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# Analysis of Threats to the Macroeconomic Stability in Visegrad Group Countries

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#### Abstract:

The paper determines evolution of various macroeconomic indicators of the V4 with special focus on the field of business environment. The results highlight economic prognoses of the Visegrad region for the upcoming years, which are in harmony with general forecasts of international organizations (EU, OECD, UNCTAD, IMF or Eurostat). Objectives of the work are summarized in a SWOT analysis including major threats to the V4 macroeconomic stability. All in all, Visegrad countries belong to the most dynamic regions of the European Union and are predicted to progress smoothly. The crucial challenges include slowing export in the Czech Republic, political instability in Hungary, labour returns from the UK to Poland and over-dependency on car and export industries in Slovakia. Furthermore, our findings revealed that negative FDI inflow will represent an obstacle for economic progress of the V4 Group.

Keywords: macroeconomic situation; economic indicators; threats analysis; Visegrad Four; V4

JEL Classification: E02; E69; F49

#### Introduction

All four Visegrad countries (V4) are situated in the Central Europe region. Even though an overall macroeconomic overview of the V4 countries is positive and the V4 group belongs to the most prosperous regions in the European Union (EU), every country disposes of local failing areas. Because every country requires different economic tools to reach stability, we offer some examples of difficulties that V4 countries currently face.

In this regard, our paper aims at identifying the most criticised factors inside each economy of V4 group. Our main goal lies in elaborating analysis of potential threats to the countries, while we primarily focus on macroeconomic indicators of business environment. Firstly, we examine several macroeconomic indicators of the V4 countries with special focus on business environment. Secondly, the paper offers economic prognosis for Visegrad countries in the near future. Based on these findings, we elaborate a SWOT analysis, which reveals possible threats to the economies. To sum up, results show that the Czech Republic suffers from decreasing exports and investment, Hungary is a centre for tax evasion, Poland will have to handle labour returns from the UK and Slovakia faces first outcomes from over-dependency on automotive and export industry.

#### 1. Literature review

Given that studies of macroeconomics include plenty of theories, we have selected just specific areas that are associated with our findings. Thus we primarily analyse impacts of potential threats regarding the field of export, tax evasion, youth labour market and FDI.

Lipková (2011) points out that the growth of foreign trade through rising volume of exported goods expresses an effective use of domestic economic sources. Higher export allows a country to increase the level of specialisation, while to decrease unit costs of production at the same time. What is more, foreign trade stabilises prices by keeping demand and supply stable (Kuman 2005). According to Tielmann (2010) export markets maintain

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higher competitiveness resulting in better-quality products. At the same time, decreasing volume of export limits generating of job opportunities.

Baláž (2010-2011) defines basic characteristics and factors of international human resources management. The studies of Tait (2013) assume that salaries of fresh university graduates (even those with sufficient experience) are lower than hiring experts.

Green and Shearman (2011) argue that education ensures higher standards of living in future. Baker and Jones (1998) suggest that a country benefits most once the fresh graduates return back to the home country with technical and professional knowledge acquired in advanced economies. In fact, there is a growing tendency of transnational corporations (TNC) to hire fresh graduates with foreign experience in the V4 region. It is often a critical moment when deciding where to allocate TNC's new branch or a factory (UN 2003).

From a developmental perspective, FDI provides the country with new technologies, they decrease transfer costs and support infrastructure projects (Lipková 2011). However, there is a risk of over-dependency of local economy on TNC production, FDI sources and export-oriented industry (Ghosh 2001). Baláž (2010) proposes numerous theories of foreign direct investment's importance for the host country. Creating new job opportunities, stimulating productivity, more effective allocation of production factors and spill-over effect of labour belong to the most valuable advantages of TNC (Dixon and Boswell 1996).

While some scholars provide an overview of negative impacts of tax avoidance (Gravelle 2010), other authors reveal different ways to combat tax evasion (Prosser 2012). On the basis of McGee (1998) we will set the analysis of how taxes boost economy and how to minimize tax evasion in the context of Hungary.

#### 2. Methodology

In this paper, we summarize macroeconomic data in order to define current economic situation of the Visegrad Four countries. Firstly, we begin with an overview of the position of the countries in regional and international economic relations. We examine various existing analysis of the current macroeconomic situation of the Czech Republic, Hungary, Poland and the Slovak Republic. Secondly, we aim at collecting details in order to create a most probable projection of the Visegrad region for the upcoming years. Our prognosis are in harmony with existing predictions of international organizations, such as the European Commission, OECD, United Nations Conference on Trade and Development (UNCTAD), IMF or Eurostat. Thirdly, we determine major threats to every V4 economy by elaborating a SWOT analysis. The SWOT method is based on macroeconomic and business-related indicators that are discussed in the paper. Fourthly, the main objective of the paper is to provide critical analysis of impacts of threats in accordance with the macroeconomic theories. In addition, comparative studies are applied in each section of the research putting emphasis on the common and most different features of the Visegrad countries.

