, because when we talk about GDP, mostly we talk about its use (consumption, investment, exports, etc.).

[6] This is still a very primitive production function, but for the time being we do not need a more complex one.

Table 1.

Value added and the use of labour in Hungarian enterprises between 2008 and 2013

(The enterprise model of our computations)

		2008	2009	2010	2011	2012	2013
1	Number of enterprises/1 (thousands) - input	348	347	349	348	352	348
	Entreprises in % of total - input						
2	Micro (0-9 persons)	91,9	92,0	92,2	92,2	92,5	92,4
3	Small (10-49 persons)	6,5	6,4	6,3	6,2	6,0	6,1
4	Medium (50-249 persons)	1,3	1,3	1,3	1,3	1,3	1,3
5	Large (Above 250 persons)	0,3	0,3	0,3	0,2	0,2	0,2
6	Total	100,0	100,0	100,0	100,0	100,0	100,0
	Number of enterprises (thousands) - Number of enterprises * Enterprises in % of total						
7	Micro (0-9 persons)	319,7	319,6	321,5	321,4	325,2	321,2
8	Small (10-49 persons)	22,5	22,2	21,9	21,6	21,1	21,2
9	Medium (50-249 persons)	4,5	4,5	4,5	4,5	4,6	4,5
10	Large (Above 250 persons)	1,1	1,0	0,9	0,9	0,7	0,7
11	Total	347,8	347,4	348,8	348,4	351,6	347,6
	Average value added produced by one enterprise (Mill. HUF) - input						
12	Micro (0-9 persons)	9	9	10	10	11	10
13	Small (10-49 persons)	123	130	135	142	145	155
14	Medium (50-249 persons)	743	770	792	819	837	872
15	Large (Above 250 persons)	10 850	11 321	11 891	12 362	13 030	13 305
16	Total	60 757	60 573	59 378	58 683	55 816	56 641
	Average labour employed by one enterprise (persons) - input						
17	Micro (0-9 persons)	2	2	2	2	2	2
18	Small (10-49 persons)	21	21	21	21	21	21
19	Medium (50-249 persons)	100	101	101	101	101	101
20	Large (Above 250 persons)	888	886	890	889	898	886
21	Total	7	7	7	6	6	6
	Value added produced by enterprises (Bill. HUF) - Number of enterprises * average value added produced by one enterprise						
22	Micro (0-9 persons)	2 842	2 877	3 108	3 142	3 577	3 212
23	Small (10-49 persons)	2 769	2 891	2 951	3 066	3 059	3 287
24	Medium (50-249 persons)	3 362	3 478	3 593	3 709	3 825	3 940
25	Large (Above 250 persons)	12 160	11 800	11 060	10 528	9 162	9 250
26	Total	21 133	21 045	20 711	20 445	19 622	19 689
	Labour employed by the enterprises (thousands) - Number of enterprises * average labour employed by one enterprise						
27	Micro (0-9 persons)	576	575	579	578	585	578
28	Small (10-49 persons)	472	467	458	453	439	443
29	Medium (50-249 persons)	454	454	457	457	463	458
30	Large (Above 250 persons)	995	924	828	757	631	616
31	Total	2 496	2 420	2 321	2 245	2 118	2 095
32	Value added produced by households/2 (Bill. Huf)	4 393	4 181	4 158	4 372	4 377	4 464
33	Labour employed by households (000' persons)	1 384	1 362	1 460	1 580	1 760	1 843
34	Rest of the world/3	3 900	3 966	4 171	4 237	4 590	4 719
35	GDP of the National Economy at current prices (Bill. HUF)	29 426	29 192	29 040	29 054	28 589	28 872
36	Price indices (2013 = 100)	94	103	103	103	105	100
37	GDP of the National Economy at 2013 prices (Bill. HUF)	31 166	28 302	28 153	28 101	27 250	28 872
38	GDP volume indices (2008 = 100)	100	91	90	90	87	93
39	Total employment (000' persons)	3 880	3 782	3 781	3 826	3 878	3 938

Notes:

[1] Under the term *enterprises* I include non-financial enterprises, financial enterprises, and government enterprises.

[2] Under *households* I include those enterprises belonging to households and those non-profit institutions that support households.

[3] The „rest of the world" sector gives an account of the economic transactions among resident and non-resident units.

GDP, or its enterprise equivalent, *value added*, does not exist by itself alone, but only as an output of enterprises. Employment also does not exist in a vacuum. Employees enter the enterprise (or other producing unit) and produce added value there. This system is plotted in Table 1. The table itself is simple, but to fill it with figures one must compile a national profit-and-loss account, which should be harmonised with the profit-and-loss accounts of the enterprises. We are not yet at the end of this work, but our estimates can be regarded as reliable.

I wanted to minimize the mathematical notations, so I chose this table form to demonstrate the model. In the table the input cells are shaded. Let us examine them straight!

