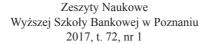
# Projekt finansowany w ramach umowy 857/P–DUN/2016 ze środków Ministra Nauki i Szkolnictwa Wyższego przeznaczonych na działalność upowszechniającą naukę.

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# GDP Components as Sources of Economic Growth in V4 Countries

Abstract. The standard of living of people determines the most important macroeconomic performance of the economy, such as the total value of produced goods and services, meaning the real GDP, GDP growth, employment level and respectively the unemployment rate, inflation rate, and the openness of the economy and balance of external economic relations. Despite its imperfections, through the assessment of economic developments and economic performance measurements, it is used in practice in the gross domestic product (GDP). GDP growth, as economic growth, in the short term is determined by the various segments of aggregate demand. The aim of this scientific paper is to analyse and quantify the contribution of an increase in individual AD components to economic growth in V4 countries and to compare these findings with each other. The paper is dedicated to an empirical site of economic growth, the subjects of the analysis are the economies of the V4 countries.

Keywords: gross domestic product, economic growth, components of aggregate demand

# Introduction

Development of economies in recent years constantly encourages the scientific and political controversy in which resonates the role and position of the state in the economy, a high level of indebtedness of several countries, the European





migrant crisis, sustainable development, and promoting economic growth, which contributes to the growth of the standard of living. Excessive rates of disparities between regions within countries, as well as, the EU Member States, and accumulation of a number of, especially, long-term problems are now exacerbating and creating a tense atmosphere in society as a whole. Despite growing economies and decreasing unemployment, the population of the Visegrad Group is increasingly unsatisfied with the lower standard of living, in which the region lags behind not only richer and more powerful economies (eg. Germany or France) but also lags behind economically comparable countries, such as Slovenia. However, there are considerable differences between countries within the Visegrad Group itself. A comparison of the economic level of these countries showed that in 2015 the Czech Republic reached 84%, Slovakia 76%, Poland 69%, and Hungary only 68% of the EU average GDP per capita in purchasing power. The similar position of these countries reflects the development of the standard of living in these countries, the highest being in the Czech Republic and the lowest in Hungary [Eurostat 2016].

The Visegrad Group (V4) is a grouping of four Central European countries: the Slovak Republic, the Czech Republic, Hungary, and Poland (with a combined total population of over 64 million people). This is an informal regional structure of four EU Member States and NATO which subscribe to the same values and have a common history, culture, and geographical position. V4 is a dynamic regional grouping of EU Member States, which creates space for strengthening coordination and consultation mechanism with a goal to find common positions and opinions on topical issues of foreign and European policy, regional development, and economic and cultural cooperation [Ministry of Foreign and European Affairs of the Slovak Republic 2016]. In 2015, the economic level of this region, with an area of more than 533,000 km², was 13,000 EUR per capita, while the average living standards of the EU 28 was 26,500 EUR per capita.

The living standard of people is determined by the most important macroeconomic indicators of the functioning of the economy, such as the total value of produced goods and services, which means GDP, GDP growth, employment level and respectively unemployment, inflation and openness of the economy, and the balance of external economic relations. Macroeconomic performance is affected by internal determinants (development of the workforce and their quality, the investment activity of entrepreneurs, the level of private and public consumption, technological change and innovation, monetary policy, etc.), external factors (foreign trade, natural disasters, war, monetary problems, etc.), and the nature of government intervention in the economy (fiscal policy, social policy, political stability, law enforcement, etc.). All macroeconomic determinants of economic development are transformed into the internal mechanism of the economy. Although there are different views among economists, in economic theory it is accepted that



a relatively simple model interprets how the economy works and how it achieves macroeconomic equilibrium and respectively, an imbalance. In this theoretical explanation is a model of aggregate demand and aggregate supply and, as a result of their activities, a model of macroeconomic equilibrium [Lisy et al. 2013: 70].

In the short term, it is for development of the macroeconomic balance and economic growth determining, primarily, the demand side of the economy. The development of the components of aggregate demand (household spending and government institutions on final consumption, gross capital formation, and net exports and imports of goods and services) is influenced by many different factors that alter its structure and determine the GDP growth. Some components of aggregate demand (eg. consumption expenditure by households) can be considered relatively stable; others (eg. the stock or investment in fixed capital) are more variable. Foreign trade is also affected by internal factors of the global evolution and demand in the countries of foreign business partners [Spěváček et al. 2012: 217-218].