The analyses are created in accordance with the macroeconomic theories of researches and academic professionals. Literature review was selected after having determined concrete macroeconomic problems in the V4 countries. In order to demonstrate complete overview of the macroeconomic situation in Visegrad countries, we offer SWOT analysis and main findings resulting from it.

#### 3. Brief overview of macroeconomic situation in Visegrad Four Countries

This section offers a real view of the current macroeconomic situation of the V4 countries and it brings 2-year statistical assumptions. The first subsection aims at an international trade sector and briefly indicates the level of openness of the Visegrad group. The next chapter covers conditions for evaluating the quality of doing business in the countries, as well as employment factors that have significant impact on companies operating in the country. All numerical information, tables and charts are based on the documents published by international organizations.

#### 3.1. International trade

During the modern process of globalization, various trade contracts have been agreed between countries and between a country and multinational corporations. Free trade areas and industrial zones have been created by almost every country. The V4 region is not an exception, the Czech Republic, Hungary, Poland and Slovakia

represent major business partners and keep very close cooperation in the field of investment, but also in the fields of culture, sport events, economic politics, geopolitics, etc.

All four economies are highly open, but Slovakia is recognized as a leader within V4. It has the 3<sup>rd</sup> biggest ratio of import and export value to the GDP in the European Union - after Luxembourg and Ireland (World Bank 2017). Beginning with Poland, it is a relatively big and resource-independent country of V4. It is the only V4 with openness less than 100% of its annual GDP volume (Eurostat 2017b). By contrast, Slovakia reaches doubled international trade volume than is able to produce and absorb domestically (IMF 2016). Import and exports annually grow, except the year 2013 when V4 economies could not keep the truck from the previous year's massive recovery from financial crisis (UNCTAD 2017). At that time, foreign trade was not supported by economic policies and financial institutions. What is more, newly industrialized Asian nations and China dominated world trade, which put EU states aside.



Figure 2 provides data for Total Investment in a V4 group, which reaches 19 - 23% of GDP, particularly Czech annual investment of 27% of its GDP in 2015. If export decreases significantly in the Czech Republic, national investment will become a dominant factor of growth (Ghosh 2001).



Figure 2. International Economic Relations Indicators

Source: Eurostat (2017c), IMF (2016).

Visegrad Four countries represent a highly attractive destination for foreign direct investment. It is the most dynamic EU region with well-developed infrastructure and availability of skilled and relatively cheap labour force. What is more, countries dispose of high concentration of suppliers, contractors and subcontractors that is appreciated by multinational corporations and foreign investors. Because Poland is the biggest V4 economy, it reasonably invests the highest volume of financial resources abroad. However, Slovakia is a special case when dealing with FDI. Since 2013, capital withdrawal of foreign investors in Slovakia was larger than their new investments (see negative data in the table below). The reason was a change in international capital flows away from emerging markets in 2013 and later. Before that time in 2012, the volume of FDI inflow into Slovakia was \$3 billion (UNCTAD, 2017). Hungary has experienced negative trend in FDI inflow for 2 years, as well. We can see

from Table 1, that Poland is the highest recipient of FDI among V4 states. The volume of investment flowing into the country is even more than doubled in comparison to the sum of other 3 Visegrad economies (the Czech Republic, Hungary and Slovakia together).

FDI Inflow (mil. USD)							
	2013	2014	2015	2016			
CZ	3,639	5,492	465	1,223			
Η	3,402	7,753	-14,804	-5,314			
PL	3,625	14,269	13,472	11,358			
SK	-604	-512	-196	-295			

Table 1	. Foreign	Direct	Investment flows
---------	-----------	--------	------------------

FDI Outflow (mil. USD)						
	2013	2014	2015	2016		
CZ	4,019	1,620	2,487	984		
Н	1,886	3,780	-15,972	-8,823		
PL	-451	2,898	3,216	6,436		
SK	-313	42,8	-183	248		

Source: UNCTAD (2017).

#### 3.2. Business efficiency environment

Business environment of the country reflects its successful story in international trade and participation in the world economy. The more convenient business policies and offer of production factors, the more entrepreneurs choose this country as a location of their manufacturing operations, service providing, financial seat and research parks.

_							
Business enterprise R&D expenditure (€/inhabitant)							
	2011	2012	2013	2014			
CZ	134.6	146.8	154.2	164.5			
Н	75.3	83.1	99.2	103.5			
PL	22.5	33.5	39.4	47.3			
SK	32.3	44.8	52.2	45.5			

	Table 2. Ex	penditure s	spent on	R&D bv	private	and	public	sector
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Gross Domestic Expenditure on R&D (% of GDP)						
	2011	2012	2013	2014		
CZ	2.97	3.00	3.06	3.05		
Н	1.20	1.27	1.40	1.37		
PL	0.75	0.88	0.87	0.94		
SK	0.67	0.81	0.83	0.89		

Source: Eurostat (2017c).

