APPROACHES TO THE ASSESSMENT OF THE FACTORS OF COMPETITIVENESS AND LONG-TERM GROWTH[1]

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ABSTRACT
The paper focuses on how to evaluate methodologies of assessing the competitiveness of some chosen international institutions and to compare the position of the European Union within the specified assessment. In a group of twenty-seven EU economies diversity of the methodological approaches will be illustrated. By confronting the individual concepts the authors seek to contribute to the debates on the methodology of the evaluation of the competitiveness and long-term growth performance in the global environment. Approaches to the assessment of the competitiveness taken by individual institutions differ significantly according to preference of a number and type of selected indicators, of assigned significance and other specific approaches of the assessment.

Key words: Competitiveness, European Union, Strategy Europe 202

Introduction

One of the key features of the current global economy is weakening of the position of a state and, vice versa, strengthening the influence of transnational corporations. As a result, there is a significant change of the role of states that are forced to compete in order to attract foreign investors and domestic companies through a proper institutional framework, infrastructure, education, innovation and tax systems, etc. In the context of these tendencies the so called concept of competitiveness of countries has been developed, which enjoys considerable popularity. It is a subject of several scientific studies, analyses and rankings made by international institutions. Most professional institutions agree that the prerequisites for achieving long-term competitiveness and growth performance are based on effective combination of a wide range of inputs which

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include economic, technological, infrastructural, political, and other factors. Approaches to the assessment of the competitiveness taken by individual institutions differ significantly according to preference of a number and type of selected indicators, of assigned weights and other specific approaches of the assessment. Some institutions put emphasis on institutional quality and the role of government in the economy, others emphasize the technological aspects of competitive advantage, and still others prefer multi-criteria evaluation based on the greatest number of diverse indicators.

The paper focuses on how to evaluate methodologies for assessing the competitiveness of some chosen international institutions and to compare the position of the European Union within the specified assessment. In a group of twenty-seven EU economies diversity of the methodological approaches will be illustrated. By confronting the individual concepts the authors seek to contribute to the debates on the methodology of the evaluation of the competitiveness and long-term growth performance in the global environment.

1 Defining the basic approaches to the assessment of the factors of competitiveness

The point of departure of our analysis is represented by different types of a complex concept of competitiveness and quality of business environment, respectively. First, we assess the form of multi-criteria ranking of the **World Economic Forum** and of the Index of Economic Freedom formulated by **Heritage Foundation**. Subsequently, we focus on a broader concept of competitiveness within the **Europe 2020 strategy** implemented within the European Union.

One frequently used way of measuring the factors of competitiveness is represented a so-called multi-criteria evaluation. Probably the most recognised evaluation of this type is an annually published "The Global Competitiveness Report" in the yearbook of the **World Economic Forum**. The World Economic Forum assessment is based on the "**The Global Competitiveness Index - GCI"**. The Global Competitiveness Index is calculated on the basis of a hundred of indicators that are classified on a scale from 1 to 7 (7 means the best) and divided into three sub-indexes and twelve pillars: sub-index A: The basic requirements (pillars: 1. institution, 2 . infrastructure, 3. macroeconomics, 4. health and primary education); sub-index B: efficiency enhancers (pillars: 5. higher education and training, 6. market efficiency, 7. labour market efficiency,

8. financial market maturity, 9. technological readiness, 10. market size); sub-index C: Innovation and sophisticated factors (pillar: 11. business sophistication, 12. innovations).

The uniqueness of the global competitiveness index is a change the weights of individual pillars depending on the level of economic development of a country (measured by GDP per capita). The concept is based on a currently universally accepted argument that the importance of sophisticated and less developed factors of competitiveness significantly differs according to the level of a given economy (we cannot compare e.g. Switzerland and Sweden with India and Macedonia). In assigning the weights of indicators we thus distinguish three groups of economies. The competitiveness of the first group is most affected by the basic assumptions (basic requirements). For the second group of countries competitiveness based on high efficiency (efficiency enhancers) is more significant, while the competitiveness of the most developed countries is driven only by the most sophisticated factors and is based on a unique know-how and knowledge-based economy (innovation and sophistication factors). Given the above specification the weights of individual indexes are the following (Schwab, 2010: 10):

- Factor driven economy: basic requirements (60%), efficiency enhancers (35%), innovation and sophisticated factors (5%).
- Efficiency driven economy: basic requirements (40%), efficiency enhancers (50%), innovation and sophisticated factors (10%).
- Innovation driven economy: basic requirements (20%), efficiency enhancers (50%), innovation and sophisticated factors (30%).

An important issue is the division of the classified countries into groups according to the level of economic development achieved. The yearbook of the World Economic Forum uses as a main sorting criterion the level of GDP per capita in USD, as follows:

- Factor driven economies: less than 2,000 USD.
    - 1. transition phase: 2.000 to 3.000 USD
- Efficiency driven economies: 3.000-9.000 USD.
    - 2. transition phase: 9.000 to 17.000 USD
- Innovation driven economies: more than 17,000 USD.

Most European Union Member States, therefore, fall within the category of the innovation driven economies (the old fifteen Member States, but also the Czech Republic, Malta, Cyprus and Slovenia). In the EU only Bulgaria and

Romania are evaluated as efficiency driven economies. The other countries (e.g. Estonia, Hungary, and Slovakia) are classified in the second transition phase. Thus, we see that the current division of the countries is questionable, as among the Member States there are still significant differences in terms of the levels of productivity per person employed and per working hour achieved. Some Member States included in the first group of the innovation driven economies achieve in terms of labour productivity only 70% of the average of the EU 27 (e. g. the Czech Republic and Portugal).