The aim of this scientific paper is to analyse and quantify the contribution of an increase of individual AD components to economic growth in the V4 countries and to compare these findings with each other. In the paper, we dedicate the empirical side of economic growth, and the subjects of our analysis are the economies of the V4 countries. We examine the growth of these countries in respect to aggregate demand, while we analyse the proportion of the components of aggregate demand to GDP. Within the analytical part we use the methodological approach of Lisy et al. [2011: 177-178] and data was taken from secondary sources of Eurostat and the OECD.

# 1. Practical aspects of economic growth in V4 countries

Performance measurement is important for both economic theory and economic policy. "The performance of the economy and economic growth of a country is determined by the effective action and interoperability of four sectors, it means households, firms, state and abroad, which constitute a coherent, interacting and interdependent system of relationships" [Lisy et al. 2011: 16].

Despite some critics of GDP, most countries use the macroeconomic aggregate gross domestic product when measuring performance. One of the advantages of this indicator is precisely the fact that it is used almost all over the world, and thus, it simplifies international comparisons. Another advantage is that statistical data is used in the calculation of GDP that is available in the country and there is no need to obtain data from abroad. GDP is the most comprehensive measure of the overall level of the production of goods and services in the economy and, at



the same, is a measure of how many jobs the economy is able to generate [Lisy et al. 2013: 11-12].

As Mankiw [2015: 496-497] mentioned, GDP becomes an appropriate and supplementary indicator that reflects the quality of the standard of living of the population in the economy. For this reason, economic growth is one of the most important (if not the most important) macroeconomic objectives of each country.

Economists have dealt with economic growth for a long time ago (Smith 1776; Malthus 1799; Ricardo 1817; Mill 1848). However, the history of the modern theory of economic growth is not very old As Uramová et al. [2010: 214-215] reported, the first modern theory of economic growth appeared only in the early 20<sup>th</sup> century, when individual schools were searching for causes of its slowdown and new sources or opportunities for economic growth in the future (Keynesian, neo-Keynesian, and the neoclassical theory of economic growth). The late 20<sup>th</sup> century began to form new theories of economic growth, which underline the need to ensure long-term and balanced economic growth based on new factors (eg. the use of human potential, innovation, and technology). This is called the endogenous growth theory. Currently, several authors work on the issues of the quality of economic growth and its resources (Barro & Sala-i-Martin 2004; Varadzin et al. 2004; Helpman 2005; Lisý et al. 2011; Drobiszová & Machová 2014, and others).

A generally accepted macroeconomic indicator, which collectively represents the performance of the economy as a whole, is the real GDP growth. From its development, it is possible to draw a number of consequences for economic practices. Since V4 countries can be considered as more or less open economies, it is clear that their economic growth depends largely on external relations, and that influence requires a certain rationality and stability of economic policy.

Figure 1 shows the development of the real GDP growth rate in V4 countries and the development of the average real GDP growth rate in the European Union (28) in the period between the years 2004 to 2015.

For better illustration, Figure 1 indicates the perfect respective optimal annual growth rate of real output, which is in accordance to the OECD at 3%. As Kliková and Kotlán [2012: 96-97] reported, this value is obtained on the basis of a detailed macroeconomic analysis and empirical research, and it is an average for developed OECD economies and the differences between countries are not reflected.

Before joining the European Union in 2004, a more or less homogeneous economic strategy was applied to the Visegrad countries. After EU accession, under the influence of internal and external changes, their economic direction developed in various ways. In particular, the development of the Hungarian economy was significantly different from the other countries in the region; it caused a slower economic growth in Hungary even before the economic crisis.



12 10 8 6 4 [%] 2 0 2008 2009 2010 2011 2005 2006 2007 2012 2013 2014 -2\_4 -6 -8 ····· Hungary Slovak Republic Czech Republic ---- EU 28 Optimum Poland

Figure 1. The GDP growth rate development in V4 and EU 28 (percentage change on previous year)

Source: own work using Eurostat as a reference.

