Competitiveness of Slovak economy and regional development policies

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Abstract. The role of common European Union economic policy, based on the implementation of its particular policies, is to increase its competitiveness within the global economy environment. Therefore, the aim and the interests of the EU as an entity of the global economy are to increase the competitiveness of the EU members. It can be done through regional development enhancement of EU regions, regional discrepancies elimination as the current EU vision appears to be as the Union of regions. Thus the paper deals with the analysis of Slovak economy competitiveness using the data from the Global Competitiveness Index, the analysis is followed by the discussion of regional development policies and the role of innovation in regional development.

Keywords: Global Competitiveness Index, European Union, international economics, social and economic development, regional development, research and development

JEL Classification: E66, F43, F63

INTRODUCTION

Competitiveness is essential to maintain productivity growth and to raise living standards, especially in small open economies, which are based on international trade and are largely dependent on direct foreign investment (Appleyard et al, 2006). Competitiveness is the ability of country to sell its own goods and services in the marketplace. The concept of competitiveness includes, for example, the overall business environment...
of the country, physical and knowledge infrastructure, as well as labor market indicators and the regulation of financial markets and products and services (Walters, Blake, 1992).

Competitiveness is often viewed as the country’s export performance and is reflected as an example of the ability of companies to get their goods and services at foreign markets and gain greater share of world trade (Hamilton, Wepster, 2009). This concept is rather problematic. Major economies, such as the US, have a sufficiently large domestic market and therefore they are less open than smaller economies such as Czech Republic or Slovakia. For those countries foreign markets are less important and therefore indicators based on export performance are inadequate for assessing their competitiveness. Furthermore, it can be argued that the essence of increasing competitiveness is manifest not only through export growth. Competitiveness is supposed to lead to the development of the country, which is reflected in improved quality of life (Ahlstrom, Bruton, 2010).

Competitive economy therefore can be better characterized by productivity growth, respectively increase in performance per produced unit or per working hour. This in turn can lead to sustainable GDP growth, employment and living standards. For example, increased productivity creates the conditions for a proportional increase in wages without increasing production costs (Allen, 2009). Relatively low productivity of labor and capital explains the low wages in many countries of Central and Eastern Europe in comparison with developed countries of Western Europe. According to Peng (2009) following areas are particularly important when assessing the competitiveness between countries:

– Macroeconomic performance and stability.
– Institutional quality.
– Innovation performance.
– The quality of human resources.

All issues blocking their development are considered barriers to competitiveness. For each area there are numerous indicators that facilitate comparison between countries. This paper uses Global Competitiveness Index (GCI).

Within the regional economy operate various institutions and partnerships whose mission and activities create conditions conducive to the development of the region, formation of its structure and capacity utilization. Morgan (1997) argues that adaptation of regions to the new environment, socio-economic turbulences, sustainability challenges and emphasis on creativity are all factors that translate into a continual need for flexible responses to endogenous and external stimuli. This paper offers, in terms of its scope and depth, a partial theoretical-methodological analysis of selected models of regional development (Kitson, et al., 2004). Innovations, research and development, respectively their capacities and infrastructural amenities shape the basic conditions for balanced and sustainable economic and social development of the regions.

This paper argues that the competitiveness, policies that promote the elimination of regional disparities, partner networks and cooperation of regional government with the business sector constitute a prerequisite for the regional economy. Such an economy then integrates systems of regional development to ensure growth in living standards in the defined geographical unit, territories and markets. Within this context it is important to note that a unilaterally oriented basis which drives economic growth may, in the future, pose a threat to stable and sustainable development, and regions without proper structures that support innovation and research could eventually experience an economic hardship due to the loss of competitiveness. Regional development in terms of ensuring sustainable growth, competitiveness and standard of living is conditioned by the expansion of social and economic potential of the region. Innovativeness, innovations, educational structure, qualifications, skills and abilities are among the key factors that determine the sustainability and competitiveness.
PROBLEM FORMULATION AND METHODOLOGY