In the beginning, it is reasonable to distinguish V4 states according to the number of enterprises in the economy. Even though Poland is the biggest V4 economy by nominal GDP, the highest number of enterprises is in Hungary, from which 84% are small businesses with 1 to 4 employees (Eurostat, 2017c). Admittedly, Slovak economy is 5-times smaller than Polish, but both countries dispose of similar number of business units. In fact, Figure 3 proposes that Slovakia has the highest number of large companies with 50-249 employees (10% of all, while this number circles around 2% elsewhere). Most business organizations with 5-9 employees can be found in the Czech Republic (15% of all Czech businesses), while Poland dominates the medium-size companies of 10-19 employees, as well as companies with 20-49 employees (15+15% share of all domestic employees).

Figure 3. Business environment indicators



Source: Eurostat (2017c).

Energy sources represent a crucial factor in the production process. In Poland, coal industry employs about 100 000 workers as the government tries to reach self-sufficiency energy strategy. In fact, Poland regularly overpasses EU limits on pollution, which is a current subject to the EU Court of Justice (Greenpeace 2015). Interest rate is changing over years reaching 0 % in the Czech and Slovak Republic, while 2% in Hungary and Poland (see Figure 4).



#### Figure 4. Indicators Influencing the Business

#### 4. Short-term economic forecasts for Visegrad Four States

The group of Visegrad Four is a well performing region in the European Union and belonged to the most rapidly recovering regions of the world in the post-crisis period. The V4 countries today represent economies with a huge potential to prosper and to achieve relatively strong and robust growth in the near future. As Visegrad economies are identically oriented and possess more-or-less the same economic characteristics, all four countries are influenced by external factors. Geopolitical tensions (mainly Russia-Ukraine, Turkey) and migration crisis, western trade sanctions on Russia, a recent slowdown of US economy, unstable growth of Chinese, Russian and Brazilian economy and ineffective banking sector of problematic Eurozone members (mainly Portugal and Italy) belong to the strongest risks to the region. The last but not least factor impacting V4 prognosis includes an issue of Brexit and its so-far-unpredictable outcomes and possible complications for close trading partners, and for the whole EU27. All data used in prognosis are based on the research of the European Commission (2017c) and are added by personal understanding.

Bearing in mind the possible risks arising from the globalization and situation in the world economy, all four countries are expected to consistently rise and to keep the positive trend of macroeconomic indicators in the period of years 2017 – 2018. Contrary, there are also factors with a positive impact on the future macroeconomic situation in the V4, mainly low commodity and energy prices, recovery of Eurozone and expansive monetary policy of the Eurozone and national banks of non-Eurozone countries.

Short-term prognosis for the Czech Republic covers above-mentioned risks. The demand for Czech products from the UK will decrease, global supply chains with China will be unstable, Russia represents an important export market for Czech economy and migration crisis may negatively influence future arrangement of the country with the EU and Schengen. Nevertheless, the economic forecast seems to be positive, putting the sector of public investment, rising domestic demand and export capacity to the leading positions. The economic growth is projected to 2.6% of GDP for the rest of the year 2017, which is a drop from record 4.7% growth in 2015 because of decreased tax on tobacco products, reduced tax on medicine, books and childcare, use of EU funds and drop in the energy prices. In 2018, Czech economy will rise by 2.7% - a slight rise due to massive investment (European Commission 2017c). A steady growth in 2017 - 2018 will bring financial stability and increased standards of living (GDP pc is expected to rise to 88% of EU average). The Czech Republic is proud of having second lowest rate of unemployment (after Germany) in the EU reaching 4% in 2015, a respectable female and older workers labour participation and 100,000 newly-opened job positions (MZVaEZ SR 2016, 32). A negative point in the prognosis for the Czech Republic is introducing a new national holiday "Good Friday", which will cause annual decrease of 0.24% of GDP (€420 million) and an additional public finance burden of €144 million p.a. (MZVaEZ SR 2016, 43). However, Czech ministry of finance has managed to keep budget surplus, so Good Friday does not represent a threat to the macroeconomic stability.

The macroeconomic situation in Hungary seems to be plausible despite its GDP growth prognosis is below V4 average. The country shall await relaxation of the EU funding, a decrease in announced investment and a projected rise in salaries in 2017, mainly in construction, industry and services because of labour shortages or absence of workers' skills. The engine of growth will be new EU funds, planned private investment projects in automobile industry and additional corporate tax reductions that will boost business. In case of public budget management, a long negative trend of -2.3% of GDP will persist also in 2017 and 2018 as a result of shifting tax burden from labour to consumption in the form of lowered flat income tax to 15 % since 2016, new doubled family tax allowances (Ministry of National Economy of Hungary 2015). In 2018, Hungarian government plans to combat tax evasions as the shadow economy reaches 10-17% of GDP (Daily News Hungary 2016). Some anti-fraud measures have already been accepted, such as obligatory online cash registers, electronic system to track goods route, value added tax obligation to taxi services, wellness and fitness, automotive repairs and medical services. Further measures represent a political and economic threat to the country, as the government has become instable. On the other hand, lower social benefits will be paid and the government already scheduled state land sales to receive temporary fiscal revenues in 2017 – 2018 (Ministry of National Economy of Hungary 2015).