From the perspective of growth and convergence based on both internal factors (investment, consumption) and external factors (capital flows, trade) it is evident that the member states which have coped better with the crisis are those which had produced high but not "overheated" economic growth, coupled with an appropriate level of internal and external financial stability, a low budget deficit, and a relatively healthy development of public finances. Of the V4 countries, this was the case for the economy in Poland, which is also characterized by less private indebtedness. For this reason, Poland is the only country from the V4 group that did not swing into negative numbers and, in 2009, registered the highest GDP growth of any country in Europe. Nevertheless, even in the case of Poland, we could not talk about "an economic miracle", because the decline in growth was about 5 percentage points, which is comparable to the decline in the GDP growth in Spain, Portugal, France, and Hungary. Although Poland is still unable to reach the level of potential output (set at 4 to 4.5% of GDP growth), we can state that Poland is characterized by the greatest stability of economic growth and the best economic condition (except in relation to the Czech Republic) among all of the V4 countries. There are several reasons: a floating exchange rate (depreciation of the Polish currency created external demand for cheaper goods and services, which increased exports and finally GDP), an underdeveloped banking sector that caused Polish banks to not invest in financial innovations and avoid taking "toxic assets" into their portfolios, a less open Polish economy (during the years 2011 to 2015 an average of 94% of GDP) when compared with the other V4 countries (eg. average openness of the Slovak Republic was 180% during the same period), and thus





less dependence on foreign trade, an extensive domestic market, consolidation of public finances, and a tighter lending policy (www.visegradgroup.eu).

Of the V4 countries, Hungary was the most affected by the crisis, and faced a 20-25% fall in export demand and, at the same time, had the largest decline in domestic demand. For this reason, the economic recovery after the crisis was moreslow when compared with other countries of the Visegrad Group.

After joining the EU, the Slovak economy was characterised by an economic boom and in 2007, the real GDP growth reached up to 10.8%, by far exceeding the growth of the V4 countries, but also exceeding the EU average over that period. Slovakia, as an extremely open economy, has not escaped the sharp decline in exports at the turn of 2008 and 2009. Exports fell by 16.5% and that pulled Slovakia into a deepening recession. The benefits of the "lucky timing" of Slovakia's entry into the European Monetary Union and adopting the euro in 2009 was felt in the stronger economic recovery of the Slovak economy in 2010 when compared to all the other V4 countries. Another reason was the financial incentives to overcome the consequences of the crisis in Slovakia.

The Czech Republic is characterized, like Slovakia, by a high level of openness. Therefore, even in the Czech Republic, just a drop in exports caused the recession in the economy in 2009. Compared to the Slovak economy, which in the pre-crisis period "overheated", the decrease of the real GDP growth in the Czech Republic was not significant. On the other hand, thanks to the exports, the Czech economy returned to economic growth relatively quickly and successfully.

The data in Figure 1 shows that GDP growth in the V4 countries oscillated around the indicated optimum of OECD last year, which shows that these economies contribute to the stabilization of EU economic development.

# 2. Empirical analysis of the components of aggregate demand

Aggregate demand (AD) represents the total amount of output that economic subjects (households, businesses, government and abroad) are able to buy in a given time period at a certain price level. It includes the total expenditure of individual economic entities for the purchase of final goods and services and, therefore, represents real GDP. The structure of aggregate demand (and respectively, GDP) can be generally expressed by the following formula:

$$AD = C + I + G + NX,$$

where C (consumption) represents spending by households to purchase consumer goods and services, I (investments) is corporate expenditure on investments, G (government) is government spending on goods and services, and NX (net



exports) is the expenditure of foreign entities as the difference between exports and imports of goods and services [Uramová et. al. 2010: 53]. Aggregate demand depends primarily on the price level, the level of incomes, as well as, the instruments of state economic policy (fiscal, wage, social, etc.). According to Mankiw [2013: 71], the aggregate demand curve in a graphical representation of the AD-AS model is such a combination of the price level and real output (aggregate expenditure), by which is the goods and services market and money market are simultaneously in equilibrium. Based on that, we can conclude that the growth of economic subjects' spending leads to GDP growth and other positive effects on the national economy that affect real macroeconomic indicators such as the employment rate, for example.