1. The number of companies I took from the tax declarations collected by the tax authorities.[7] In the given years, around 350,000 enterprises filled out corporate income tax declarations. These companies produced 70 percent of the GDP. Hereinafter, the term *enterprise* always refers to this enterprise group.
2. Corporate tax declarations include the complete enterprise balance sheet, profit-and-loss account, and labour data. Based on the reported labour, I could query how many enterprises belong to the EU'S *micro*, *small*, *medium*, and *large* enterprise categories. I could also compute the total labour belonging to these categories and how much added value they produced. The added value was determined as the balance of the revenues and the expenditures for material use or intermediate consumption.
3. The coefficients of rows 2-6 in Table 1 were deducted from the number of companies classified by the queries to the appropriate enterprise categories.
4. The coefficients of rows 12-16 and of rows 17-21 were computed by dividing the total produced added value by the number of enterprises in the given category.
5. The items in rows 32-34 were taken from the integrated accounts of National Accounts.[8]
6. All other data in Table 1 are calculated from the inputs.
    a. The number of enterprises is the product of the total number of enterprises and the appropriate percentage of enterprises.
    b. The value added of enterprises is the product of the enterprise number and the value added coefficient of the appropriate category.
    c. The labour employed by the enterprises is the product of the enterprise number and the employed labour coefficient of the appropriate category.
7. The value added of the national economy, or the GDP, is the sum of value added produced by the enterprises, the value added generated by the household sector, and the rest of the world.
8. I assume that the number of employees of the national economy is the sum of the number of employees in the enterprises, in the households, and in the non-profit institutions serving households.

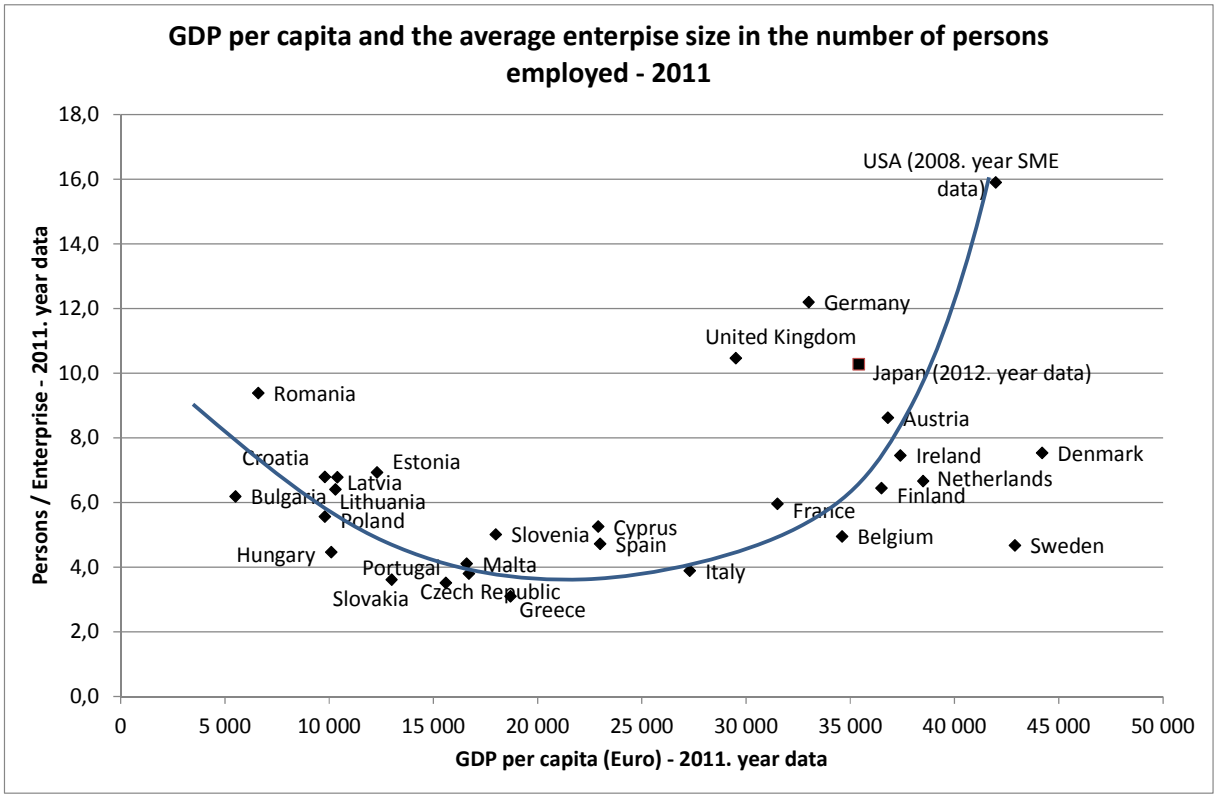
Table 1 speaks so a lot about the problems of the Hungarian economy—especially its employment difficulties. One can see that an overwhelming majority of companies, 93 percent, falls into the *micro* enterprise category; 5 percent are small companies; and only 1.8 percent belong to the medium companies.[9] As a result, the average company size—in terms of headcount—is 6 employees. The

[7] According to a contract signed by the Tax Authority (NAV) of Hungary and the Corvinus University of Budapest, each year we get the anonymous enterprise records from the tax declaration database for scientific research.
[8] Source: Magyarország Nemzeti számlái
[9] Do not forget that the investigated enterprise circle is only half of the total enterprise population, and the rest (which we do not investigate here) are also mainly micro companies. So the real share of micro companies within the economy is far bigger.

enterprise structure and enterprise employment coefficients do not change significantly. Because of the increase in productivity and the price level, the value added production coefficients are growing slowly, only 3.2% per year in nominal terms. The reasons why is this problematic will be illustrated in diagrams 9-11.