This paper discusses the competitiveness and its impact on the Slovak economy particularly in terms of further regional development. The aim of the paper is to outline how to assure sustainable economic growth in terms of the Slovak economy competitiveness enhancement within the world economy triad in international economics system. One area of interest is to examine whether and to what extent the increasing competitiveness of the Slovak economy contributes towards overall regional development of the country. Research task includes examination of the competitiveness analysis of the Slovak economy and the identification of problematic issues as well as assessment of their interaction with regional development in terms of regional development policy, especially in the context of technological progress and innovation. The paper is focused on the analysis of the competitiveness of the Slovak economy through the global competitiveness index, and the exploration of subnational government fiscal powers (measured as subnational government expenditures and public direct investment as a % of GDP) along with the EU framework for the funding of structural policies. The aim of this paper is to analyze the conditions for increasing the competitiveness of the regional economy and the conditions for regional development with an emphasis on promoting innovation, technology transfer and the new structure of the regional economy.

The basic data come from widely recognized institutions in assessing the competitiveness and efficiency of the economy such as the World Economic Forum (WEF) and the OECD. Annually published reports on competitiveness by organizations such as the World Economic Forum and the OECD has achieved high recognition from the governments of countries being evaluated as well as businesses, and therefore they are considered as authoritative sources in this field. This paper employs information analysis, comparative analysis, statistical indices, data analysis; it uses and examines the facts and data from scientific and professional publications and websites. Subsequent analyzes results in the synthesis and extrapolation using the method of abstraction eliminating less important factors in order to formulate general conclusions and opinions.

COMPETITIVENESS UNDER GLOBAL ECONOMY DEVELOPMENT

In the original meaning competitiveness was related only to enterprises and was associated with the fact that the company has a competitive advantage, which brings its better position at market as compared to competitors (Dunning, Lundan, 2008). First to deal with the issue of competitiveness and its definition in the sense we understand it today, was American economist Michael Porter (2004). His approach to this issue has become the basis for the contemporary theory of competitiveness, which analyzes resources and factors of competitiveness under globalization processes. Under the influence of globalization the criteria of competitiveness are being changed, the classical understanding of competitiveness based on competitive advantage has been left behind. The basis for a new understanding are the revolutionary changes in technology, human capital and production processes organization. According to Ivanova (2011a) national competitiveness examines the ability of national economy growth by means of a set of factors, policies and institutions that determine the level of country's productivity. At the corporate level, M. Porter explains competitiveness as company's ability to secure competitive advantage, which is the basis of company's performance at markets.

Krugman (1994) while defining competitiveness focuses on the aspect of living standards as a result of national productivity. S. Brakman (2006) defines competitiveness as the set of institutions, policies and factors that affect the level of country's productivity. Hitiris (2006) argues that economic competitiveness is defined as the resultant of country's performance in the field of science and technology, particularly its innovative capacity, which defines the long-term ability to develop and commercialize new stream of previously
Recognized solutions - innovation. P. Neumann (2013) argues that economic competitiveness is a concept, expressing by a synthetic way the country’s ability to penetrate by its goods and services into foreign markets and to obtain comparative advantages in international competition.

Global institutions and organizations, dealing with competitiveness, evaluate it and compile rankings for economic competitiveness or businesses they also define this category for their needs and compile options and ways how to measure competitiveness. The World Economic Forum (WEF) states that national competitiveness is defined as the ability of national economy to perform continuously increasing level and quality of life. WEF annually evaluates and publishes information on the global competitiveness index measurement consisting of a great number of factors describing competitiveness of a particular country. WEF defines competitiveness as the set of institutions, policies and factors that determine the level of country’s productivity. The productivity level then provides a sustainable level of prosperity that can be achieved by the economy (UNDP, 2015).