Lisy et al. [2011: 177] dealt with the question of a proportion of individual components of aggregate demand to GDP growth over the reporting period. To answer the question, he used the formula:

$$AD (GDP_t) = Y_t = C_t + I_t + G_t + NX_t, \text{ resp. } GDP_{t-1} = Y_{t-1} = C_{t-1} + I_{t-1} + G_{t-1} + NX_{t-1}$$

After editing the equation of the GDP growth rate calculation, we get:

$$\frac{\Delta Y}{Y} = \frac{\Delta C}{C} \times \frac{C}{Y} + \frac{\Delta I}{I} \times \frac{I}{Y} + \frac{\Delta G}{G} \times \frac{G}{Y} + \frac{\Delta NX}{NX} \times \frac{NX}{Y}$$

We mark growth rates of the individual AD components as  $g_y$ ,  $g_c$ ,  $g_i$ ,  $g_g$ ,  $g_{nx}$  and we write:

$$g_{y} = \frac{C}{Y} \times g_{c} + \frac{I}{Y} \times g_{i} + \frac{G}{Y} \times g_{g} + \frac{NX}{Y} \times g_{nx}$$

From the equation it is clear that the growth rate of the product is a combination of the growth rates of individual components of the aggregate demand, while of these rates are the proportions of the individual components of GDP [Lisý et al. 2011: 177].

In Table 1 we present the average proportion of the components of aggregate demand to the GDP in the V4 countries during the period 2004-2015, meaning after the EU accession up until the present.

Based on the analysis of secondary data, we can conclude that the structure of GDP changed in the monitored countries and, in the period between 2004 to 2015, it changed only slightly. In the long term, the most stable and the largest component of GDP is private consumption (C), which ranges in the V4 countries from 48% in the Czech Republic, to 61% in Poland.

The household consumption registered a generally increasing trend over time. In the period of crisis, however, these expenses grew at a slower rate. Several sci-



Table 1. The percentage proportion of individual components of aggregate demand to GDP in V4 countries (average for the period between 2004-2015)

Country		Components of GDP							
Country	С	I	G	NX					
Slovak Republic	57.05	23.84	18.45	0.66					
Czech Republic	48.44	27.14	19.83	5.12					
Poland	61.41	20.13	18.38	0.15					
Hungary	52.86	22.64	21.11	4.00					

Source: own work based on the Eurostat.

entific studies show that after 2009, there was an increased preference of Slovak households for generating savings. Pauhofová and Martinák [2014: 14-15] state that the reasons leading to the lower consumption of Slovaks in the post-crisis period are mainly associated with the deterioration of the situation on the labour market, increasing uncertainty about future income and potentially increasing the risk of poverty. With some simplification these claims are also valid for other countries of the Visegrad Group.

The second largest component of GDP are the gross corporate investments (I), which are less stable when compared to private household expenditure. Investments are components of AD, which have the capacity to generate not only short-term effects on the national economy and affect real variables such as GDP and employment, but also have theability to enlarge production capacity and thereby contribute to increasing the economy's potential in terms of endogenous capacity. This fact is not always reflected in economic practice.

Similarly to private consumption, investment activity of businesses was also affected and slowed by the economic crisis. In Slovakia, the largest decline was recorded in 2009 just when the economy showed effects of the crisis and business investment fell by almost 3 billion EUR, which also led to a slowdown in GDP growth. In the reporting period between 2004-2015, gross corporate investment ranged from 20% of GDP in Poland to 27% of GDP in the Czech Republic. It is thus clear that while in Poland a larger share of GDP is constituted by high household consumption (private consumption when compared with the Czech Republic), in the Czech Republic a relatively larger share of GDP is made up of corporate investments (as opposed to gross investments as it is in Poland).

The level of government spending as part of AD depends on the degree of state involvement in the society. In the V4 countries the contribution to GDP remained stable during the period, on ranging from an average of 18% in Poland and Slovakia to 21% in Hungary.

We dealt with the issue of government spending, its development, and its structure in the years 1997-2011 in Mazúrová and Kollar [2015; 2016]. Based on

available OECD database, we have divided government expenditure by the function classification COFOG ("Classification of the Functions of Government") on productive and unproductive expenditure according to their relation to economic growth. We found out that during the reporting period a substantial portion of government spending in Slovakia concentrated into productive areas of the national economy, which affects economic growth positively.

