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## ECONOMIES OF THE VISEGRAD COUNTRIES: COMPARATIVE ANALYSIS

The article analyzes the macroeconomic indicators of the Visegrad countries before and after the entering the European Union. A significant dependence of the GDP dynamic in the Czech Republic, Hungary and Slovakia from the dynamics of the EU as a whole and the lack of such the dependencies for the Polish economy was disclosed. There are not statistical confirmation of the predictions of accelerating inflation and rising unemployment for less developed countries in the case of their entering the EU. Every country remains free to choose effective methods to counter the challenges of integration. One of them is a speedy development of the domestic market and keeping dependency of the national economy on overseas trade (both import, and export) on the safe level, and Polish experience proves it to be valid.

**Key words:** *Visegrad Group, the European Union, GDP, inflation, unemployment*

Today the Visegrad group (V4) has become the most original phenomenon in European political and economic space. It was created in 1991 by the Czech and Slovak Federal Republic, the Republic of Poland and the Republic of Hungary. It successfully has passed a test of division one of the signer (the Czech Republic and Slovakia was formed in 1993 as a result of the Czech and Slovakian Republic's division), entering the European Union (all participants became the full European Union members in May 2004), and the latest world financial and economic crisis. Moreover, V4 plays the observable role in solving problems, having not only regional but also Europe-wide importance. It in particular shows the joint statement as a result of the meeting of the foreign secretaries of the Visegrad group with the Ukrainian minister of foreign affairs in Kiev on December 16, 2014 [1].

The phenomenon of the Visegrad group is explored in scientific literature well enough. The researchers spared special attention to the V4 on the eve of entering the European Union, because there were misgivings that the group would stop its existence since the primary tasks, for which it was cre-

ated, seemed solved [2–4]. However, thanks to large part to deep scientific analysis of this problem, the founders of the V4 exuded possible to continue its work in the former format.

The second wave of the interest to the Visegrad Four was connected with need of the estimation of the first result of the member-countries' activity in composition of the EU [5–7]. The authors analysed the consequences of entering the EU both for V4 as a whole and for separate countries.

In May 2014 the Visegrad countries celebrated the decennial event of the entering to the EU that caused a new wave of the raised interest to them [8–9]. In our opinion the Institute of the political sciences of Slovak academy of sciences has become the centre of the studies of these questions, which with support of the Visegrad fund has conducted a number of the typical international studies and has published two monographs [10–11]. The authors try to examine this question with several positions: history, political and economic. XXIII International economic forum, which took place in September 2014 in Krynica Zdrzy (Poland) was dedicated to the complex estimation of the result of the 10-

year stay of the Visegrad group countries in composition of the European alliance [12].

It is possible that in the near future the interest to experience of integration both countries of the Eastern Europe as a whole and participants of the Visegrad group in particular in the EU will increase again. This is connected with documentary fixation of the European surges of the new countries (Ukraine, Moldova and Georgia) and their signing of the agreements about Associations. The study of the predecessors' experience will allow not only imagining the contents of those transformations, which are necessary to realize on way of the European integration better, but also as far as possible avoiding the difficulties and mistakes, which were made by others.

The purpose of this article is to estimate of the macroeconomic situations in the participant-countries of the Visegrad Four on the eve of entering the EU and hereupon entering, as well as to study correlation of dynamics of the national factors with the track record of the EU economy as a whole.

Poland, Czech land and Hungary pertained to the oldest states of Europe. Stefan I became the first Hungarian king as far back as 1000. Boleslav I was awarded the title of the Polish king after 25 years. The first Czech prince to win the royal title was Vratislaus II of Bohemia in 1085, but inheritance of this title has in 1212 [10, p. 16]. The analysis of political and historic events for the last millennium shows that present participants of the Visegrad group practically have always strived to have some forms of the association that did not exclude the multiple conflicts. This group has got its name in honour of borough Visegrad, where the agreement between Polish, Czech and Hungarian kings, which defined the relations in this part of Europe for many years, was reached in 1335.

The modern Visegrad agreement was executed in the manner of declarations. The signers have formulated 5 basic objectives whose achievement the participants must follow:

– full restitution of state independence, democracy and freedom;

– elimination of all existing social, economic and spiritual aspects of the totalitarian system;

– construction of parliamentary democracy, modern State of Law, respect for human rights and freedoms;

– creation of a modern free market economy;

– full involvement in the European political and economic system, as well as the system of security and legislation [13].

