THE IMPACT OF THE IMPLEMENTATION OF THE EUROPEAN UNION STRUCTURAL FUNDS IN THE SLOVAK REPUBLIC IN COMPARISON WITH V4 COUNTRIES

Michal IMROVIČ, PhD

University of Saints Cyril and Methodius, Slovakia

michal.imrovic@ucm.sk

Vladimír KOVÁČIK, PhD

University of Saints Cyril and Methodius, Slovakia

vladimir.kovacik@ucm.sk

Oľga BOČÁKOVÁ, PhD

University of Saints Cyril and Methodius, Slovakia

olga.bocakova@ucm.sk

Abstract: *The European Union's Structural Funds are a key instrument for reducing the disparities between its regions. The Slovak Republic, as well as other countries of the V4, has been eligible to implement these funds since joining the EU in 2004. This paper focuses on the implementation of the Structural Funds in the V4 countries in the 2007-2013 programming period. We have searched this programming period as it was the first period since the accession of countries to the EU in which they benefited from this support throughout its whole duration. The ability to spend EU funds effectively has a major impact on the economies of countries, as these resources make up the bulk of public investment. In this paper, we were working with secondary data using standard scientific methods of quantitative research as well as descriptive statistics. The results of our research have shown that the level of effectiveness of the implementation of EU allocated funds varies in the V4 countries in 2007 – 2013, while the effectiveness of some key indicators in the Slovak Republic was the worst among the V4 countries. We have also found that in terms of selected key socio-economic indicators in the period under review, such as unemployment rate, the Slovak Republic has improved least within the V4 countries.*

Keywords: Public administration, EU, structural funds, V4 countries, operational program, Slovak Republic.

Introduction

Structural and cohesion policy is one of the key areas of the European Union (EU) policies, to which a special attention is given. There are significant differences between more than 250 regions of the EU, mainly in the population living standard, despite the EU is one of the most flourishing areas and economies in the world. One of basic pillars of the EU is the convergence principle, whose objective is a gradual equalization of the living standard in individual regions. Regional policy and cohesion policy of the EU (Casula, 2021) is the main source of investments in Europe (Crescenzi, Giua, 2020). It enables to use more than 35% of the EU budget, which comes mainly from wealthier member states, in disadvantaged regions and helps maintain regional competitiveness. The main principle of regional (cohesion policy) policy of the EU is a financial solidarity toward less developed regions, as well as toward social groups. Developed regions perceive different needs, mainly in the field of the competitiveness and employment rate growth. An important milestone for the development of regional policy in the EU was the enlargement of the Union in 2004 and 2007, when 12 new member states entered the Union. Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia became members on 1 May 2004 (Szeiner et al., 2020), while part of the same wave of enlargement was the accession of Bulgaria and Romania in 2007.

The Visegrad Group (V4) is a group of four Central-Europe countries – Slovakia, Czech Republic, Hungary and Poland. These countries share common history, cultural and religious background (Visegrad Declaration, 1991). After 1989, these countries had joined the process of the integration into European institutions and joined the EU in 2004. Later, these countries had joined common activities of foreign policies, mainly in the field of security and democracy support. The entry into the EU in 2004 can be considered as a fundamental breakpoint not only in the cooperation of V4 countries, but also in the development of individual member states. After joining the EU in 2004, one of the main goals of V4 countries was to catch up with old member states in the level of economic development. The rate of the economy growth can be measured by various methods, but most commonly used method is an evaluation of selected social-economic parameters, such as GDP per capita, GDP annual growth, or an employment/unemployment rate. By joining the EU in 2004, V4 countries have become authorized entities for drawing the

structural funds of the EU (Ferry, Mcmaster, 2005) determined for the help by overcoming the inequalities between economically stronger and weaker regions within the EU. Financial resources from the EU funds represent a predominant percentage of public investment in the V4 countries, which in Slovakia is almost 80 percent. In this context, it is extremely important how countries manage spending these resources effectively. In practice, however, several determinants cause that the level of implementation (Casula, 2021) effectiveness (Moreno, 2020) of assigned financial sources of the EU in individual countries is different, as well as the impact on social-economic indicators. In turn, efficiency in the using of EU funds may, to a certain extent, mean that several key socio-economic indicators differ significantly from one country to another. It is that, among other things, what we wanted to point out in this contribution.

Methodology

The aim of this paper is to evaluate the impact of the implementation of structural funds of the EU in the programming period 2007 - 2013 in V4 countries through selected indicators influencing the development of countries, including the population in the period under review, which was set for years 2007 – 2015. Programming period 2007 - 2013 started on January 1st, 2007 and ended on December 31st, 2013. However, the projects were realized also in next two years on the basis of the rule "n + 2", according to the Article 31, sec. 2 of the Council Regulation (EC) No 1260/1999 of 21 June 1999 laying down general provisions on the Structural Funds (in this case 2013 + 2, i.e. until the end of 2015). The objectives of this paper were:

o   to compare selected indicators in the V4 countries related to the implementation of the programming period 2007-2015 with a focus on GDP growth, GDP per capita, GDP rate per capita in the parity of a purchasing power and allocation of funds per country;

o   to compare EU funds in the V4 countries in terms of total and contracted funds; contracted and disbursed funds and also the drawing of funds in the period under review;

o   to determine the effectiveness of the use of funds in the V4 countries in the period under review based on the ratio of contracted and drawn funds;

o to find out the development of selected socio-economic indicators in the v4 countries in comparison with the eu28 average in the period under review when the eu structural funds of the programming period 2007-2013 were implemented.