The net exports during the period are the least stable component of AD. Based on the processing of secondary data, we found out that in the Czech Republic and Hungary the share of exports in GDP was around 4-5%, while in Slovakia and in Poland it was only 0-1% of GDP. Poland is compared to the less open economy of the Slovak Republic. Nevertheless, the contribution of net exports to GDP in Slovakia is low. This is explained by the fact that net exports, in terms of the methodology, are quantified as the difference between the values of exports and imports. Therefore, the lower the dependence of export proceeds from imports is, the higher the share of exports in GDP is. Our considerations are confirmed by several studies dealing with international trade in an open economy and empirically approaching development. As an example we mention a study of the National Bank of Slovakia, according to which "it could be stated that in relation to the nature of international trade of Slovakia in regard to export commodities there is a high intensity of exports to imports, which results in a significantly lower share of exports to the actual GDP between 2005 and 2012."<sup>1</sup>

As mentioned above, the great openness of the Slovak and Czech economy caused the collapse of these economies in 2009. Small open economies such as Slovakia and the Czech Republic are heavily influenced by the economic development of foreign partners. It also provides a positive "locomotive effect" in a boom period, but also, a negative impact of the recession induced a decline in these economies (eg. decline in the crisis period during 2009). The benefits and potential risks of increasingly opening an economy is discussed by Slaný and Žák [1999], Jurečka et al. [2013]. Inter alia, they note that on the one hand, the fall in foreign trade may contribute to a recession in the domestic economy, however, on the other hand, its growth may lead to the stabilization of the national economy without government interventions to support the economy, which unreasonably burden the state budget.

Further, in accordance to the paper's intention, we quantify the increase in the proportion of the AD components to the economic growth of the V4 countries in the reporting period, relying on the before-mentioned mathematical equation (according to [Lisý 2011: 177]). We present the results of mathematical calculations for individual V4 countries and their comparison in the following tables. It should be noted that while in the Eurostat statistics there are indicator of real GDP growth

<sup>&</sup>lt;sup>1</sup> National Bank of Slovakia, www.nbs.sk [access: 15.08.2016].

used (see Figure 1), in our analysis, we use a base of nominal values, and therefore in determining the proportion of the AD components to GDP growth we do not rely on effects of inflation.

Table 2. Contribution of annual consumption (C) growth rate to the economic growth of the V4 countries (in %)

V4 – C	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Slovak Republic	6.41	7.46	12.20	9.32	1.93	0.82	1.82	1.68	0.30	1.22	1.23
Czech Republic	5.08	5.05	4.38	9.52	-2.80	3.03	2.25	-0.78	-0.84	-1.90	1.73
Poland	9.55	5.48	6.59	9.73	-9.87	7.94	2.88	1.50	0.17	1.54	1.01
Hungary	4.07	-0.91	6.33	2.21	-7.90	1.33	1.58	0.19	-0.10	-0.54	1.29

Source: own work based on the Eurostat.

Table 2 compares the contribution of household consumption to the economic growth of the V4 countries. Based on the results of the calculations we can conclude that in the period before the crisis, the GDP growth is mainly due to the growth of consumption expenditure by households in Poland, the Czech Republic, and Slovakia. In Hungary, the growth rate of consumption in 2008 was only 2.21%. In 2009, a significant decline in private consumption caused a slowdown primarily in Poland but also in other countries of the region. This component of aggregate demand only had a positive effect on GDP growth in Slovakia during 2009. The highest proportion of consumption on GDP growth was recorded after the crisis in Poland in 2010. In subsequent years the rate of household consumption grew in the V4 countries quite well. The exception was the slowdown in economic growth due to private consumption in the years 2012-2014 in the Czech Republic and Hungary. In 2015, the contribution of consumption to economic growth was almost the same in all of the V4 countries, but comparably lower than what it was a year before the economic crisis.

Table 3 presents the contribution of gross investment of enterprises to GDP growth in the V4 countries during the study period.