The goal-directed realization of these positions in large part has defined the successful going of a country through the starting-up stage enter the European Union. As a result of the done work at the starting-up stage the process of entering united Europe did not become powerfully painful for these countries.

As Table 1 shows that on the eve of entering the EU all countries of the Visegrad group pertained to one group as to the level of the economic development. It is group of the middle developed countries. GDP per capita, calculated on parity of purchasing power in Euro (the method of Eurostat), varied between €10,000 and €20,000. This indicator was the lowest in Poland (about 50% to the average parameter in the European Union) and it was the highest in the Czech Republic – over 83%.

Table 1

**Main macroeconomic indicators of the V4 countries on the eve entering the EU\***

Indicator, country	2002	2003	2004
<b>GDP per capita, € (calculated according to PPP)</b>			
Czech Republic**	15,3	17,5	19,3
Hungary	12,7	13,1	13,8
Poland	9,9	10,2	11,0
Slovakia	11,2	11,7	12,6
EU (28)	21,0	21,3	22,3
<b>Rate of Real GDP Additions (%)</b>			
Czech Republic	6,5	6,4	6,1
Hungary	4,5	3,8	4,8
Poland	–	3,6	5,3
Slovakia	4,7	5,4	5,2
EU (28)	1,3	1,5	2,5
<b>Index of Consumer Price (%)</b>			
Czech Republic	1,4	–0,1	2,6
Hungary	5,2	4,7	6,8
Poland	1,9	0,7	3,6
Slovakia	3,5	8,4	7,5
EU (28)	2,5	2,1	2,3

Table 1

Indicator, country	2002	2003	2004
<b>Unemployment Rate (%)</b>			
Czech Republic	8,1	7,7	7,8
Hungary	5,8	5,7	5,8
Poland	18,1	19,4	19,6
Slovakia	19,1	18,7	18,3

\* Source: <http://ec.europa.eu/eurostat/tgm>

\*\* Own calculations.

It is necessary to line that all countries developed rapidly, demonstrating more or less stable GDP growth rate. The positive track record of national production began in the second half of the 1990-s when the first outcomes of the economic reforms, oriented on formation of market economies appeared. The Czech Republic occupies the specific position. Its economy pulled through the world financial crisis (GDP felt in 1997–1998) very hard. But in the following years increase of GDP was the highest. However, there is not yet tracked correlation between the track record of the countries' indicators and indicators of the EU as a whole.

If according to two first indicators participants of the Visegrad group entered the EU with closed parameters, problems of the balance on the money market and the market of the labour for them were absolutely different. The Czech Republic and Poland managed to hold the price: rate of inflation in these countries was lower than in the EU countries on average but in 2003 we could observe the stable level of the consumer prices. On the contrary, in Hungary and Slovakia rather quick growth of the consumer prices was typical.

Several other situations were formed on the labour market. The problem of the unemployment was moderate for the Czech Republic and Hungary. Slovakia and Poland had each fifth economically active person unemployed. At the time of entering the EU the unemployment rate in Poland was the highest in Europe.

Ten years of stay of the V4 countries in composition of the European Union noted ups and downs of the economy. We would like to pay attention to several trends, which are come to light with analysis of data in Table 2.