From those approaches defining competitiveness we can see that the definition has two levels – micro and macro ones. Within these two levels competitiveness can be also examined at the level of industry and region (Lipkova, 1993). Thus, there is not only business competitiveness, but also competitiveness of economy, or region. Competitiveness is a potential of economic structures (businesses, local and regional economies, integration groups) that by the effective use of resources provides sustainable economic prosperity, which is reflected in economic performance, productivity, employment, social and political spheres.

“Competitiveness of economy” should be associated with economic growth, as the primary objective of states is not to be competitive, but to ensure economic growth as a source of further economy development and standards of living for population. It is necessary to bear in mind that the determinants of economic growth vary in time and in space. Jovanović (2014) states that the current development is characterized by two determinants: the world economy globalization along with the related world trade liberalization process and the other is the rapid development of information and communication technologies. These aspects are reflected in understanding the nature, sources and manifestations of competitiveness in the current period (Haviernikova, 2014).

From the definition of competitiveness it is clear that competitiveness is related to the process of economic globalization, characterized by a strong growth in international economic activity in relation to domestic activity (Vojovic, Krajnakova, 2013). The growth of cross-border economic activity carried out by international economic relations is executed by means of the international movement of goods and services, capital, labor as well as information and knowledge. Globalization represents qualitatively higher level of internationalization; it is a complex process that involves the functional integration of international activities of economic subjects. This qualitative shift in international relations has been significantly accelerated by the development of information and communication technologies.

**SLOVAK ECONOMY WITHIN THE GLOBAL COMPETITIVENESS**

Competitiveness is, in broadest sense, the economic indicator that represents how the economy of a state can act and be enforced in domestic and international competition; it reflects the enforcement of competitiveness factors in a particular economy. When measuring the competitiveness the impact of competitiveness determinants on the economic performance of the economy is being assessed. It is given (formed) by economic performance of entities (enterprises, or regions), which create economic growth of the economy. The importance (weight) of each factor depends on the group to which the economy belongs, whether it is economy based on production resources or sources driving the efficiency, the innovation factors.
This study uses Global Competitiveness Index which assesses the national competitiveness using measures that are of macroeconomic nature. It should be noted that there is no perfect universally accepted measure of competitiveness and in literature we can find opinions of experts, who do not consider this index as relevant indicator for the economic competitiveness assessment. Such studies include Krugman (1994), Dicken (2007), Baldwin and Wyplosz (2009) who stress that the basic measure of economic competition between states is to be labor productivity, arguing that the growth in living standards is substantially equal to the domestic productivity growth rate. This means that the standard of living is determined by domestic factors rather than world markets competition. Those authors reject the category of national competitiveness as the economic and social success especially of small open economies depends on how flourishing the other countries are, with which they have economic cooperation, especially in times of recession and crisis, and not on the competition between them. Despite these reservations, the World Economic Forum annually publishes the results of world economies regarding their competitiveness achievements.

Global Competitiveness Index (GCI) is focused on the economy’s ability to succeed in international competition. Since 2004 it has been presented by the World Economic Forum (WEF). The GCI assesses the competitive environment in the reporting countries of the world on the basis of their ability to assure sustainable economic growth and a high level of prosperity for its citizens, the microeconomic and macroeconomic factors of competitiveness are of its part. GCI consists of 12 pillars of competitiveness, which are classified into three sub-indices according to whether their growth is based on the factors of production, efficiency and innovation (Table 1). Each of these pillars consists of 7 to 20 other sub-indicators. Some sub-indicators are evaluated on the basis of available statistical data, others are the result of the global Executive Opinion Survey.