Table 3. Contribution of annual gross corporate investments (I) growth rate to the economic growth of the V4 countries (in %)

V4 – I	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Slovak Republic	5.33	3.64	4.74	2.72	-4.61	1.57	2.89	-2.13	-0.15	0.63	2.82
Czech Republic	3.62	2.92	4.42	3.68	-4.37	1.24	0.80	-1.02	-1.44	-0.49	2.11
Poland	3.49	3.08	4.69	3.66	-4.95	1.91	1.38	-0.41	-0.71	1.67	1.17
Hungary	1.71	-0.11	2.48	0.90	-3.88	-1.42	-0.07	-0.76	1.55	1.76	0.57

Source: own work based on the Eurostat.



As shown in Table 3, it is clear that corporate investments when compared to household consumption are a less stable component of aggregate demand. In the pre-crisis period, the growth rate of private investments was comparable in the countries of the Visegrad Group region. The exception was Hungary, where the proportion of this component of aggregate demand was lower (in 2006, investments contribute negatively to the GDP). During the economic recession of the V4 countries in 2009, there was also a decline of gross corporate investments (most notably in Poland). In 2010 and 2011, due to the impact of fiscal incentives, the growth rate of investments in these countries increased (however, much less in Hungary). In 2012, investment expenditure started to decline again and the economic growth rate decreased (most significant in Slovakia). In 2013, the investment growth rate was positive only in Hungary and continued to grow. In other countries, investments started to contribute to economic growth from the year 2014, and in the Czech Republic from the year 2015.

In Table 4 we present the contribution of government spending to economic growth in the V4 countries during the study period.

Table 4. Contribution of annual government spending (G) growth rate to the economic growth of the V4 countries (in %)

V4 – G	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Slovak Republic	1.70	2.98	1.94	2.97	1.91	1.57	0.05	-0.13	0.57	1.11	0.78
Czech Republic	2.22	1.86	1.20	2.69	0.01	0.84	0.12	-0.68	-0.17	-0.50	0.88
Poland	3.00	2.08	1.21	3.68	-2.69	2.70	-0.13	0.29	0.52	0.84	0.45
Hungary	1.85	0.12	0.99	1.73	-2.46	0.49	-0.32	-1.04	0.08	1.04	0.55

Source: own work based on the Eurostat.

Government spending is another component of aggregate demand, which contributed positively to economic growth in the pre-crisis period. It should be noted that in the paper we do not evaluate secondary effects of the growth of government spending on the economy debt, which is not a negligible fact. The highest growth rates recorded in government spending during this period were in Poland, and the lowest, in Hungary. In 2009, the growth rate of government spending in Slovakia slowed only slightly and was more pronounced in the Czech Republic. In Poland and Hungary, the growth rate of government spending influenced negatively on economic growth. In 2010, the support of the V4 economies by governments increased and was reflected in an increasing trend of this AD component to overall growth, especially in Poland and Hungary, less so in the Czech Republic. In Slovakia, the rate of growth in government spending slowed. In the following period, when the consequences of the debt crisis in the Eurozone began to manifest, the growth rate of government expenditure in the V4 countries



oscillated around a value of 0 or declined. In 2015, the growth rate of government expenditure was registered from 0.45% in Poland to 0.88% in the Czech Republic, which means that the proportion of government spending on economic growth was lower in comparison with other components of aggregate demand.

Table 5. Contribution of annual net exports (NX) growth rate to the economic growth of the V4 countries (in %)

V4 – NX	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Slovak Republic	-1.93	-0.48	2.51	-0.20	-2.40	2.50	-0.42	3.31	1.20	-0.68	-1.62
Czech Republic	1.44	5.03	-2.19	-0.05	-1.34	0.20	1.24	0.69	0.13	1.47	4.23
Poland	0.29	-0.18	0.33	-3.31	1.94	0.45	0.72	0.95	1.37	-0.08	1.31
Hungary	0.14	0.14	0.30	0.64	-0.54	4.21	1.31	-0.14	0.75	0.58	1.74

Source: own work based on the Eurostat.

In Table 5 we present the contribution of net exports to economic growth in the countries of the Visegrad Group during the period between the years 2005 to 2015.