In Figure 9 the enterprise size of Romania, Bulgaria, and some Baltic States reflects the features of the former socialist enterprise structure, which could be characterized by the predominance of artificially enlarged big enterprises and by the low weight of micro and small enterprises. The more advanced regime-transforming countries demolished this structure.[10] Their average enterprise size decreased to around the level of 5-6 people, which is the level of the South-European periphery and at least half of the average enterprise size of the most advanced EU Member States.

Figure 9.



This development has double effects:

1. On the one hand, it has dismantled the so called „in gate unemployment" and employment with low productivity, and it has increased enterprise productivity to a much higher level than before. This was shown clearly in Figures 5 and 6.
2. On the other hand, it has reduced the growth of the volume of employment, overall efficiency, and the factor productivity.

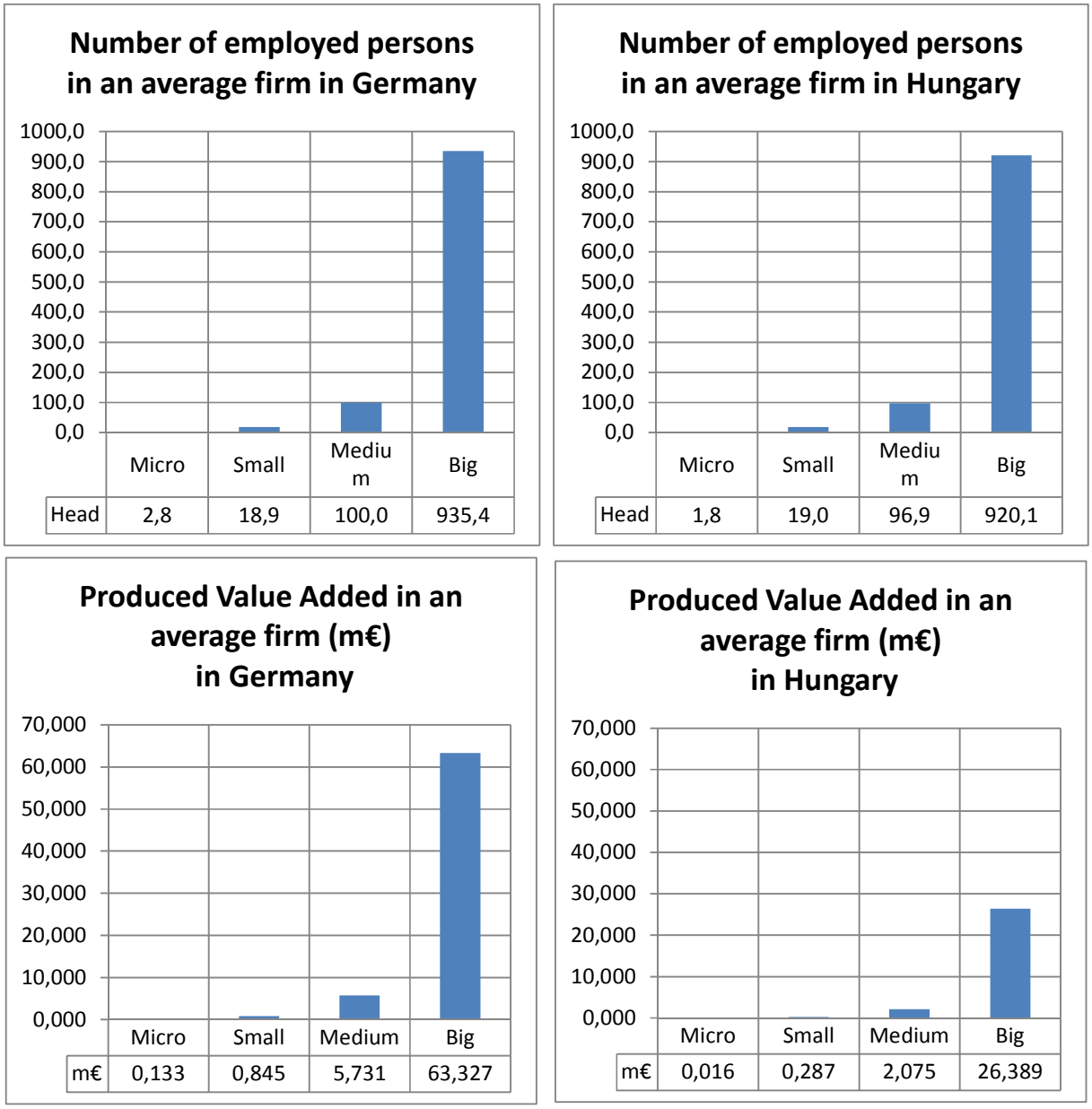
Several Hungarian and international analyses show that the company size is closely related to factor efficiency. Figure 10 shows that, due to the economy of scale, the bigger enterprise category produces

[10] Slovakia is a cuckoo in the nest. Probably there is a mistake in the data. We are investigating this.

more efficiently than a smaller one regardless of being Hungarian or German. Although the German companies produce added value more efficiently, their higher efficiency also jumps up as the enterprise size grows. This surge may also be seen (but at a lower level) among the Hungarian enterprise categories.

Figure 10.