For our research, we set the following research questions:

o How have selected indicators in the V4 countries been changed in relation to the implementation of the 2007-2015 programming period, focusing on GDP growth, GDP per capita, GDP per capita in purchasing power parity and the allocation of funds to the country?

o How have the individual countries in the V4 countries been successful in implementing eu funds in terms of overall and contracted resources; contracted and disbursed funds as well as in the drawing of funds in the period under review?

o how were the individual v4 countries effective in terms of using of eu funds in the period under review on the basis of contracted and drawn funds?

o what was the development of selected socio-economic indicators like (employment and unemployment rate; people at risk of poverty and social exclusion) in the period under review in the v4 countries in comparison with the eu28 average when the implementation of the eu structural funds in the programming period 2007-2013 took place?

In this paper, we were working with secondary quantitative data. We have used standard scientific methods, mainly analysis, synthesis, comparison, induction, deduction. Another key method that has been used was the descriptive statistics, and for better visualization, we used a graphical presentation of the identified results (Rimarčík, 2007; Chajdiak, 2010). The paper, by its focus, brings results that have been absent in the researched area so far. We consider the processing in this context of the V4 countries to be original.

Regional and structural policy of the European Union

Regional policy can be understood as a control by state and territorial institutions, of which extent is directed toward the creation of suitable conditions for dynamic and multilateral development of regions with maximal utilization of their geographical, human and economic

potential (Rajčáková 2005). If necessary, regional policy fulfills the role of a supplement to the internal market, economic and monetary union (Balko et al., 2004). According to Bachtler (2001), *"the primary objective of European regional policy shall be the support of cohesion across the Union… however, it is important to realize that regional policy includes also other goals: it prepares a European strategies framework for regional development, supports the integration, helps by catastrophes, etc."* According to the theory, regional policy on a national level represents a partial and sectional economic policy, which can be interpreted as a *"coordination policy of all tools in certain area"* (Buček, 2001). Following authors have dealt in their works with the theoretical-methodological anchoring and general questions of regional policy functioning: Gorzelak, Kukliński (1992), Maier, Tödtling (1998), Armstrong, Taylor (2000) or Wokoun et al. (2008); in the conditions of domestic issues for example Samson et al. (2001), Rajčáková (2005), Ivanička, Ivaničková (2007), Ištok (2010) or Buček, Rehák, Tvrdoň (2010). The assessment of the impacts of EU regional policy based on the utilization of resources from structural funds and the research of convergent or divergent processes in regional structure of the EU was dealt by, for example, Cini (2003), Flores (2008), Basile, Castellani, Zanfei, (2008), Di Caro, Fratesi, (2022) or Busillo et al. (2010). The functioning of regional policy in 1990s in Slovakia – in the first years of its existence – was researched for example by Búšik (1998), Tvrdoň et al. (2002), Matlovič and Matlovičová (2011), Marišová et al. (2021), Fiala, Krutílek, Pitrová (2018) or Wokoun, Mates, Kadeřábková, (2011). Authors Ferry, Mcmaster (2005) who deal with comparing the impact of EU funds in Poland and the Czech Republic.

The main task of structural policy of the EU is to strengthen the economic, social and territorial solidarity, also called as the cohesion in individual member states of the EU. The cohesion policy is focused mainly on the support of the economic growth of less developed regions, including the support of employment rate. Such regions are designated as structurally weak regions. Structural and cohesion policy is considered as one of the pillars of European regional policy. Cohesion and structural policy are a demonstration of solidarity of the EU with its less developed member states and their regions. The meaning of cohesion policy is the support of the country as a whole, directed toward the areas, which are creating the conditions for its better economic and social development (Barič, 2017). Concerning structural policy of the EU, there are many significant studies, such as

of Belka (2013) on Poland, Draghi (2015) on a structural reform of the EU, Dustmann et al. (2014) on Germany.

The impact of the implementation of EU structural funds in V4 countries in selected areas

At the beginning of operational programs implementation in the period 2007 – 2013, macroeconomic conditions in V4 countries were quite varied despite many common features of their economies. V4 countries have differed mainly in their economy development, labor market and the development of transportation infrastructure. These aspects have been reflected into the decisions regarding the selection of intervention priorities co-financed by the EU, and it has influenced the rate of growth of macroeconomic indicators in the period of 2007 – 2013 (Monfort, P., et al., 2021). However, a common denominator was a significant starting point for the economic development after these countries had joined the EU, as well as economic and social processes, which had an immediate effect on satisfying people´s needs. This development, as well as assumed impact of interventions from the realization of operational programs, can be analyzed by means of selected macroeconomic/social-economic indicators.