Poland is the largest economy in Central Europe and various experts assume it will become a regional economic power in the middle of the 21st century. A short-term analysis includes positive internal factors for its economic growth in 2017 and 2018, such as higher productivity of labour, mobilization of domestic resources and massive investment from EU funds. By far, Poland is the largest recipient of EU subsidies. It received PLN 403 billion in the programme 2007-2013 and PLN 441 billion in the period 2014-2020 (Ministry of Treasury of the Republic of Poland 2013). As far as we are concerned, Poland has the 6<sup>th</sup> largest energy industry in the EU which is likely to become even stronger in coming years. What is more, the country is a major food supplier for Europe and 3rd largest process manufacturer in the EU (McKinsey 2015). What is more, Poland has recently experienced rapid increase in number of high-school and university students. Furthermore, Polish remittances are highest in the region. They amounted 1.24% of GDP (€4 billion) in 2013 (Ministry of Treasury of the Republic of Poland 2013). However, they are expected to fall by 3 % as a consequence of Brexit and potential excluding of Polish workers from the UK labour market. In 2015 Poland was described as a green island with high prosperity of almost 4 % of GDP (OECD 2016). In the long-term, we estimate a slight slowdown in Poland, but growth still resists among strongest ones in the EU. The engine of economy will consist in strong domestic consumption, stable employment rate, low prices of energy, easy credit conditions and higher fiscal revenues, e.g. from green tax (European Commission 2017c). In the field of foreign direct investment, high solid profits and low interest rates are being offered at present and new retailers plan to invest more in 2017 and 2018 (boom in supermarkets and retail chains). Additional costs to the economy will be caused by thousands of workers returning home from the UK.

The Ministry of Finance of the Slovak Republic counts with external risks noticed above and with intern risks in regard of massive outflow of entrepreneurs due to specific sectoral taxes, tax licences and tax on dividends in the period of years 2016 - 2018. Up to the end of 2016, the impact of Brexit was neutral for the Slovak economy as the country experienced high economic growth of 3.3 % GDP in 2016 (European Commission 2017c). However, we count with a high uncertainty for the upcoming years in the form of decreased demand for Slovak-made cars in the United Kingdom (UK) and moving out a part of the British production from Slovakia. When mentioning the quality of economy, the IMF predictions say that Slovakia will overtake Czech Republic in the field of GDP pc until 2020, the European Commission predicts until 2024 (The Slovak Spectator 2015). Furthermore, expansive monetary policy will allow easy credit lending. The rate of unemployment was relatively high in 2016, but is predicted to fall as 84 000 new jobs will be created by 2018, (National Bank of Slovakia 2015). On the other hand, average wage seems to be rising, which will cause higher production costs resulting in negative FDI inflow. The government target is to boost public investment starting with construction of Bratislava bypass D4/R7 in 2017 and 2018. Likewise, to boost private investment (mainly in automobile industry – PSA, Jaguar Land Rover, Volkswagen) and to boost domestic consumption and net export value also belong to the official targets (Ministry of Finance of the Slovak Republic 2016).

#### 5. Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis

We use a SWOT method in order to get an organized list of V4 countries' strong and weak economic sides, so as to determine easily their actual macroeconomic situation. The SWOT analysis is based on data from international organizations listed in the paper, as well as economic forecasts for Visegrad Group countries (see paragraph 2 and paragraph 3).

	SWOT analysis					
	Strengths	Weaknesses	Opportunities	Threats		
CZ	<ol> <li>Highest gdp pc</li> <li>Highest total investment (% of gdp)</li> <li>Highest part of public expenditure into r&amp;d</li> <li>The only v4 country with 2016 budget surplus</li> <li>2<sup>nd</sup> lowest rate of unemployment in the eu</li> <li>Capital for starting doing business - 0 % of income, while oecd average is 9,6% (oecd 2016)</li> </ol>	<ol> <li>Weak e-interaction with authorities</li> <li>Lowest gdp growth prediction</li> <li>Export dependency on Germany</li> </ol>	<ol> <li>Interest from foreign investors</li> <li>Growth in eurozone (export markets)</li> <li>Prediction of moderate appreciation of czk exchange rate</li> <li>Increasing interest in innovations</li> <li>Best performance in the business environment quality indices (global competitiveness index and economic freedom)</li> </ol>	<ol> <li>Brexit (UK important export market for CZ)</li> <li>Prognosis of GDP growth below V4 average</li> <li>Negative impact of new national holiday Good Friday on GDP</li> </ol>		
H	<ol> <li>Relatively high business investment into R&amp;D</li> <li>Biggest number of smes</li> <li>Modest growth of minimum wage</li> <li>The most SMEs</li> </ol>	<ol> <li>Most criticized and unstable government</li> <li>Poor access to credit</li> <li>Highest interest rates on mortgages</li> <li>100% of income spent on mortgage</li> <li>Highest debt</li> <li>High energy dependency</li> <li>Only v4 country with less than 40 hours worked p.c./week (Eurostat 2017c)</li> </ol>	<ol> <li>Positive GDP growth prognosis</li> <li>Effective strategy to combat shadow economy (to increase national income)</li> <li>Growth in Eurozone (export market)</li> </ol>	<ol> <li>Political impact of migration crisis</li> <li>Rise in tax evasion</li> <li>Increasing number of workers with minimum wage (so far highest share of min. Wage earners)</li> <li>Worst position in business environment indices</li> </ol>		
PL	<ol> <li>Biggest V4 economy (in terms of nominal GDP)</li> <li>Biggest recipient of EU subsidies</li> <li>Highest volume of remittances</li> <li>Highest FDI inflow</li> <li>Highest expenditure into the education</li> </ol>	<ol> <li>Relatively low GDP pc (68 % of EU average)</li> <li>Relatively low country openness</li> <li>Lowest expenditure into R&amp;D sector</li> </ol>	<ol> <li>Positive GDP growth prognosis</li> <li>Huge potential source of shale gas</li> <li>Strong geopolitical ambitions (the USA, NATO)</li> <li>The highest concentration of large firms (&lt;10 employees)</li> <li>Relatively small household savings</li> </ol>	<ol> <li>Brexit in terms of national labour force abroad</li> <li>Fewest smes</li> <li>Relatively a high- speed increase in minimum wage</li> <li>Strong lobbying</li> </ol>		
SK	1.High economic performance in post-crisis period	1.Highest youth and long- term unemployment	1.Positive GDP growth prognosis	1.Brexit (huge export market for Slovakia- made cars)		