The produced value added and the used labour in the Hungarian and German enterprises in 2011

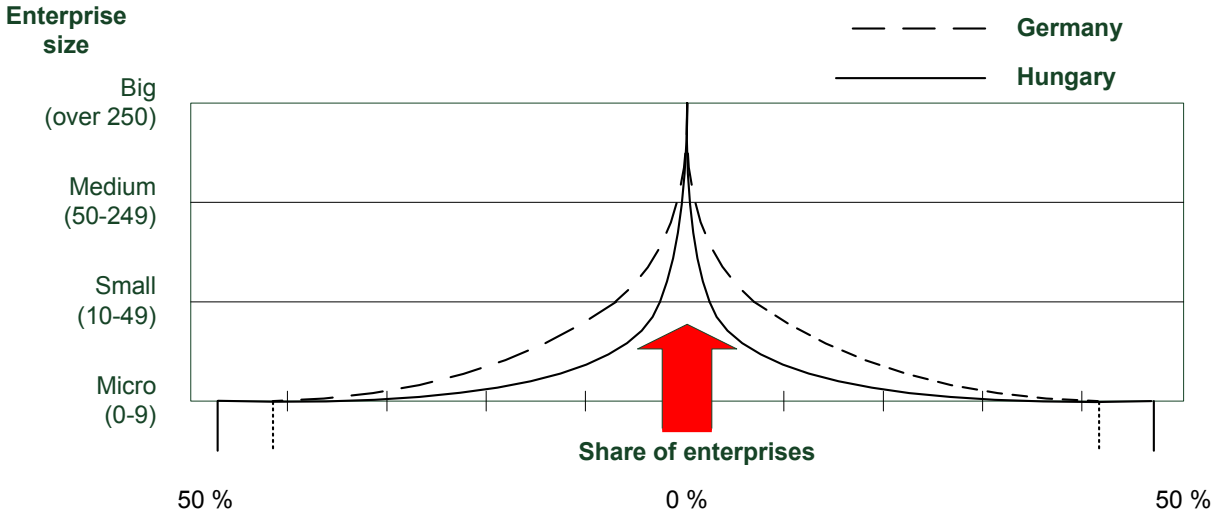


In my opinion, the cause of the observed growth rate slowdown in Figure 1 must be in the breakdown of the above described enterprise structure, that is, **in the reduction of the weight of the larger companies and an increase of the weight of the smaller companies**. This process has reduced the enterprise return to scale and slowed down the growth rate. This statement will be proven in detail immediately.

In 2011, 91.4% of Hungarian enterprises were *micro* enterprises, 7.1 percent belonged to *small* enterprises, 1.3 percent were *medium*-sized businesses, and 0.2 per cent (approx. 860 enterprises) were *large* enterprises. In Germany—similar to the majority of the most developed countries—the proportions were as follows: 83 percent micro, 14 percent small, 2.5 percent medium-sized, and 0.5 percent large. A modern enterprise structure, as we show in Figure 11, is especially strong in the middle of the figure's pyramid and below is less wide. This implies a criticism of the Hungarian enterprise structure and gives hints in which direction to develop it: **The pyramid of the Hungarian enterprises must be enlarged, but not with an unchanged structure**. From the relatively too big micro base, those who are able to grow must be raised to the small and medium level by thickening the trunk in this way. Some of them will also turn into large enterprises.

Figure 11.

Comparison of the Hungarian and German enterprise pyramid - 2011



Such a structural shift would have positive impact on employment. Figure 10 clearly indicates that the larger enterprise categories employ more labour. Such a structural shift associated with higher GDP growth would create more primary employment. This statement we can confirm by the model introduced in Table 1.

Increasing the number of micro enterprises is not an effective way forward, not in value added, nor in GDP, nor in the number of employees. A fragmented structure that is unable to concentrate its resources effectively could be only a temporary solution in a long-term process of change. The preferred (because most effective) structure is one in which the middle categories have a greater share. The effects of this process I will present in three forecasts.

With our enterprise model, let us compute the following:

1. How will the GDP and employment grow if the number of enterprises grows according to the trend of the past and if the enterprise structure remains unchanged? – First forecast.
2. How will the GDP and employment grow if the number of enterprises grows according to the trend of the past, but Hungary manages to transform its present enterprise structure into the German one by 2020? – Second forecast.

3. Finally: How will the GDP and employment grow if the number of enterprises grows according to the trend of the past, but Hungary manages to transform its present enterprise structure only moderately? – Third forecast.

To the different forecasts we assign the enterprise structures shown in Table 2.

Table 2.

Enterprise structures in the different forecasts

		Hungarian enterprise structure	German enterprise structure	Modestly concentrating enterprise structure
		Forecast 1	Forecast 2	Forecast 3
		H	D	X
1	Micro	92,4	83,0	90,0
2	Small	6,1	12,0	7,0
3	Medium	1,3	4,8	2,8
5	Large	0,2	0,2	0,2
5	Total	100,0	100,0	100,0

To compute the three forecasts some additional assumptions are needed.

Because we pay special attention to both the number of workers departing abroad and to the number of communal workers, we set a function for both categories. These functions determine the headcount of these categories as a function of the created primary jobs. If more primary jobs are created, then there is less need for our citizens to try their luck abroad, and fewer people would need to be subsidized by communal work. At present these functions cannot be statistically well grounded in Hungary as the flow abroad has just started, and the Government has just now launched an extensive public works program. It is impossible to predict the extent of these phenomena. These two functions are for the time being hypothetical; however, they cannot distort the final result of the calculations. It is certainly true that if the number of primary jobs significantly increases, both of these processes will slow down. These two functions are shown in Table 3.