Since joining the EU, all new member states were successfully catching up with the European average of economic development. During the decade preceding the beginning of the implementation of programming period 2007 – 2013, mainly V4 countries were able to decrease the differences compared to more developed European countries, when their growth was faster than the rest of the EU countries. For the research and assessment of the effect of cohesion policy on macroeconomic indicators, it is necessary to know economic grounding points of V4 countries at the beginning of programming period 2007 - 2013. The key indicator for the division of regions is the Gross National Product per capita (GNP p.c.) level. GDP (nominal) p.c. does not, however, reflect differences in the cost of living and the inflation rates of the countries; therefore, using a basis of GDP per capita at purchasing power parity (PPP) may be more useful when comparing living standards between nations, while nominal GDP is more useful for comparing national economies on the international market (Hall, 2021). This is the subject to criticism based on the fact that GDP p.c. is unable to reflect the real socio-economic state of regions. Some groups (e.g., Beyond GDP) and organizations propose the creation of a set of alternative indicators that could

substitute the GDP and its derivates (European Commission - Beyond GDP). GDP is often used as a metric for international comparisons as well as a broad measure of economic progress. It is often considered to be the "world's most powerful statistical indicator of national development and progress" (Lepenies, 2016). For this reason, at first, we have looked on the GDP p.c. level in V4 countries in 2007. An average GDP rate p.c. of V4 countries in 2007 was still only on the level of approximately 65% of the EU-28 average (Eurostat, 2016a). From the point of view of economic development, in the period after joining the EU, V4 countries were very varied. In 2007, SR´s GDP level p.c. was 66.8% compared to the EU average, which within the V4 was the second highest value after Czech Republic, which was a dominant leader in this indicator with the value of 82.5%. Slovakia was followed by Hungary – 60.3%, and Poland fell behind more significantly with the value of 53.1%.

Table 1. GDP rate per capita in V4 countries compared to the EU-28 average in % in 2007 - 2015

|	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU - 28	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CR	82.5	83.9	85.3	82.8	83.0	82.5	83.6	86.0	87.2
Hungary	60.3	62.7	64.2	64.8	66.0	65.7	67.2	68.2	69.0
Poland	53.1	55.4	59.2	62.5	65.1	66.8	67.0	67.4	68.6
SR	66.8	71.4	71.2	74.9	75.0	76.3	76.5	77.1	77.2
V4 - average	65.68	68.35	69.98	71.25	72.28	72.83	73.58	74.68	75.50

Source: own processing based on data of Eurostat (2016a)

Since 2007 until 2015, Slovakia has reached the increase in GDP rate per capita by 10.4%, which is the second-best result among the countries of V4 after Poland, which has achieved the increase of 15.5% in this period. Hungary´s increase was 8.7% and Czech Republic recorded an increase of 4.7%. This indicator is used for expressing the performance of economy and living standard of its citizens; however, it is a limited indicator, which does not take into account all attributes expressing the well-being of the population in the given country. The impact of

interventions can be further measured by many methods. The economies of V4 countries grew in 2007 - 2015 much faster than the EU average. Average growth in V4 countries in this period was 2.4% compared to only 0.72% in the whole EU (World Bank, 2015). From all countries of V4, the fastest growth in this period was recorded by Poland, when its real GDP per capita has increased from 50.8% to 68.6% of the EU average. Slovakia has recorded a rapid growth as well, since it has grown much faster than Hungary with the same originating position. The result could be seen in the fact that the GDP per capita in SR in 2015 was 77.2% of the EU average, when - from the point of view of the pace of GDP rate growth - the country caught the regional leader, which was Czech Republic.

The main challenge for the EU and its member states was to react flexibly to the actual economic crisis by means of redirecting of some interventions from structural funds in a way that it could help minimize all impacts of the crisis. As we can see on the Graph no. 1, the GDP growth significantly decreased in V4 countries in 2009, when the consequences of the crisis in Europe were the most perceptible, except Czech Republic, which was not that hit by the crisis, mainly thanks to the stable bank sector. While the biggest economic decline was recorded in Hungary, where the GDP growth in 2009 reached the level of -6.8%, the crisis had most significant year-on-year impact on Slovakia with the decrease of 10.7 percentage point. Slovakia was followed by Hungary with the year-on-year difference of 7.7 percentage point, then followed by the Czech Republic with the difference of 7.6 percentage point. The smallest impact of the crisis was recorded in Poland with the difference of 3.5 percentage point.