From Table 5 it is clear that the net export is the least stable component of aggregate demand. For comparison, Poland and Hungary are less open economies, where the contribution of net exports to economic growth is higher in comparison with Slovakia, which is characterized by the highest degree of openness among the V4 countries. This comparison clearly shows that high economic openness does not always predetermine high growth in net exports, which would contribute to a higher economic boom. For this reason, net exports cause, in some years of the reporting period, a deceleration of GDP growth, mainly in Slovakia. This fact was reflected in 2009 when the impact of the crisis was a fall in foreign trade in the V4 countries –a negative growth rate of this component reached Slovakia, the Czech Republic, and Hungary. In contrast, this year Poland had a growth rate of net exports of almost 2%. In the period after the economic crisis the proportion of net exports to economic growth in the V4 countries were different, while in some economies reflected higher economic growth (eg. in Slovakia during 2010, 2012, and 2013). In 2015, the largest proportion of net exports to economic growth was in the Czech Republic (up to 4.23%), while in Slovakia, they caused a decrease in the economic growth rate of about -1.62%.

### **Conclusion**

Economic growth is one of the traditional objectives of economic policy because its development determines other economic indicators that affect the standard of living of the population in the country. In this scientific paper, we have tried

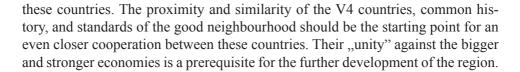
to contribute to the clarification of economic growth in the V4 countries through the development of individual components of aggregate demand. Our aim was to analyse and quantify the contribution of the increase of individual AD components to economic growth in the V4 countries and to compare these findings with each other.

After the analysis, we have reached some conclusions. We confirmed that the most stable component of GDP in the V4 countries are private consumption expenditures by households, even though in recent years there has been a change in consumer behaviour, resulting in a slowdown of this aggregate. We believe that the household sector is adapting to the conditions of unstable economic development in recent years; this is natural and rational. For a more serious problem we consider the fluctuating private corporate investments in the surveyed countries. We believe that the subjects of economic policy should focus on identifying and eliminating barriers that limit investment activity of enterprises. It is necessary to choose a long-term pro-growth strategy that would allow businesses to develop in modern conditions. We consider that in the V4 countries, existing reserves of SMEs are in the background of political preferences, in spite of its positive effects not only on the labour market.

Government spending, which contributes to economic growth largely positively, is a sensitive topic especially in the context of fiscal consolidation. Within this paper, we were dealing with this issue particularly from the perspective of aggregated data, but we have included links to published papers, in which we were dealing with the analysis of government expenditure in relation to economic growth and, in terms of social policy and debt, in more detail. We believe that it is still necessary to evaluate the structure of government spending in order to more efficiently allocate public resources not only in Slovakia, but in all countries of the Visegrad Group.

In view of the nature of the economy of Slovakia and the Czech Republic, net export is an important component of their GDP. On the other hand, their "dependence" on foreign trade especially in times of crisis is reflected in the economic growth extremely negatively. The development of net export is influenced by the development of the economy of foreign partners and, as a component of AD, is significantly unstable. Nevertheless, we consider external demand as a significant source of economic growth, as was confirmed in the much less open economy of Poland. It is, therefore, important to promote the competitiveness of the Visegrad Group countries in international trade, not only in the European region, but also on a global scale.

In view of the identified similarities, but also differences in the V4 countries, we believe that future research should be directed at the areas that are subject to a detailed assessment of both the internal and external factors that influence the development of individual components of GDP and thus, the standard of living in



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# Czynniki PKB jako źródła wzrostu gospodarczego w krajach V4

Streszczenie. Standard życia ludzi w gospodarce określają najważniejsze wskaźniki makroekonomiczne, tj. całkowita wartość wytworzonych dóbr i usług, tempo wzrostu gospodarczego, poziom zatrudnienia, stopa bezrobocia, inflacja, otwartość gospodarki oraz równowaga zewnętrznych stosunków gospodarczych. Mimo swoich niedoskonałości, PKB jest podstawowym miernikiem oceny sytuacji gospodarczej i efektywności ekonomicznej. Wzrost PKB w krótkim okresie zależy od różnych czynników zagregowanego popytu. Celem artykułu jest analiza zmian udziału poszczególnych składników wzrostu gospodarczego w PKB dla krajów V4.

Słowa kluczowe: PKB, wzrost gospodarczy, składników zagregowanego popytu