Our enterprise model uses current prices. In order to get GDP volume indices from it, one more assumption must be made, namely, the planned rate of inflation. The Hungarian Government has managed to keep down inflation in recent years, so it is assumed that until 2020, the average annual inflation will be around 1%.

Relying on these additional assumptions, we can now make the forecasts with our enterprise model described in Table 1. The number of companies, the employment coefficients, and the value added coefficients will be forecast according to the relevant trends of the period 2008-2013, and then we change the percentages within the enterprise structure so that by 2020 they reach the targeted amounts. Figures for intermediate years must be interpolated between the targeted structure and the

actual one. Then the product of the enterprise number and the relevant coefficients of the given year determines the forecasted GDP, employment, the number of people leaving abroad, and the headcount of communal workers, supposing that the GDP production of the households and its supporters is constant.

Table 3.

Number of people leaving abroad and communal workers as a function of employment growth

	Growth of primary workplaces (compared to 2008) (000 persons)	Stock of people working abroad in 2020 (000 persons)	Communal workers - 2014 actual (000 persons)
Range 1	0	600	350
Range 2	100	500	300
Range 3	200	400	250
Range 4	300	300	200
Range 5	400	200	150
Range 6	500	100	100

Figure 12 shows the first forecast. The headcount of employees, workers abroad, communal workers, and unemployed persons are shown on the left axis. GDP growth rates at constant prices (2008 = 100) are shown on the right axis. The figure's message is this: If the number of companies changes according to the trend of the past 5 years, and the composition of enterprises does not change, then the annual GDP until 2020 will grow by an average of 2 percent, and the level of GDP won't be much higher than the 2008 level. Only 91,000 new jobs will be created in the primary enterprise sector. The number of workers working abroad is expected to be around 520,000, and 350,000 communal workers must be subsidised in this miserable form.

Here I should get back to my previous promise. In the analysis of Figure 1, I mentioned that the trajectory of the actual growth will be somewhere between the zero growth of Variant 1 and the growth of Variant 2. Well, this finding was based on the first forecast of this model computation.

The second forecast is illustrated on Figure 13. It may be summarised as follows: If the number of enterprises changes according to the trend of the past five years, but their composition is converted into the German enterprise composition by 2020, then Hungary's GDP will grow by 7.7% annually until 2020, and GDP in 2020 will be about 50 percent higher than in 2008. The primary enterprise sector will see 1.7 million new jobs. The number of workers abroad will decrease to the pupils and for those who are abroad temporarily, and also the number of people earning a living from public works will be driven down. Public works will serve the purpose for which it was intended: to employ a small number of those who stay behind.

Figure 12

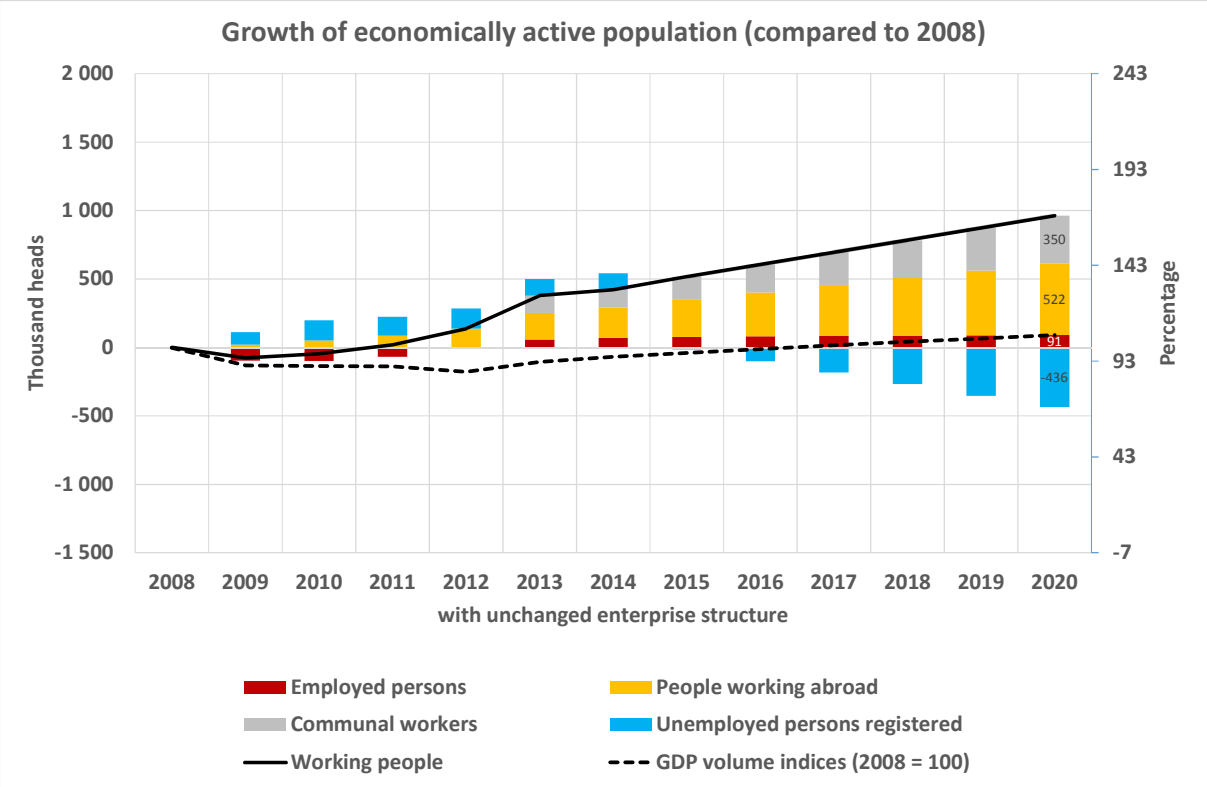


Figure 13.