Graph 1. GDP growth of V4 countries in 2007 - 2015 in %
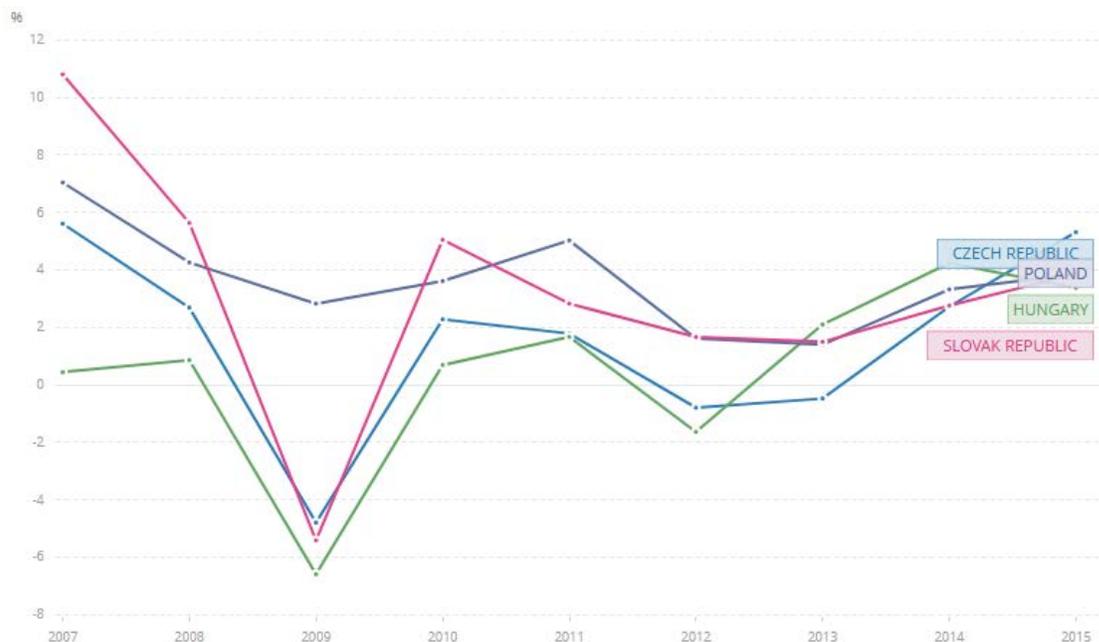
Source: World Bank, 2015

The GDP rate per capita compared to EU-28 average is strongly related to the indicator of purchasing power in the countries of V4. There are various key indicators, which can be analyzed in this regard, such as the development of gross salaries or the parity of purchasing power related to an average year salary. It is an important analytical tool in the OECD and is watched closely by policymakers seeking elements of comparison of the level of economic development of Member countries, and even of economic policy in the European Union regarding the allocation of structural funds (OECD, 2002). Annual growth rate of real GDP per capita is calculated as the percentage change in the real GDP per capita between two consecutive years. Real GDP per capita is calculated by dividing GDP at constant prices by the population of a country or area (Global SDG indicator Platform, 2018).

Purchasing power parity is a theory of exchange rate determination. It asserts (in the most common form) that the exchange rate change between two currencies over any period is determined by the change in the two countries' relative price levels (Dornbusch, 1985). For finding out a real purchase-effectiveness of citizens of V4 countries in a monitored period, it is not enough just to analyze average salaries through the parity of the purchasing power. We need to look also

at other indicators, which indicate the prices of goods and services, and what the people can buy for their salaries. A relevant indicator of purchase-effectiveness of the population is the indicator "real individual consumption". This indicator measures the material well-being of households in the standard of the parity of purchasing power. Therefore, we have analyzed real individual consumption of V4 countries via the GDP per capita indicator in the parity of the purchasing power in % compared to the EU-28 average in 2007 – 2015 (Tab. 2). This indicator reflects the performance of the economy and living standard of its citizens. However, it does not consider the price and salary levels in the economy, but it still has some relevant value, since in general it is true that a higher GDP per capita is linked with higher performance of the economy, so the people have better lives with higher living standard.

Table 2. GDP rate per capita in the parity of a purchasing power of V4 countries compared to EU-28 average in %

	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU - 28	100	100	100	100	100	100	100	100	100
CR	82	84	85	83	83	82	84	86	87
Hungary	60	63	64	65	66	66	67	68	68
Poland	53	55	59	62	65	67	67	67	69
SR	67	71	71	74	74	76	76	77	77

Source: own processing based on data of Eurostat (2016b)

From the point of view of real individual consumption, Poland has recorded the most dynamic growth within V4 countries with the growth of 16%. Slovakia has recorded the second-best growth with the value of 10%, Hungary with the value of 8% and Czech Republic with the value of 5% - here we need to add that, despite the lowest dynamics, Czech Republic had the best starting point in 2007, which was at that time by almost 30% higher than for Poland. The mentioned fact, demonstrating the economic level of these countries, is related to the GDP rate per capita, where the Czech Republic was a dominant leader in the region of V4 countries during the monitored period.

In the programming period 2007 – 2013, the V4 countries had access to 130 billion EUR from the funds of the EU, which represented 17.35% of the annual GDP of the whole V4

region. The total amount of assigned financial resources from structural funds of the EU, as it is shown in the Tab. 3, differs between V4 countries. SR had the smallest allocation from all V4 countries, but in the indicator of assigned EU funds per capita, it had the third-worst place, since the lowest value was recorded in Poland. The allocation for Poland was higher than summed allocation of all other three V4 countries. Although Poland has the highest budget from the EU resources from V4 countries, in the ratio of EU funds per capita it is paradoxically the last among V4 countries. Averagely, V4 countries have received EU funds per capita in the amount of 2.234 EUR. In the ratio of the EU funds compared to the GDP, only Czech Republic is significantly under the average of all V4 countries, mainly because its GDP per capita in 2007 rapidly oversteps other V4 countries. Regarding assigned EU funds compared to the GDP, averagely achieved level in V4 countries was 21.38%.