Slovak Republic Global Competitiveness Report 2015–2016, annually processed by the World Economic Forum in Geneva (WEF), has ranked Slovakia at the 67th place out of 140 countries having been evaluated. The Competitiveness Index pushed SR by 8 points higher compared to the previous period. Within the Visegrad Group countries the Czech Republic is at the 37th spot, Poland and Hungary at 41st respectively 63rd position. On top of the ranking is Switzerland followed by the Singapore, USA, Germany, Netherlands, Japan, Hong Kong, Finland, Sweden and UK. Slovakia has received low ratings mainly in the following areas: infrastructure, education, market efficiency, protectionism, legal framework effectiveness, public sources redistribution and independence of judiciary. The biggest obstacles to do business in Slovakia include corruption, inefficient government bureaucracy, taxation, restrictions on the labor market, fiscal and policy inconsistency (UNDP, 2015). The evaluation has been carried out on the basis of information received from international institutions (30%) and the partner institute in Slovakia, which is the Business Alliance of Slovakia (70%). The good thing is that Slovakia has been ranked as the economy driven by innovation (Slovak Ministry of Foreign Affairs, 2016). Table one illustrates Slovakia in the context of GCI in 2015 and Graph 1 shows the comparison of Slovak economy and advanced economies in the 2015.

Table 1

<table>
<thead>
<tr>
<th>Global Competitiveness Index of Slovak economy</th>
<th>Rank (out of 140)</th>
<th>Score (1–7)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GCI 2015–2016</strong></td>
<td>67</td>
<td>4.2</td>
</tr>
<tr>
<td>GCI 2014–2015 (out of 144)</td>
<td>75</td>
<td>4.1</td>
</tr>
<tr>
<td>GCI 2013–2014 (out of 148)</td>
<td>78</td>
<td>4.1</td>
</tr>
<tr>
<td>GCI 2012–2013 (out of 144)</td>
<td>71</td>
<td>4.1</td>
</tr>
<tr>
<td>Basic requirements (20.0%)</td>
<td>56</td>
<td>4.7</td>
</tr>
</tbody>
</table>
As shown in Table 1, in the last four years, Slovakia has achieved the best score in the GCI (67) during the period 2015-2016 i.e. in the most recent report. Slovakia has relatively strong evaluation in pillars of “Health and primary education” and “Macroeconomic” environment whereas the worst results are given for the pillars of “Innovation” and “Institutions”. Graph 1 illustrates that the Slovak economy lags behind developed economies in areas such as “Innovation”, “Institutions” as well as “Infrastructure”. On a positive note, Slovakia is on par with advanced economies in areas such as “Financial markets development”, “Macroeconomic environment” and “Health and primary education”. It can be implied that serious efforts should be devoted to the areas of “Innovation” and “Institutions” institution areas. This means that technological progress, research and development and transparency are areas that should be at the forefront of efforts by the government and its economic policies.

### REGIONAL DEVELOPMENT POLICIES AND INNOVATION

Regional development is recognized as one of the key factors in the economic development policies of many countries as well as transnational institutions. As argues Barca et al. (2012), theories of regional economic growth and development have made a quantum leap in the last decades. Last two decades of globalization and associated developments in urban and regional performance provide evidence that the prevailing growth and development theories could no longer explain empirical growth patterns. This has inspired a theoretical transformations (i.e. endogenous growth theory, new economic geography, institutional economics) that redefined our understanding of how economic development takes place and how it is related to economic geography and brought to the fore the importance of aspects such as human capital, innovation, agglomeration, and institutions. How to translate rapid developments in theory and empirical analysis into successful regional development policies is a subject of an intense academic discourse but the prominent role of space is undisputed in all streams of regional development research.

According to Ivanova (2011b) and Belas et al (2015), innovation performance is essential for sustainable economic growth, which is the main feature of a knowledge based economy. Regionalization of economic policies is in the best interest of progress and development and should be accompanied by the...
integration of new technologies and innovation. Therefore, the public sector should support the creation of regional innovation centers, as well as employ other tools that support these objectives. This is especially important in regions that already have sufficient educational and research base.