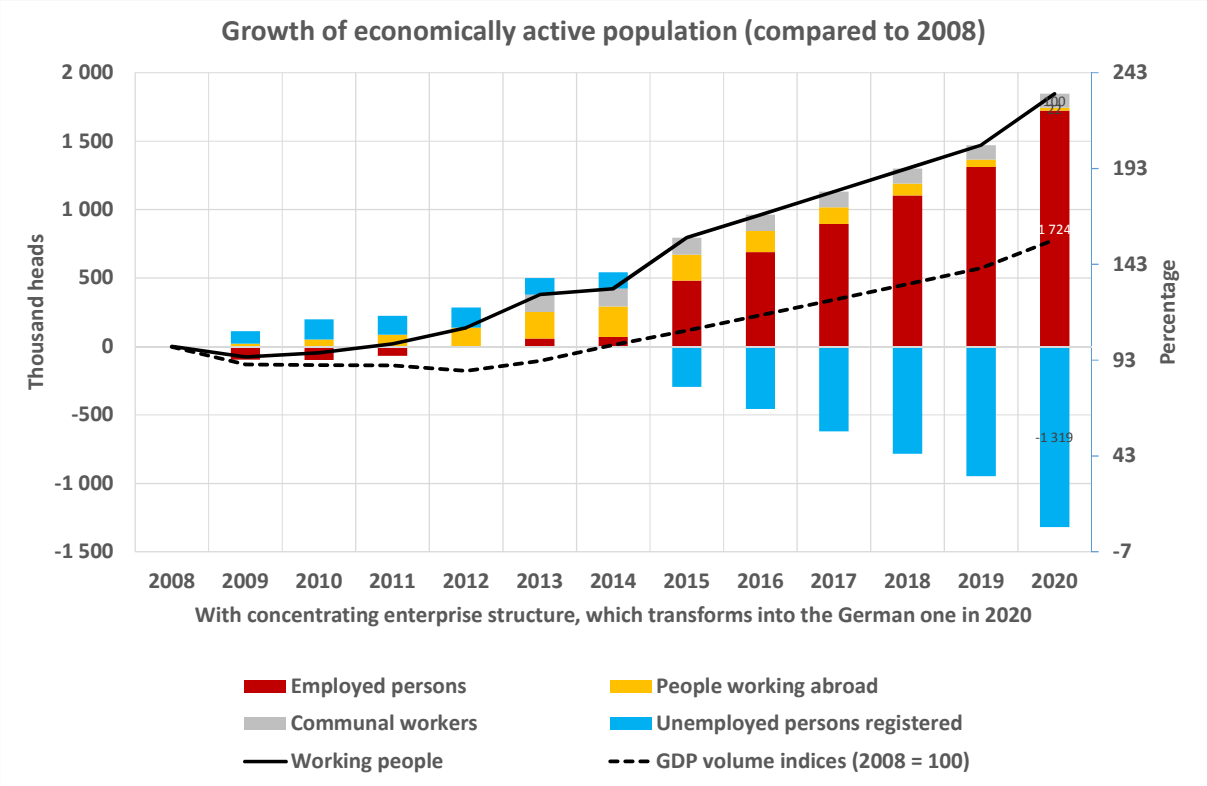
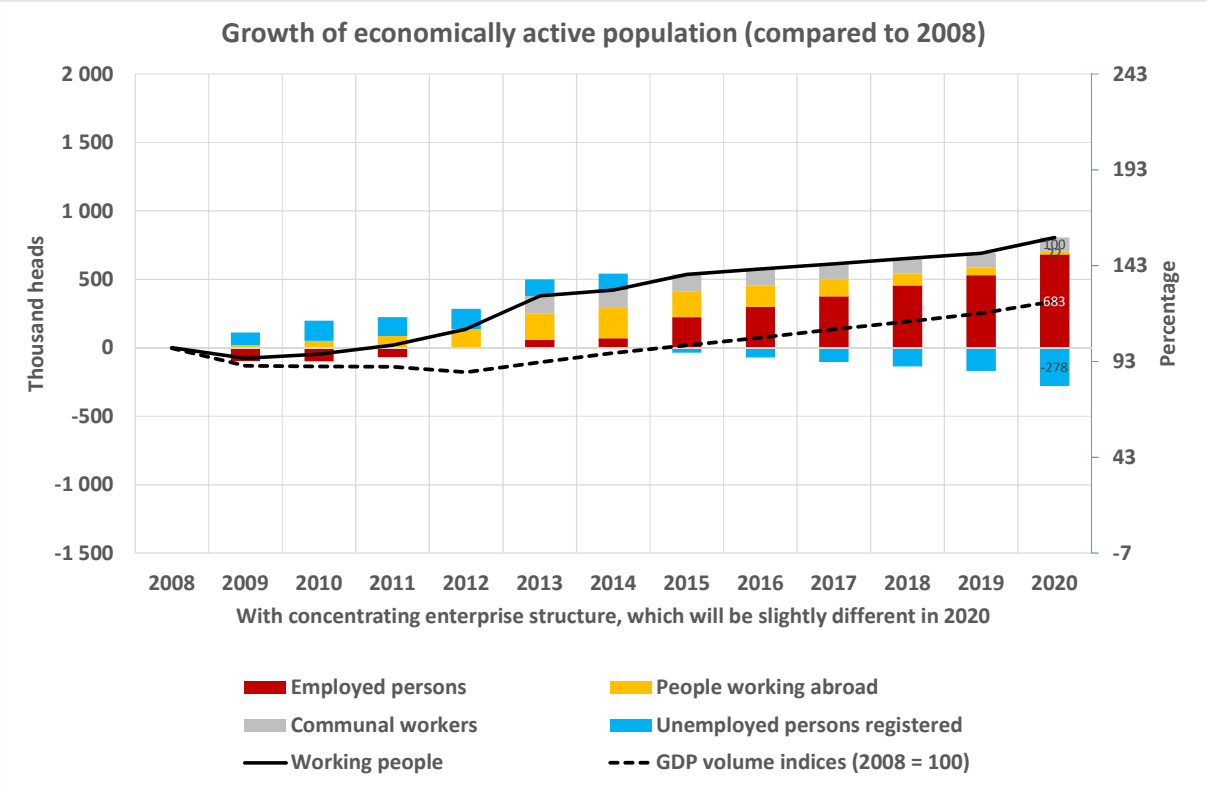