Table 3. Selected indicators of V4 countries related to the population, GDP and EU resources

	CR	Hungary	Poland	SR	Total/average
Population (in mil.)	10.54	9.86	38.01	5.43	63,84/15.96
GDP in 2007 (in bill. EUR)	138.30	102.17	313.87	56.24	-/152.65
GDP in 2015 (in bill. EUR)	168.47	110.90	430.26	79.14	-/197.19
GDP per capita in 2007 (in EUR)	13.400	10.200	8.200	10.400	-/10.550
GDP per capita in 2015 (in EUR)	16.000	11.300	11.200	14.600	-/13.275
Allocated EU funds (in bill. EUR)	26.30	24.92	67.19	11.65	130.06/32.51
Allocated EU funds per capita (in EUR)	2.496	2.529	1.768	2.144	-/2.234
Allocated EU funds per GDP (in %)	19.02%	24.39%	21.41%	20.71%	-/21.38%
Number of operational programs	26	15	29	11	-

Source: own processing based on data of the EU (2015)

From the point of view of statistics regarding the utilization of structural funds of the EU in V4 countries in the programming period 2007 – 2013, the most important indicators are the amount of assigned, contractual and drawn financial resources. As we have already mentioned

above, Poland had the highest number of financial resources (67.19 billion EUR), followed by Czech Republic (26.30 billion EUR), Hungary (24.92 billion EUR) and the lowest amount was assigned to Slovakia (11.65 billion EUR).

Table 4. Information about EU structural funds implementation in V4 countries in the programming period 2007 – 2013

	CR	Hungary	Poland	SR	Total /average
EU funds (in bill. EUR)	26.30	24.92	67.19	11.65	130.06/-
Contracted grants (in bill. EUR)	27	29.2	66.9	14.2	137.3/-
Contraction rate (in %)	103%	117%	100%	122%	-/111%
Paid grants (in bill. EUR)	23.3	27.7	61.6	11.3	123.9/-
Payment rate (in %)	89%	111%	92%	97%	-/97.25%

Source: own processing based on data of the EU (2015)

As it is shown in the Tab. 4, the level of effectiveness of implementation of assigned financial resources of the EU differs among V4 countries. At the end of 2015, all V4 countries had achieved the level of contraction 100% or more from the allocated sum for the programming period. After 9 years of implementation, V4 countries achieved the contraction level of 111% on average, calculated from the budget delimited for the programming period. An average level of drawing at the end of 2015 in all V4 countries was 97% of their budget assigned for the programming period.

A very important indicator of a real level of effectiveness of EU structural funds implementation in individual countries of V4 in the programming period 2007 – 2013 is the difference between the ratio of contraction and the draw rate. The smaller the difference in these two indicators is, the more effective is considered the implementation of structural funds of the EU. By this indicator, it is necessary to emphasize the fact that, according to general rules of the EU, the member state is obliged to follow the rules of economic, effective and efficient manipulation with the financial resources of the EU by the performance of operational programs.

Additionally, the member state is obliged to follow budget rules according to the provisions of national legislation.

By the performance of operational programs in the programming period 2007 – 2013, there was often recorded controlling over the frame of disponible allocation (in SR, there was even the over-contraction on the level of 122% for the whole NSRF), which causes certain risks in the area of following the budget rules, because under the assumption that all contracted expenses in the projects would be drawn, the part of the allocation exceeding 100% assigned to the member state would have to be paid in full from the state budget, which would be in contradiction to the budget rules set by national legislation.

A significant difference between contraction and draw rate also indicates that projects were not drawn in full; that in realized projects, there was identified a high percentage of unauthorized expenses; that the part of expenses was used unauthorizedly or in the contradiction with the conditions set by contracts on providing the irrevocable financial contribution, of which consequence were project financial corrections and refunding the financial resources into the EU budget after performing the audits and controls, and after the identification of specific insufficiencies. For this reason, we have compared the economy of SR with the resources of the EU and compared the data with V4 countries from this point of view, while the difference between the contraction and draw rate is expressed as a gap.

Table 5. Gap between the contraction rate and payment rate in V4 countries in 2007 - 2013

	Contraction rate (in %)	Payment rate (in %)	A gap between the rates of contraction and payments (in %)
CR	103%	89%	14
Hungary	117%	111%	6
Poland	100%	92%	8
SR	122%	97%	25

Source: own processing based on data of the EU (2015)

As it is introduced in the Tab. 5, from the point of view of implementation effectiveness, Slovakia took the last place from V4 countries, when the gap between the contraction and draw rate reached the value of 25%. From the countries of V4, the most effective implementation of this indicator was recorded in Hungary (a gap of 6%), followed by Poland (a gap of 8%) and followed by Czech Republic (a gap of 14%).