Table 2

**Main macroeconomic indicators of the V4 countries after the entering to the EU\***

Indicator, country	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>GDP per capita, € (calculated according to PPP)</b>									
Czech Republic	–	–	–	–	–	–	–	–	–
Hungary	14,4	15,1	15,6	16,2	15,6	16,4	17,0	17,1	17,6
Poland	11,6	12,3	13,7	14,1	14,3	15,6	16,6	17,4	17,9
Slovakia	13,8	15,3	17,3	18,5	17,3	18,5	18,9	19,6	20,0
EU (28)	23,2	24,4	25,8	25,9	24,3	25,3	26,0	26,5	26,6
<b>Rate of Real GDP Additions (%)</b>									
Czech Republic	10,7	6,9	6,2	6,3	–2,9	5,0	0,5	–1,0	0,7
Hungary	4,3	4,0	0,5	0,9	–6,6	0,8	1,8	–1,5	1,5
Poland	3,5	6,2	7,2	3,9	2,6	3,7	4,8	1,8	1,7
Slovakia	6,5	8,3	10,7	5,4	–5,3	4,8	2,7	1,6	1,4
EU (28)	2,0	3,4	3,1	0,5	–4,4	2,1	1,7	–0,4	0,0
<b>Index of Consumer Price (%)</b>									
Czech Republic	1,6	2,1	3,0	6,3	0,6	1,2	2,1	3,5	1,4
Hungary	3,5	4,0	7,9	6,0	4,0	4,7	3,9	5,7	1,7
Poland	2,2	1,3	2,4	2,7	–0,9	1,4	3,6	2,8	0,4
Slovakia	2,8	4,3	1,9	3,9	0,9	0,7	4,1	3,7	1,5
EU (28)	2,3	2,3	2,4	3,7	1,0	2,1	3,1	2,6	1,5
<b>Unemployment Rate (%)</b>									
Czech Republic	8,0	7,8	6,8	5,6	5,5	6,1	6,9	7,0	6,9
Hungary	6,4	6,9	7,4	7,6	8,4	9,7	10,7	11,0	10,7
Poland	18,9	17,0	13,8	10,2	8,3	8,3	9,2	9,8	10,0
Slovakia	17,5	16,1	13,7	11,4	11,0	12,1	13,4	14,1	14,0

\*\* Source: <http://ec.europa.eu/eurostat/tgm>

1. First of all we can see approximation of new EU members on level of the development to average indicators. According to European statistics in 2013 GDP per capita, calculated on PPS, in Poland amounted to 67% from average on the EU, in Hungary – 66% and in Slovakia – 71%. But if to use the site data CIA for calculation, this correlation will turn out to be a bit different: Czech – 76%, Poland – 61%, Hungary – 57% and Slovakia – 71% [14]. However, in any case, there is a fact of the convergence of the development level.

2. The convergence is conditioned by quicker growth of GDP in the Visegrad countries than dynamic of average indicators in the EU as a whole. Moreover, entering the EU influenced GDP growth rate in the Czech Republic, Poland and Slovakia positively during the first years (particularly it is noticeable for Slovakia). And opposite trend exists only in Hungary: rates of economic growth were slow. Moreover, in 2007 growth rate of real GDP in Hungary started to outstrip this indicator in the EU as a whole.

3. The integration of the new countries in the European Union economy has brought about greater dependency of their development on the overall European trend. Particularly brightly this was shown during the crisis in 2009. If only the Czech Republic had experienced crisis in 1998 really, that consequences of the last crisis were fixed in each country. The most essential fall in GDP was in Hungary and Slovakia, and it was smaller in the Czech Republic. But Poland experienced only deceleration of economic growth. Such a difference in sensitivity of the economy of these countries to the world can, from our point of view, explain the integration depth of the countries in the European economy. It is possible to measure the ratio of the export to gross domestic product. In Hungary in 2013 this index accounted for 97,2% (during the crisis GDP fell by 6,6%), in Slovakia – 93% (the fall was 5,3%), in the Czech Republic – 81,1% (the fall was 2,9%), and in Poland – 46,7% (the growth was 2,6%) [14]. We can see this dependency during the time of the second wave of the crisis (2012–2013): GDP of the EU fell by 0,4%

in 2012, this factor in Hungary fell by 1,5%, and in the Czech Republic it went down by 1%. This fact confirms importance of the development of the home market for achievement of the stable economic position of the country.

4. The voiced hypotheses are confirmed on processing statistical data. As we can see in Table 3 ratio of GDP growth rate in the European Union as a whole to the track record of this factor for participants of the Visegrad group is essential for the Czech Republic, Hungary and Slovakia. So the rate of GDP growth in Slovakia is direct function of the same factor in the EU (correlations parameter is 0,92). It is quite an essential correlation between the rate of GDP growth in Hungary and the EU (correlation parameter is 0,83). The Czech economy depends on the EU less (correlation ratio is 0,74). For Poland available correlation is not essential (correlation ratio is only 0,65).