Figure 14 depicts the third forecast. What it says is this: If the number of enterprises changes according to the trend of the past five years, and if the weight of medium-sized companies increases moderately, then GDP will grow by 4 percent annually until 2020, and the GDP in 2020 will be about 30% higher than that of 2008. The number of new jobs in the primary enterprise sector will be around 680,000. The number of workers abroad will decrease to the pupils and for those who are abroad temporarily, while public works will shrink to a more modest level than today's.

Figure 14.



The results clearly show that an increase in the number of enterprises without a change in the enterprise structure leads nowhere, while a higher concentration of workers in a modestly higher number of medium-sized enterprises would practically solve our employment problem.

The model calculations also confirm a strong correlation between enterprise structure and GDP growth. The lower the weight of larger enterprises in the enterprise structure, the lower the GDP growth rate, and *vice versa*. The main cause of our economic difficulties is that our companies do not want to grow or are unable to grow. The most important issue becomes, why is the Hungarian enterprise structure so stable, so resistant to change? And why has the concentration of enterprises not begun? But that is another story.

Referenciák

1. AMECO, database of EUROSTAAT
2. AUBERT, J.-E. [2010]: Innovation Policy. A Guide for Developing Countries. The World Bank, Washington, D.C.
3. ACEMOGLU, Daron – ROBINSON, A. James [2013]: Miért buknak el nemzetek, A hatalom, a jólét és a szegénység eredete, HVG Kiadó Zrt., Budapest, 2013, 502. old.
4. ARTNER Annamária [2014]: Tőke, munka és válság a globalizáció korában, Akadémiai Kiadó, Budapest, 2014, 312. old.
5. BEREND T. Iván [1999]: Central and Eastern Europe 1944-1993: Detour from the Periphery to the Periphery, Cambridge University Press, Electronic Edition, 1999, 381 old. (Magyarul: Terelőúton, Közép és Kelet-Európa, 1944-1990, Budapest, Vince kiadó, 1999.)
6. BERG, Matthew – HARTLEY Brian – RICHTERS Oliver [2015]: A stock-flow consistent input-output model with applications to energy price shocks, interest rates, and heat emissions, New Journal of Physics, 20 January, 2015, 21 p.
7. BEVEREN, Ilke van [2010]: Total Factor Productivity estimation: a practical review, Journal of Economic Surveys (2010) Blackwell Publishing Ltd. 9600 Garsington Road, Oxford OX4 2Dq, UK and 350 Main Street, Malden, MA 02148, USA. 38. p.
8. BODA György [2008]: A tudástőke kialakulása és hatása a vállalati menedzsmentre, Információs Társadalomért Alapítvány, Budapest, 2008, 101 old.
9. BODA György – Virág Imre [2010]: Ütemvakság, Közgazdasági Szemle, 2010, X. szám
10. DEJUAN, Oscar [2010]: Structural Dynamics from Clakesch Approach, Paper Presented to 18th International Input-Output Conference, Sydney, 20-25 June, 2010, 16 p.
11. Economist szerkesztőségi cikkek [2012]: Small is not beautiful Why small firms are less wonderful than you think, 2012.03.08. 16:17, and Decline and small Small firms are a big problem for Europe's periphery, 2012.03.08. 16:18
12. Edvinsson, L - Malone M.S [1997]: Intellectual Capital, Harper Business, 1997, 223 p.
13. EU SME DATABASE
14. HALMAI Péter [2015]: Az európai növekedési potenciál eróziója és válsága, Budapest, Közgazdasági szemle, 2015, április (379-414. o.)
15. HÁMORI Balázs – SZABÓ Katalin [2012]: Innovációs verseny, Esélyek és korlátok, Budapest, Aula Könyvkiadó Kft, 2012
16. JÁNOSSY Ferenc [1975]: A gazdasági fejlődés trendvonaláról, Magvető könyvkiadó, Budapest, 1975, 388. old.
17. Keen, Steve [2010]: A dynamic monetary multi sectoral model of production, www.debtdeflation.com/blogs, University of Western Sydney, 29 p.
18. KENNEDY, Paul [1992]: A nagyhatalmak tündöklése és bukása, gazdasági változások és katonai konfliktusok 1500 – 2000, Akadémiai kiadó, Budapest, 1992, 688. old.
19. LUKÁCS Edit [2012]: A magyar kisvállalkozások tipizálásának lehetőségei az elmúlt évtized hazai kutatásainak tükrében, Vezetéstudomány, 2012, Különszám.
20. Magyarország nemzeti számlái, 1995-2013, KSH, 2014 november
21. MONG Attila [2012]: Kádár Hitele, A magyar államadósság története, Libri Kiadó, Budapest, 2012
22. MUNKAERŐPIACI TÜKÖR 2013, Szerkesztette FAZEKAS Károly NEUMANN László, MTA Közgazdasági- és Regionális Tudományi Kutató- Központ Közgazdaság-Tudományi Intézet, Országos Foglalkoztatási Közhasznú Nonprofit KFT. Budapest, 2014