Selected socio-economic indicators in V4 countries in 2007 – 2015 period

The situation on the labor market in the countries of V4 was quite specific during the monitored period. Besides the fact that in the past V4 countries were economically less developed, they had rather low unemployment rate, which significantly differed in individual countries. Between 2007 and 2013, the number of people in Europe who had been unemployed for more than a year doubled. At its peak, this sharp rise in long-term unemployment has affected around 12 million people across the EU (European Commission, 2019).

Unemployment is a situation in which a certain part of the working-age population does not participate in the work process. This phenomenon significantly contributes to the unfavorable development of public finances, but also reflects the possible underutilization of production capacities in the economy (Workie Tiruneh - Štefánik et al., 2014).

At the beginning of the programming period 2007 – 2013, from the point of view of a human capital and labor market, the V4 countries faced much more challenging position than other member states of the EU. According to the Eurostat, the unemployment rate in V4 countries was higher than in EU-28, while the employment rate was lower than in EU-28. If we looked at the starting year of 2007, an average unemployment of V4 countries was on the level of 8.14%, while the EU-28 average was only 7.2%. Slovakia was the worst in this parameter from this block, when the unemployment rate reached the value of 11.2%. However, in the Czech Republic and Hungary, the unemployment rate was lower than the EU average. Lowering of unemployment rate was supported by projects from structural funds of the EU financed from the source of the ESF, focused on the support of employment, from which the most effective were active measures on the labor market.

Table 6. Unemployment rate in V4 countries and EU-28 average in % in 2007 – 2015

	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU - 28	7.2	7	9	9.6	9.7	10.5	10.9	10.2	9.4
CR	5.3	4.4	6.7	7.3	6.7	7	7	6.1	5.1
Hungary	7.4	7.8	10	11.2	11	11	10.2	7.7	6.8
Poland	9.6	7.1	8.1	9.7	9.7	10.1	10.3	9	7.5
SR	11.2	9.6	12.1	14.5	13.7	14	14.2	13.2	11.5
V4 - average	8.14	7.18	9.18	10.46	10.16	10.52	10.52	9.24	8.06

Source: own processing based on data of Eurostat (2015a)

Similarly, to the entire EU, also in V4 countries we could see the consequences of the economic crisis on the labor market as a whole. The implementation of structural funds of the EU contributed to the moderation of crisis impacts, which is proved also by the fact that the average unemployment rate in V4 countries reached the pre-crisis levels (8.06) only in 2015. Additionally, here we could see also a faster growth of GDP in V4 countries compared to the EU-28 average, on the contrary, in the case of V4 countries we have recorded the increase of the unemployment level in EU-28 to 9.4%, which is by 2.4% more than in 2008, when the crisis started. Thus, also thanks to faster economic growth, the V4 countries were able to cope better with the consequences of the economic crisis, from the point of view of economic growth, and compared to other member states of the EU. However, the introduced statement does not apply to Slovakia, which was hit by the crisis in full extent, and which as the only one of these countries recorded higher unemployment rate in 2015 (11.5%) compared to the starting point in 2007 (11.2%). In 2015, other V4 countries managed to achieve lower unemployment rate compared to the beginning of the monitored period.

One of the most important social-economic indicators is the employment rate. The significance of the employment rate in the society does not represent only the economic dimension for the country and financial security for families or individuals, but it represents also the basic entity from the point of view of social and psychological position of a human in the society. According to Keynes, full employment means the absence of involuntary unemployment (Keynes, 1937). If the point of full employment of resources is reached and effective demand continues to

increase, prices will rise to equilibrate the demand for and the supply of goods and services (Meade, 1995). The gains from, and consequently the political support for, employment protection is larger the lower the rate of creative destruction (i.e., the lower the growth rate) and the larger the employee's bargaining power (Gilles, 2002). The prioritization of the issue of employment rate in the EU is expressed also by the fact that within the goals of the Europe 2020strategy, the first place is taken by the objective "The employment rate of the people aged 20-64 should be increased from current 69% to at least 75% until 2020" (European Union, 2010). Regarding the employment rate development, in the monitored period Slovakia recorded a slight increase in 2015 compared to the starting amount from 2007, when the total improvement had the amount of 0.5%. Other countries of V4 recorded more significant increase of the employment rate – the highest for Hungary (+6.6%), then Poland (+5.1%) and Czech Republic (+2.8%). The EU-28 employment rate level average remained on almost the same amount, with a slight increase by 0.3%.