Table 3. Strengths, Weaknesses, C	Opportunities, and	l Threats analysis
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	SWOT anal	ysis	
Strengths	Weaknesses	Opportunities	Threats
<ul> <li>2.High labour productivity</li> <li>3.Highest share of employees working sundays</li> <li>4.High degree of trade openness</li> <li>5.The only eurozone member country</li> <li>6.Highest commuting</li> </ul>	2.Highly corrupted government 3.Low transparency of authorities 4.Missing west-east highway 5.High energy dependency 6.Car overuse 7.Highest costs of living	2.Newly opened job vacancies 3.OECD prediction to overtake Czech economy by 2020 4.Negative FDI outflow (investment back to Slovakia)	2.Ukraine conflict near SK borders 3.EU sanctions on Russia 4.FDI outflow 5.High-speed increase in average salary 6.Over-dependency
member country 6.Highest commuting efficiency	6.Car overuse 7.Highest costs of living	Slovakia)	salary 6.Over-dependency on car industry

Source: Author's own processing based on OECD (2016), World Bank (2016) and Karelová (2016).

#### 6. Main findings and discussion

Based on the research, we can assume that all four Visegrad countries are fastest-growing economies in the region. They progress swiftly in a smart way while respecting innovative and modern technical parameters. Obviously, they are not yet as developed as a western and northern part of the EU, but we strongly believe that their economic future is auspicious. To sum up, Visegrad countries are the engine of EU growth and tend to grab a greater and greater share of the member states' economic success. In this part, we will try to define potential threats with considerable impact on macroeconomic situation in every Visegrad country, which is the major objective of the research. The statement is based on the macroeconomic indicators and analyses summarized in the paper.

#### 6.1. Czech Republic

We can see in SWOT analysis that the Czech Republic is a well-performing economy with high standards of living and potential of increasing influence in the region. Its strong factors include industrial orientation, strategic location near an EU economic giant Germany, relatively cheap and well-educated workforce. Moreover, macroeconomic indicators remain on a solid growth path.

Our results broadly support previous findings that while Czech inhabitants have been historically more educated with higher standards of living, Slovak citizens tend to be more productive nowadays. We have noticed that the Czech Republic is vulnerable because of over-dependency on external markets (especially German) and dependency on manufacturing (mainly automotive industry and related sectors). Analysists consider the country as "an assembly line of Europe" as it produces semi-finished goods of low added value, which are further processed in Germany and exported to the US.

Therefore, the Brexit issue probably presents a potential threat for so-far-positive evolution of Czech economy. Bearing this in mind, we assume that the biggest challenge for the Czech Republic will be falling UK and China demand for Czech exports. Another potential negative impact may arise from introducing "Good Friday" as a national holiday which is most likely to decrease GDP pc by CZK 1 100 (€ 41). In fact, both challenges are easily to be managed with budget surplus reached in 2016 and 2017. The government is planning to support domestic consumption and to boost state investments properly. Public spending will thus be the source of the growth. In this context, we predict promising future for the Czech economy, but dependent on secondary sector investment situated near German boarders (Ústí nad Labem and Karlovarský region).

#### 6.2. Hungary

In brief, Hungarian economy is in a relatively stable situation. However, what matters more is a political situation that is nowadays sorely broken in the country. As we have already mentioned before, Hungarian government is currently one of the most criticised in the EU. The Prime Minister Victor Orbán has been viewed controversially by the EU, western countries and the US (mainly before Donald Trump's inauguration). It seems that Hungarian government tries to establish a right wing state. Amnesty International describes their new laws introduced last year as a threat to freedom and democracy. It is our firm belief that unless the country improves political

background, foreign investors will not be interested in allocating projects in the country. Nor the combat against tax frauds and tax evasion can be successful. What is more, above-mentioned phenomenon contributes to wide-spreading Euroscepticism and collective anti-immigration and anti-NATO violence protests. We are convinced that as long as the political situation is not stable and safe, economic environment of Hungary is in a mortal danger.