OECD review of regional innovation (OECD, 2011) identifies two policy trends that contribute to the rising role of regions. First, the paradigm shift in regional development policies favours strategies based on the mobilization of regional assets for growth, bringing innovation to the core of regional development agendas. Second, there is a growing recognition of the regional dimension in national innovation strategies in harnessing localized assets and improving policy impacts. A policymakers should respond to these trends by considering following recommendations:

(i) Innovation should be essential component of regional development policies
(ii) Regional development expenditures/investments should coordinate innovation policies across all levels of government and emphasize decentralization
(iii) Regional innovation strategies should implement new tools to define, monitor and evaluate success

Within the context of European Union, EU regional policy accounts for 32.5% of the EU budget for 2014–20 and is considered to be the Unions main investment arm (European Commission Directorate-General for Communication, 2014). The European structural and investment funds consist of the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund. The Structural Funds (i.e. the ERDF and the ESF) are particularly important as they are designed to invest in economic and social restructuring across the EU and thereby reduce gaps in development between European regions, for example in terms of infrastructure and employment.

Four priority themes supported by the ERDF include research and innovation, information and communication technologies, SME competitiveness and low carbon economy. Other thematic objectives include climate change and risk prevention, environment and resource efficiency, transport and energy networks, employment and labor market, social inclusion, education and training as well as efficient public administration.

As emphasized by the Europe 2020 strategy and its Innovation Union flagship initiative, a much greater effort needs to be put into creating the eco-systems that encourage innovation research and development and thus enhance the capacity of regional economies to innovate and adapt to increasingly competitive environment (Terem et al., 2015). This includes investments in the R&D and innovation in the narrow sense, as well as investments into entrepreneurship, information and communication technologies and human capital.

Well established instruments for investments in the R&D and innovation in the narrow sense include funding of:
– R&D infrastructure and centers of competence,
– R&D activities in research centres,
– technology transfer and the improvement of cooperation of networks,
– development of human potential in the field of research and innovation,
– investment in firms directly linked to research,
– assistance to R&D, particularly in SMEs,
– assistance to SMEs for the promotion of environmentally-friendly products and production processes.

Other instruments that support innovation in broader terms include funding for following initiatives:
– services and applications for citizens (e-health, e-government, e-learning, e-inclusion, etc.),
– services and applications for SMEs (e-commerce, education and training, networking, etc.),
– the design and dissemination of innovative and more productive ways of organizing work,
– advanced support services for firms,
– support of self-employment and business start-ups,
– the development of life-long learning systems and strategies in firms,
– the development of special services for employment, training and support in connection with restructuring and development of systems anticipating future skills needs.

As illustrates Haviernikova (2014), in spite of long-term government efforts, regional disparities in Slovakia were not significantly reduced. Against a background of the European sovereign debt crises substantial funding of regional programs have become unsustainable and there is a shift from subsidy-like regional policies designed to reduce regional disparities, into policies designed to foster regional competitiveness and innovation.

Barca et al. (2012) argue in favor of place-based rather than place neutral regional development interventions. As reports Rodriguez-Pose and Ezcurra (2010) fiscal decentralization in high income countries has been associated with a reduction of regional disparities. To this end EU Cohesion Policy 2014-2020 advocates a new strategic approach based on „smart specialization strategies“ that should help regions to tap into their innovation potential and build on particular assets and strengths. Each region ex-expected to identify and further develop limited set of priority areas, in which it already has a competitive advantage. The emphasis on a local know-how, process of entrepreneurial discovery” and active involvement of regional stakeholders such researchers, businesses, and public authorities is intended to create synergies between Cohesion Policy and Horizon 2020.