Table 7. Unemployment rate of v4 countries and eu-28 average in % in 2007 – 2015

	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU - 28	69.8	70.2	68.9	68.5	68.6	68.4	68.4	69.2	70.1
CR	72	72.4	70.9	70.4	70.9	71.5	72.5	73.5	74.8
Hungary	62.3	61.5	60.1	59.9	60.4	61.6	63	66.7	68.9
Poland	62.7	65	64.9	64.3	64.5	64.7	64.9	66.5	67.8
SR	67.2	68.8	66.4	64.6	65	65.1	65	65.9	67.7
V4 - average	66.05	66.925	65.575	64.8	65.2	65.725	66.35	68.15	69.8

Source: own processing based on data of Eurostat (2015b)

Figure 2. Unemployment of the V4 countries and EU average in 2007 - 2015 in %
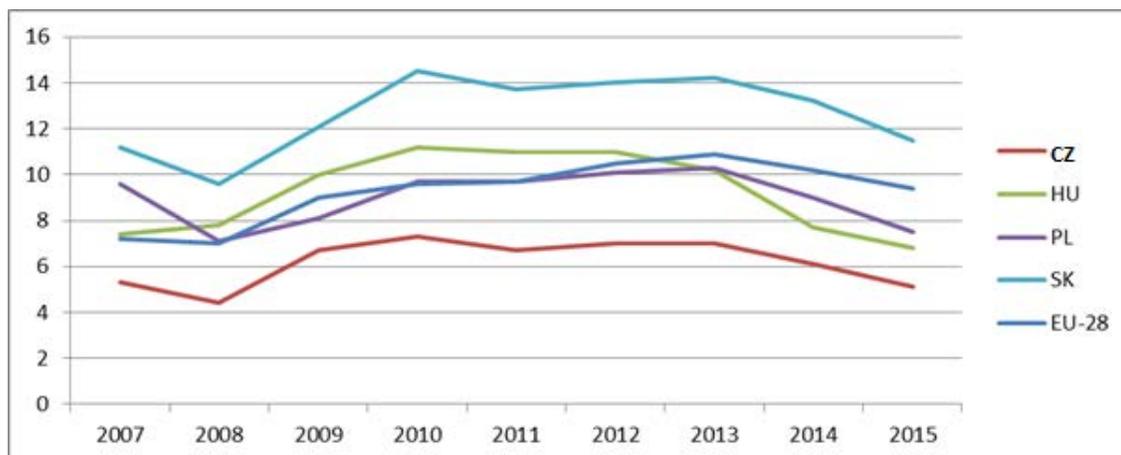
Source: own processing based on data of Eurostat (2015a)

Another important indicator for the analysis of the effect of drawing the financial resources of the EU in the monitored period 2007 – 2015 is the people at risk of poverty or social exclusion. Decreasing the level of poverty and social exclusion, enabling socially excluded people to actively engage into the life of the society, support of the inclusion and fight against the discrimination, and the solution of specific circumstances of extremely vulnerable groups belong to main challenges for ensuring the social cohesion in Europe. This area was also significantly influenced by the economic crisis when, in 2008, almost 120 million of Europeans in the entire EU occurred in the area of risk of poverty and social exclusion (Eurostat, 2019). Social inclusion is a process that ensures that those at risk of poverty and social exclusion are given opportunities and the necessary resources to be able to participate fully in economic, social and cultural life and have the same standard of living and well-being that is considered to be commonplace in the society in which they live. It provides them with greater participation in decision-making, which affects their lives and access to fundamental rights. Reducing poverty and social exclusion is one of the main challenges for ensuring social cohesion in Europe. According to Gerbery and Jambazovic (2011), being socially excluded means unequal access to the five basic resources of society (education, employment, housing, social protection, health care), difficult access to the main social institutions responsible for distributing life chances and, last but not least, detachment from important areas of life that ensure integration in the community or society. According to Mareš and Sirovátka

(2008), socially excluded from society are those who, for reasons beyond their control, cannot participate in the normal activities of their fellow citizens. The implementation of specific operational programs financed from the ESF source focused on the fight against the poverty via employment rate support, mainly in the form of active labor market measures, has significantly contributed to the lowering the rate of the people at risk of poverty or social exclusion, and these projects have also contributed to the fulfillment of the objective no. 5 of the Strategy Europe 2020 – Social inclusion: to get at least 20 million citizens of the EU out of the risk of the poverty and social exclusion (EU, 2010).

Table 8. People at risk of poverty or social exclusion in 2007 - 2015 in %

	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU - 28	25.3	23.7	23.3	23.8	24.3	24.8	24.6	24.4	23.8
CR	15.8	15.3	14.0	14.4	15.3	15.4	14.6	14.8	14.0
Hungary	29.4	28.2	29.6	29.9	31.5	33.5	34.8	31.8	28.1
Poland	34.2	30.5	27.8	27.8	27.2	26.6	25.5	24.3	23.2
SR	21.4	20.6	19.6	20.6	20.6	20.5	19.8	18.4	18.4
V4 - average	25.2	23.7	22.8	23.2	23.7	24.0	23.7	22.3	20.9

Source: own processing based on data of Eurostat (2015c)

In the period under review, the most significant improvement in this indicator was recorded for Poland when, at the beginning of implementation of programming period in 2007, it was showing the value of 34.2% and in 2015 there was an amount of 23.2%, which is a decrease by 11%. Since 2007, when SR recorded the amount of 21.4% people at risk of poverty or social exclusion, the country managed to decrease this indicator by 3% to 2015, followed by the Czech Republic with the decrease by 1.8% and Hungary with the decrease by 1.3%.