Therefore, we are afraid that Hungary has not rigorous potential for business expansion in the EU. In our point of view, until the government is stable and adopts supportive strategies, business cannot prosper. So far, macroeconomic indicators remain at the bottom of tables in the V4 comparison. It is worth noting that Hungary definitely receives the worst ratings among V4 countries in the world indices of the quality of business environment (Karelová 2016).

#### 6.3. Poland

Our findings regarding macroeconomic situation of Poland are consistent with studies by international organizations. We confirm that Poland belongs to the countries that will expand dramatically in the future, as the country profits from strong combination of well-targeted national strategies and stable political background. The country provides lucrative and convenient conditions for doing business. This is the reason why the biggest number of large companies is located in Poland.

In regard to the potential threats to the economy, there are some challenges that attract domestic attention. First, Poland disposes of just few small and medium sized enterprises in comparison to other V4 countries. Second, Poland represents the biggest V4 economy by the value of its nominal product, but its GDP pc is almost at the bottom within V4 comparison. Third, returning labour force from the UK may become a heavy economic burden to the state. Fourth, the number of university graduates overpasses the demand, so they are rather an economic burden. However, Poland is nowadays an important destination of offshored business services where relatively cheap but multilingual university-educated Polish workforce is a key factor.

The research provides strong evidence that future economic success belongs to Poland, as it will be primarily focused on pharmaceutical sphere (biosimilars and clinical trial) and intelligent mines with high added value. We see Poland as a potential future economic power of Eastern Europe. Its cooperation with the US, NATO alliance and other strategic countries makes Poland a strong and politically influential country. In other words, we believe that if a new coalition is created in the region, it will be definitely led by the Republic of Poland.

#### 6.4. Slovak Republic

Research conducted on macroeconomic situation of the Slovak economy suggests that there is a high probability that the country becomes more competitive in the field of international business, mainly due to rising volume of production sent abroad. Among Visegrad Four countries, Slovakia disposes of comparable advantage of convenient policy strategies, investment-friendly conditions and competitive business environment. In our point of view, Slovakia remains an economic tiger within Eurozone area with annual GDP growth above EU average. Consequently, Slovakia is estimated to overtake Czech economy by 2020.

In contrast, studies show no benefit from single orientation on the automotive manufacturing branch and heavily dependency on foreign demand and energy import. Nevertheless, automotive industry creates a potential threat to macroeconomic stability in Slovakia. In the long run, national analysts expect FDI inflows to fall and foreign investors leaving the country to increase. In fact, Slovakia is the biggest car producer per capita in the world. Therefore, we would suggest to diversify major economic sectors and to put more emphasis on the service sector. Otherwise, the country is likely to follow Detroit-like scenario, as the US state rose and fell with automotive industry ending with large municipal bankruptcy due to global competition. However, a new car manufacturing company Jaguar Land Rover (JLR) has been agreed to set up a new plant in Slovakia. National government believes JLR will create sufficient job vacancies in the Nitra region, stimulate infrastructural projects and bring more suppliers and contractors to the country.

To extend the conclusion of this study, future research can also look into impacts of a slowing Chinese economy, which may negatively influence the total foreign demand for Slovak goods. This may represent the

second crucial threat to the macroeconomic stability not only of the Slovak Republic, but the stability of the whole region.

#### Conclusion

On the basis of the main findings and SWOT analysis, we can assume that macroeconomic situation of Visegrad countries is plausible and is expected to keep stable economic growth in the near future. In fact, Visegrad Four is perceived as one of the most dynamic regions in the European Union. According to the various economic ratings and indices of business environment published by respected international agencies (*e.g.* World Bank, World Economic Forum, Heritage Foundation, Transparency International), Hungary, Poland, the Czech and Slovak Republic belong to the fast-growing economies with a prognosis of huge potential to improve their position in the world economy. The main findings confirm that countries are probable to boost domestic consumption, rise volume of net export and to start already-agreed government projects. What is more, there are thousands of new jobs announced to be created in Slovakia and Hungary in 2017 and 2018. The paper has showed that it remains an open question whether all V4 economies are going to implement new trade measures promoting business in the region. We are conscious that more research is needed to examine countries' credibility of promising ambitions to combat corruption, inefficient administration and trade barriers.

With respect to the economy of the Czech Republic, positive economic evolution is forecasted as a result of the high saving rate of households, robust public investment and low unemployment rate. Results of the paper proves that the state succeeds in eliminating inefficient administration. What is more, the unemployment rate is the second lowest among EU countries (after Germany).

The EU and the OECD are also positive about the future of Hungarian economy that targets to become one of the most prospering EU members. However, the government is supposed to be focused more on eliminating public debt below the EU-allowed limit of 60 % of GDP, diminishing a long-term trend of paying minimum wage to workers and also decrease the volume of needed financial capital to start a business. The research has releaved many problematic areas where Hungary is behind EU average, such as high funding costs or poor access to credit.