Graph 1: Subnational government expenditure as a % of total public expenditure and as a % of GDP, 2012


Indicators of fiscal decentralization indicate that Slovakia might have only limited capacity to take full advantage of these new initiatives as its subnational government operates with relatively limited fiscal powers. More precisely, as reported in Graph 1, subnational government spending in Slovakia accounted in 2012 for 16.8% of public spending which is well below OECD area average that amounts to 40% of public spending. Similarly, subnational public investments in Slovakia accounted in 2012 for 0.998% of GDP.
while subnational public investment in OECD countries accounted in 2012 for 1.95% of GDP (OECD, 2013). Moreover, as reported in Graph 2, there is a negative trend in the area of fiscal decentralization over the period 2006 through 2015. Total public sector expenditures in Slovakia have increased over the period 2006 through 2015 by 62.4% compared to only 40.8% growth in expenditures of higher territorial units and municipalities. Consequently, subnational government spending in Slovakia decreased in 2015 below 15.9% of public spending. Such a regress in fiscal competence of regional authorities might partially explain evidence that in spite of long-term national government efforts, regional disparities in Slovakia were not significantly reduced (i.e. Haviernikova, 2014). Against a background of the European sovereign debt crises substantial funding of regional programs have become unsustainable and there is a shift from subsidy-like regional policies designed to reduce regional disparities, into policies designed to foster regional competitiveness and innovation.

Graph 2: Public expenditures and subnational government expenditures in Slovakia (mil. Eur)
Source: The Prize of the State (2016).

The need for improving limited fiscal competence of subnational government in Slovakia and enhancement of local capacities should not be underestimated. The level of fiscal decentralization in Slovakia is well below OECD standards, and time series analysis suggests a negative trend in the extent of fiscal decentralization over the last decade. This is contrary to the OECD (2011) guidance that it is essential to establish multi-level, open and networked governance structures. The combination of fiscal decentralization, bottom-up regional initiatives, and increasing attention to place-based dimensions in national policy is a pre-condition for successful implementation of regional innovation policies.

CONCLUSION

Competitiveness is one of the main alternative indicators of economic performance and, as such, greatly complement the key indicator of economic performance i.e. the gross domestic product. It combines economic aspects with social ones and thus in a more complex way, keeps track of all the important factors that reflect not only economic efficiency but also social maturity of the country. Despite its potential, there is no consensus among professionals and academicians on the issue of competitiveness, its measurement
and the method of expression. This study uses the Global Competitiveness Index, which assesses national competitiveness referring to pillars and sub-indices which are macroeconomic in nature. One criticism is that macroeconomic indicators not necessarily reflect the competitiveness at the micro level - however the national competitiveness at the macro level is due to the presence competitive companies and as such it captures micro level. This paper aims to describe and present competitiveness in the V4 countries in the observed time series. The analysis showed that Slovakia’s position, based on the Global Competitiveness Index (GCI), is relatively weak within the Central European region, but on a global scale is relatively stable. Since Slovakia is consistently ranked in the first half of the chart.

Economic and financial crisis as well as the growing pressure of competing countries with cheap labor are the factors that stimulate the transition to a new stage of development in which the structure of regional economies relies on the use of outputs and effects of tools such as STP, clusters, innovation centers, technology incubators and their networking within the region, national economy and transnational integration units. The driving force behind such developments may be the increased education level of the population, powerful research and development base, the innovation potential of the private sector prompted by a favorable business environment and participation of regional authorities in the public-private innovation partnerships. However, in the absence of significant changes in legislation, competences and financial incentives that promote research and development investments and innovations in industry, technologies and services, the regions will fail to attract private capital to support R&D and innovation potential and thereby shaping the new structure of the regional economy, based on the long-term competitiveness.

The role of a space in economic development is recognized as one of the dominant factors and is subject of intense academic research that explores linkages between space, economic growth, innovation and competitiveness of a region. Regional development policies of EU characterizes shift towards promotion of regional competitiveness via support of innovation. This includes investments into R&D and innovation in the narrow sense as well as associated investments into entrepreneurship, information and communication technologies as well as human capital. Smart specialization strategy is designed to increase efficiency of these investments by encouraging local initiatives that would promote place-based comparative advantages of a region. Fiscal competence and capacity of regional authorities to participate in such initiatives is thus essential. Policymakers in Slovakia should not underestimate this issue as indicators of fiscal decentralization indicate that further progress in this regard is desirable.

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