Conclusion

For the economically weaker regions of the Union, the implementation of the EU Structural Funds represents a unique opportunity to reach the level of other regions or significantly accelerate the process of self-development. The implementation of the financial instruments of the EU structural and cohesion policy in the V4 countries in the programming period 2007-2013 significantly supported the economies of these countries. The programming period 2007 – 2013 was also the first period, in which V4 countries could draw the support of the Union after joining the EU in its entire duration, which was reflected on the number of contributions for individual states. It is necessary to realize that at that period, V4 countries were in the stage of realization of demanding structural reforms requiring high amounts of financial resources for their performing. It was the financial resources from the EU structural funds, which were supposed to serve as primary resources for financing these reforms, so the countries could draw hundreds of millions of EUR on infrastructural projects of highways, railroads, informatization, sewerage systems, industrial parks, health care and education infrastructure, reconstructions of villages and towns, as well as projects supporting the employment rate, social inclusion, education and social services. The extent of individual interventions from the structural funds in the programming period indicates that without the financial support provided by the Union, the states would not be able to realize a significant part of structural reforms, and thus it is questionable, whether V4 countries could achieve as high economic growth as was achieved in the monitored period, when their growth rate was higher than the rest of the EU from the point of view of an average GDP rate per capita. Moreover, this development was interrupted by the global economic crisis in 2008 and 2009, which had significantly slowed mentioned reforms and economic growth, while the structural funds of the EU helped V4 countries to moderate its impacts. In general, cohesion policy of the EU significantly accelerated the progress in social and economic development of V4 countries, despite the effectiveness of the use of its tools was different in individual countries.

In this paper, we were analyzing the impact of the implementation of EU structural funds in the programming period 2007 - 2013 in V4 countries through selected indicators influencing the development of countries, including the population in the period under review. We have also set four research questions. From the point of view of in GDP rate per capita, Slovakia had reached

the increase by 10.4%, which as the second-best result among the countries of V4 after Poland, which had achieved the increase of 15.5% in this period. Hungary´s increase was 8.7% and Czech Republic recorded an increase of 4.7%. From the point of view of GDP rate per capita in the parity of a purchasing power among V4 countries, Poland had recorded the most dynamic growth within V4 countries with the growth of 16%. Slovakia had recorded the second-best growth with the amount of 10%, Hungary with the amount of 8% and Czech Republic with the amount of 5%.

From the point of view of total and contracted funds; contracted and disbursed funds and the drawing of funds in the period under review, the highest contraction rate was recorded in Slovakia (122%), followed by Hungary (117%), Czech Republic (103%) and Poland (100%). Regarding the payment rate, Slovakia had recorded 97%, which was the second highest in V4 as the worst percentage was recorded in the Czech Republic (89%).

From the point of view of efficiency of the EU structural funds implementation, we have analyzed the gap between the contraction and draw rate in the V4 countries. Based on our research we have found out that the Slovak Republic had spent the EU funds the least efficiently among the V4 countries while recording the gap at the amount of 25%.

From the point of view of employment rate in the period under review, Slovakia recorded the worst balance among the V4 countries as the total improvement had the value of 0.5%. Other countries of V4 recorded more significant increase of the employment rate – the highest for Hungary (+6.6%), then Poland (+5.1%) and Czech Republic (+2.8%). From the point of view of unemployment rate, Slovakia also recorded the worst balance in the period under review, as the unemployment rate had grown by 0.3%, while other V4 countries while other countries had seen a decrease in this indicator. Regarding the people at risk of poverty or social exclusion indicator, Slovakia achieved the second-best improvement in comparison to Poland.

Therefore, we can reasonably speak about the impact of the effectiveness of the implementation of the EU structural funds on selected socio-economic indicators. Based on our research we can conclude that lower efficiency in the using of these funds as primary sources of public investment may have a negative impact on these indicators. Nowadays, the trend of the EU is directed toward decreasing the budget for cohesion policy, which relates to an effort of shrinking the number of financed priorities in individual member states. Therefore, according to our opinion, further analyses are needed to address the issue of the effectiveness of EU spending. In following

discussions, it is also necessary to speak about the prioritization of supported areas; otherwise, it will be difficult to achieve the effectiveness and meaningfulness of realized interventions regarding the implementation of EU structural funds in the future.

The results obtained can provide valuable information on the basis of which the government and experts in individual departments can adopt solutions to improve the situation in the implementation of EU structural funds in the V4 countries. Our results and findings can be beneficial for the creation of individual areas of national policies, with the aim of bringing innovative measures in view of the priorities of the V4 countries and their problems as well as their possibilities in drawing EU structural funds. In the future, we can compare the obtained results of the examined program period with other program periods and thereby determine the viability of EU structural funds. At the same time, the EU structural funds and the results obtained from previous periods will enable governments to respond appropriately to current crises and threats to society in the V4 countries.

The added value of our research lies primarily in pointing out and identifying, finding out the impact of the implementation of the EU structural funds in the V4 countries in the first program period, because the EU structural funds make it possible to respond quickly and flexibly to the various disparities of the V4 countries. It is the EU structural funds that have the greatest prerequisites for the V4 countries to continue to benefit economically, which we also declare with our findings.

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