The article highlights estimated growth of Poland at a fast pace with enhancing all sectors of economy. Being the biggest recipient of EU subsidies and remittances from abroad, shifts the country right direction to the economic prosperity. Nevertheless, Poland is required to establish independent fiscal council and to promote higher labour mobility within the cities. The most crucial issue on Polish "To do List" is low GDP pc which reaches only two thirds of EU average.

Last, but not least, high rate of youth unemployment remains a big macroeconomic challenge for the government of the Slovak Republic. What is more, results of the paper are consistent with a widely recognized issue that Slovakia absorbs many non-transparent tender frauds. On the plus side, Slovakia is one of the most open economies in the world and it reaches the highest global production of automobiles per capita. On the minus side, this increases so-far-high dependency on the global economy and trading partners. Moreover, multinational corporations operating in the Slovak environment are capable of influencing government policies and new acts that have currently been prepared and considered. Nonetheless, we submit that a rising level of youth and long-term unemployment belong to the negative factors of the Slovak economy.

In conclusion, it is vital to mention individual initiative of EU member states to promote their economy and reach inclusive growth for the upcoming period of time. According to the National Reform Programme (NRP), which belongs to the agenda of Europe 2020 the region of Visegrad Four is described as a center of recent economic expansion in the EU and its recovery has been mostly stable in the post-crises period.

#### References

- [1] Baker, C. and Jones, S.P. 1998. *Encyclopedia of Bilingualism and Bilingual Education*. Bristol: Multilingual Matters. 758 p. ISBN: 978-18-5359-3628.
- Baláž, P. 2010. Medzinárodné podnikanie. Na vlne globalizujúcej sa svetovej ekonomiky. Bratislava: Sprint dva, 144-306. ISBN: 978-80-89393-18-3

- [3] Dixon, W.J. and Boswell, T. 1996. Dependency, Disarticulation, and Denominator Effects: Another Look at Foreign Capital Penetration, *American Journal of Sociology*, 102 (2): 543-562.
- [4] Ghosh, B.N. 2001. Dependency Theory Revisited. Farnham: Ashgate, 176 p. ISBN: 978-07-5461-5156
- [5] Gravelle, J.G. 2010. *Tax Havens: International Tax Avoidance and Evasion*. Collingdale: DIANE Publishing. ISBN: 978-14-3794-1111
- [6] Green, E. and Shearman, H. 2011. Education for a New Society. London: Routledge, 146 p. ISBN: 97-8-041-5500-883
- [7] Karelova, K. 2016. Comparison of the Quality of Business Environment of the V4 according to Selected Indices. *Forum Statisticum Slovacum*, 12: 24-40.
- [8] Lipková, Ľ. 2011. Medzinárodné hospodárske vzťahy. Bratislava: Sprint, 133-359. ISBN: 978-80-89393-37-4
- [9] McGee, R.W. 1998. *The Ethics of Tax Evasion*. Dumont: Dumont Institute for Public Policy Research. 405 p. ISBN: 978-09-6487-9485
- [10] McKinsey <u>& Company</u>. 2015. *Poland 2025: Europe's new growth engine*. 96 p. Available at: http://www.mckinsey.com/search.aspx?q=poland+food+supplier (accessed May 13, 2017)
- [11] Prosser, K.J. Murray, R. 2012. Tax Avoidance. London: Sweet & Maxwell, 281 p. ISBN: 978-18-4703-7749.
- [12] Tait, G. 2013. Making Sense of Mass Education. London: Cambridge University Press, 304 p. ISBN: 978-11-0766-0632
- [13] Tielmann, V. 2010. Market Entry Strategies. München: GRIN Verlag, 28 p. ISBN: 978-36-4067-2158
- \*\*\* Daily News Hungary. 2016. Hungary Joins OECD Corporate Anti-Tax Evasion Initiative. Press article. Economy Section. Available at: <u>www.dailynewshungary.com/hungary-joins-oecd-corporate-anti-tax-evasion-initiative/</u> (accessed January 26, 2017)
- \*\*\* European Commission. (2017b. National Reform Programmes. Europe 2020. Available at: <u>http://ec.europa.eu/</u> <u>europe2020/europe-2020-in-your-country/ireland/national-reform-programme/index\_en.htm</u> (accessed May 28, 2017)
- \*\*\* European Commission. (2017c). *European Economic Forecast. Institutional Paper 020.* Luxembourg: Publications Office of the European Union, 2016. p 70-71. ISBN 978-92-79-54315-9.
- \*\*\* European Commission. 2017a. Economic situation in the EU. Available at: <u>https://ec.europa.eu/info/business-</u> economy-euro/economic-performance-and-forecasts/economic-performance-country\_en (May 14, 2017)
- \*\*\* European Commission. 2017d. The European Semester 2016. Council Recommendation. Available at: <u>https://ec.europa.eu/info/publications/2017-european-semester-country-specific-recommendations-commission-recommendations\_en</u> (accessed March 27, 2017)
- \*\*\* EUROSTAT. 2017a. GDP per capita Indices. Database. Available at: <u>http://ec.europa.eu/eurostat/statistics</u> <u>explained/index.php/GDP\_per\_capita\_consumption\_per\_capita\_and\_price\_level\_indices</u> (accessed January 12, 2017)
- \*\*\* EUROSTAT. 2017b. Unemployment rates, seasonally adjusted, February 2017. Available at: <u>http://ec.europa.eu/eurostat/statistics-explained/index.php/</u> (accessed April 7, 2017),
- \*\*\* EUROSTAT. 2017c. Your Key to European Statistics. Database of Macroeconomic Indicators (DataTree). Available at: <u>http://ec.europa.eu/eurostat/data/</u> database?node\_code=tsdec310 (accessed February 1, 2017)
- \*\*\* Greenpeace. 2015. Poland: Europe's most polluted country in trouble with the EU but still won't clean up coal. Available at: <u>http://energydesk.greenpeace.org/2015/06/25/polands-smog-crisis-europes-most-polluted-count</u> ry-in-trouble-with-the-eu-but-wont-cut-coal-emissions/ (accessed January 29, 2017)