Table 3

**Correlation between indicators of dynamic both in the European Union and in the countries of V4 (2002–2013)**

Country	Correlation parameter of GDP growth rate	Correlation parameter of ICP
Czech Republic	0,7438	0,7571
Hungary	0,8249	0,4202
Poland	0,6503	0,7952
Slovakia	0,9246	0,3045

The life has shown that many forecasts for speedups to inflation, caused action of the law of the levelling-off of the prices after increasing degree to openness market, were unfounded. Even entry of Slovakia to the Euro-zone in January 2009 did not cause the hits to inflations. Moreover, during all these years (for a small exception) in Poland and the Czech Republic consumer price increase was more slowly than in the European Union as a whole. Herewith for these countries correlation parameter shows presence of a relationship with the inflation rates in the European Union (accordingly, 0,79 and 0,76). Alternatively for Hungary and Slovakia such a relationship is absent (correlation parameters are 0,42 and 0.30).

It is necessary to notice that the level of prices in the countries in question is really less than average in the EU. So, according to our calculation, based on the using of the purchasing power parity of national currency, level of the prices in the Czech Republic is 63% from average in the EU, in Poland – 59%, in Hungary – 62% and only in Slovakia it reached 70% [14]. The trend of levelling-off of the prices will be revealed in the future. And since there are only two ways of such justification – a fortification of the rate of national currency or speed inflation, for Slovakia as a member of the Euro-zone, there is no choice left. On the other hand, fluctuation in the level of the prices within 20% is normal for many «old» members of the EU and Euro-zone (for instance, Luxembourg and Spain).

6. The main problem for the countries of the Visegrad Four is the unemployment. It is possible to say that only the Czech Republic managed to keep this factor more or less acceptable for modern society. For Hungary entering the EU was signified by increasing the jobless rate, and today it is more than 10%, what is nearly twice as big as the start factor. Approximately the same jobless rate is in Poland; however, from the point of dy-

namic direction the picture in this country is opposite: this is twice as little as in the year of entering the EU. In Slovakia questions of the employment are solved worse than in other countries. The unemployment rate, with which the country started in the EU, approximately corresponded to Polish and it fell before the crisis in 2009. However, in the following years part of the unemployed people amongst economically active population started to increase and today reached one of the highest points in the EU – 14% (only in Latvia this parameter is 14,4%).

As it can be seen from the above, organized analysis allows confirming that majority of the problems which are predicted for the countries, increasing free trade with the European Union, can be successfully solved if the starting-up work has been made efficiently. It is not obligatory speedup of inflation or growth of the unemployment. Every country has enough liberties for choice of the efficient methods of the reaction on challenges of integration. One of them is a speedy development of the domestic market and keeping dependency of the national economy on overseas trade (both import, and export) on the safe level, and Polish experience proves it to be valid.

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У статті аналізується стан макроекономічних показників країн – учасниць Вишеградської групи напередодні вступу до Європейського Союзу та після цього. Виявлено значущу залежність динаміки ВВП Чеської Республіки, Угорщини та Словаччини від динаміки цього показника по ЄС у цілому та відсутність такої залежності для економіки Польщі. Не знайшли статистичного підтвердження прогнози про прискорення інфляції та зростання безробіття для менш розвинутих країн при їх вступі до ЄС. У кожній країні є достатньо свободи для вибору ефективних методів протидії викликам інтеграції. Одним з них є прискорений розвиток внутрішнього ринку та підтримка залежності національної економіки від зовнішньої торгівлі (як імпорту, так і експорту) на безпечному рівні.

**Ключові слова:** *Вишеградська група, Європейський Союз, ВВП, темпи інфляції, рівень безробіття.*

В статье анализируется состояние макроэкономических показателей стран – участниц Вышеградской группы накануне вступления в Европейский Союз и после этого. Обнаружена значимая зависимость динамики ВВП в Чешской Республике, Венгрии и Словакии от динамики этого показателя по ЕС в целом и отсутствие такой зависимости для экономики Польши. Не нашли статистического подтверждения прогнозы об ускорении инфляции и росте безработицы для менее развитых стран при их вступлении в ЕС. У каждой страны остается достаточно свободы для выбора эффективных методов противодействия вызовам интеграции. Одним из них является ускоренное развитие внутреннего рынка и поддержание зависимости национальной экономики от внешней торговли (как импорта, так и экспорта) на безопасном уровне.

**Ключевые слова:** *Вышеградская группа, Европейский Союз, ВВП, темпы инфляции, уровень безработицы.*

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