23. OPLATKA András [2014]: Németh Miklós, „Mert ez az ország érdeke”, Helikon Könyvkiadó, Budapest, 2014, 435. old.
24. PALÓCZ Éva [2010]: Hallgat a felszín – fecseg a mély. Egy elhanyagolt szegmens a gyorsan növekvő KKV. A gyorsan növekvő magyar kis- és középvállalatok a gazdaság motorjai. Közgazdasági Szemle, 2010. LVII. évf. április
25. PAPANEK Gábor [2010]: A gyorsan növekvő magyar kis- és középvállalatok a gazdaság motorjai, Közgazdasági Szemle, LVII. évf., 2010. április (354–370. o.)
26. PAPP Bence [2015]: A munkaerő-piaci bizonytalanság hatása a közszféra és a versenyszféra közötti bérkülönbségekre, Közgazdasági Szemle, 2015. Május, 473-501. old.
27. Pitti Zoltán [2010]: Gazdasági teljesítmények kontra társadalmi elvárások 20 év után, Napvilág kiadó, Budapest, 2010
28. Pitti Zoltán [2012]: A hazai gazdaság fejlődésének tulajdonosfüggő jellemzői. Európai Tükör, MEH folyóirat, 1. szám.
29. Pitti Zoltán [2012]: A gazdasági teljesítmények vállalkozási méretfüggő jellemzői Magyarországon Közgazdász, a TÁMOP-4.2.1/B-09/1/KMR-2010-0005. sz. kutatási projekt keretében készült tanulmány
30. Pitti Zoltán [2010]: A hazai vállalkozások demográfiai, teljesítményi és eredményességi jellemzői a 2000-2007. évi innovációs gyakorlat és K+F teljesítmények tükrében, Budapesti Corvinus Egyetem tanulmánya, Kutatási összefoglaló, Készült „A vállalati K+F ráfordítások ösztönzésének lehetőségei” tárgyú, a Nemzeti Kutatási és Technológiai Hivatal által irányított kutatási program keretében.
31. Pitti Zoltán [2010]: Gazdasági kórkép alulnézetből, VEZETÉSTUDOMÁNY 2 XLI. ÉVF. 2010. 6. és 9. SZÁM / ISSN 0133-0179
32. Pitti Zoltán [2012]: Gazdasági teljesítmények tulajdonosfüggő jellemzői Magyarországon (kézirat)
33. RESZEGI László – JUHÁSZ Péter: A vállalati teljesítmény nyomában, Budapest, Alinea Kiadó, 2014, 335 old.
34. ROMÁN Zoltán[2006]: A kis- és középvállalatok és a vállalkozások statisztikai helyzete. 2006. Gazdaság és statisztika, 17.56
35. SVEIBY, Karl Erik [2001]: Szervezetek új gazdagsága: a menedzselt tudás, Budapest, KJK KERSZÖV Kiadó, 2001, 291. p.
36. SYVERSON, Chad [2011]: What Determines Productivity, Journal of Economic Literature, 2011, 49:2, 326-365.
37. Társasági adóbevallások adatbázisa, NAV
38. TÖMPE István [2015]: Az elitek árulása, Noran Libro, Budapest, 2015, 453. old.
39. SCHUMPETER, Joseph A. [1934]: A gazdasági fejlődés elmélete, Vizsgálódás a vállalkozói profitról, a tőkéről, a hitelről, a kamatról és a konjunktúraciklusokról; Közgazdasági és jogi könyvkiadó, Budapest, 1980, 320 old.
40. YIFU – LIN, Justin – FANG CAI – ZHOU LI [2008]: The China Miracle, Development Strategy and Economic Reform, The Chinese University Press, Hong Kong, 2008, 387 old. 484. old.