- \*\*\* IMF. 2016. EconStats. World Economic Outlook Data. Database. Available at: <u>www.econstats.com/</u> weo/V014.htm (accessed January 16, 2017).
- \*\*\* Ministry of Finance of the Slovak Republic. 2016. 40 zasadnutie výboru pre makroekonomické prognózy Available at: <u>www.finance.gov.sk/Default.aspx?CatID=11215</u> (accessed May 12, 2017)
- \*\*\* Ministry of Finance of the Czech Republic. 2016. Macroeconomic prediction. (accessed June 6, 2017), Available at: <u>http://www.mfcr.cz/cs/verejny-sektor/makroekonomika/makroekonomicka-predikce/2016</u> (accessed June 6, 2017)
- \*\*\* Ministry of National Economy of Hungary. 2015. Convergence Programme of Hungary 2015-2018. Available at: <a href="https://www.kormany.hu/download/b/6b/50000/">www.kormany.hu/download/b/6b/50000/</a> CP2015%200430\_en.pdf#!DocumentBrow (accessed June 02, 2017)
- \*\*\* Ministry of Treasury of the Republic of Poland. 2013. Poland to get nearly EUR 106 bln from 2014-2020 EU budget pool expected impact on the Polish economy, chances and challenges. Available at: <u>www.msp.gov.pl/</u>en/polish-economy/economic-news/4015,dok.html> (accessed February 13, 2017)
- \*\*\* MZVaEZ SR. 2016. Ekonomická informácia o teritóriu. Česká republika. Available at: <u>www.mzv.sk/documents/</u> 749074/620840/Česká+republika+ekonomické+informácie+o+teritóriu (accessed February 27, 2017)
- \*\*\* National Bank Of Slovakia. 2015. Predikcia vývoja ekonomiky Slovenska. 13<sup>th</sup> Conference of SAF. Available at: <u>https://www.nbs.sk/\_img/Documents/\_Dohlad/Publikacie/Banky\_a\_institucie\_platobnych\_sluzieb\_1p\_2015.pd</u> <u>f</u> (accessed January 30, 2017)
- \*\*\* NUMBEO. 2017. Database for Cost of living, Health Care, Pollution, Traffic Data. Database of user contributed data. Available at: <a href="http://www.numbeo.com/cost-of-living/">www.numbeo.com/cost-of-living/</a> (accessed May 18, 2017),
- \*\*\* OECD. 2016. OECD Stats. Average Annual Wages. Available at: <u>https://stats.oecd.org/Index.aspx?</u> <u>DataSetCode=AV\_AN\_WAGE</u> (accessed March 22, 2017)
- \*\*\* The Slovak Spectator. 2015. IMF predicts growth for Slovak economy. Available at: <u>https://spectator.sme.sk/c/</u> 20063062/imf-predicts-growth-for-slovak-economy.html (accessed March 03, 2017).
- \*\*\* UNCTAD. 2017. FDI Statistics. Database of Foreign Direct Investment. Available at: <u>http://unctad.org/en/Pages/</u> DIAE/FDI%20Statistics/FDI-Statistics.aspx (accessed May 27, 2017)
- \*\*\* United Nations. 2003. *Population, Education and Development. The Concise Report*. New York: United Nations, 2003. 33 p. ISBN: 92-1-151382-0.
- \*\*\* World Bank. 2016. *Doing Business 2016. Measuring the Regulatory Quality and Efficiency.* Washington: Publishing and Knowledge Division of the World Bank, 2016. 348 pp. ISBN: 978-1-4648-0668-1.
- \*\*\* World Bank. 2017. Trade (% of GDP). World Development Indicators. DataBank. Available at: https://data.worldbank.org/data-catalog/world-development-indicators (accessed March 16, 2017)
- \*\*\* World Economic Forum. 2016. Global Competitivness Report 2016-2017. Geneva: World Economic Forum.



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