The advantage of the presented Global Competitiveness Index of the World Economic Forum (WEF) is the use a large variety of criteria and a large number of countries which the evaluation covers. The weakness of the two evaluations is a strong representation of the so called soft data in the analysed criteria. These are based on the observations of the expert respondents and thus they are not entirely objective and statistically comparable data. In fact, they may be distorted by a subjective view of the evaluator (Malý, 2007: 27). On the other side, it may be beneficial to determine how top executives (often foreigners) perceive the local environment in which they operate. The assessment may reflect, for instance, the view of global investors who make decisions about the allocation of resources (Bič, 2010: 6).

A specific group of the approaches to the assessment of competitiveness is represented by the **indexes of economic freedom**. These indexes are not based on a complex multi-criteria analysis of the competitive position, but rather they provide the information about what the country's institutional quality is. They evaluate the role of the state in the economy, particularly in relation to domestic and foreign businesses. Among the best-known indexes of economic freedom is the one elaborated by the **Heritage Foundation.** This index has been presented since 1995 and currently includes almost two hundred countries. The assessments of states are classified in terms of 10 groups of factors determining the economic freedom: 1) business, 2) trade policy, 3) fiscal policy, 4) size of government, 5) monetary policy, 6) the investment environment, 7) banking and finance, 8) ownership rights, 9) corruption and 10) labour market regulation. The rating of each group is made on a scale of 0 to 100, with 100 being the best result (Holmes, Miller, 2011).

Another possible approach to evaluate the competitiveness is represented by a concept based on the strategies of the European Union. Until present days, two documents of this kind have been drafted. The first strategy was implemented in the period of 2000-2010, and is commonly known as the Lisbon Strategy. For the following decade the Europe 2020 Strategy was adopted. The Lisbon Strategy integrated and further developed all the processes already implemented by the European Union within the realm of coordinating the economic and social policies. The Lisbon Strategy was a ten-year framework aimed at reforms in the finished products markets, capital and labour, and at the support of structural changes, particularly through research and development activities and investment in human resources (Hobza, 2009: 207). In the current decade the EU reform process continues through the new Europe 2020 Strategy which includes three main priorities: smart growth, sustainable growth and inclusive growth (European Commission, 2010: 10).

The core of the Europe 2020 Strategy shall be formed by the following priorities (European Commission, 2010: 10):

- Smart growth - developing an economy based on knowledge and innovation.
- Sustainable growth - promoting a more competitive, greener, and more resource efficient economy.
- Inclusive growth - promoting high-employment economy, which is delivering economic, social and territorial cohesion.

The following goals are these (European Commission, 2010: 11):

- The employment rate for persons aged 20-64 years should increase from the current 69% to at least 75%, including through the involvement of women, older workers and the better integration of migrant workers.
- The EU currently set a target of investing in research and development at 3% of GDP. As a part of this goal, it managed to attract the attention to the need for investments in research and development in the public and private sectors. This goal, however, is rather focused on inputs rather than the results. There is a clear need to improve the conditions for private R & D in the EU and many of the measures proposed in this strategy will do this. It is also clear that a common look at the research, development and innovation would mean a broader range of expenditure which would be more relevant in terms of business operations and for productivity drivers. The European Commission proposes to maintain the target of 3% and at the same time to create an indicator that would reflect the intensity of the research, development and innovation.
- Reduce the greenhouse gas emissions by at least 20% compared to 1990 levels; to increase the share of renewable energy in final energy consumption to 20% and increase energy efficiency by 20%.

- The target related to educational attainment of early school leavers is to reduce the rate of premature termination of the current 15% to 10%, while increasing the proportion of persons aged 30-34 years old having completed tertiary education from 31% to 40% in 2020.
- The number of the Europeans living below national poverty level should be reduced in 2020 by 25% (roughly the equivalent of 20 million inhabitants).

The **Europe 2020 Strategy** builds on the previous Lisbon Strategy. It puts a consistent emphasis on the development of the knowledge economy and the labour market while adding the energy and social balance to its targets. The energy targets, a new priority of the strategy, can increase the EU's competitiveness in two ways. First, it may improve energy balance and create new opportunities and jobs in high-tech sectors of the energy industry. Thus, the question to discuss is not primarily the setting of the current reform strategy, but rather the achievement of defined goals of the Member States that lagged behind expectations in the past decade. Also there is a reform of the governing system of the European Union.

The aim of monitoring and assessment of individual countries within the Europe 2020 Strategy in the European Union is not to set a ranking, but rather to identify weaknesses and a proper setting of the structural reforms and economic policies of the EU Member States. As a consequence, comparable data from the European Commission is not available. Rankings based on performance under the Europe 2020 Strategy are compiled by some independent economic insitutions. As of the year 2000 such comparison is published by the World Economic Forum, which compiles the Europe 2020 Competitiveness Index and, subsequently, publishes the ranking of all twenty-seven Member States according to the achieved value of the index.

2 Application study of methods to assess the competitiveness on the example of the EU economies

In this section we will evaluate the position of the Member States of the European Union in the framework of three examined international rankings. First we start to assess the Global Competitiveness Index of the World Economic Forum. The position of the EU Member States (EU_27) in this index is rather differentiated (we build on a publication by Schwab, 2012). Table 1 shows that in the current ranking of the values of the global competitiveness index for the period 2012-2013 the variability among the most successful Finland (3rd place) and the weakest Greece (96) makes more than 90 positions. The ranking shows the positions among all evaluated countries, about 150 of them. The position of the developed European economies is not bad in terms of the international comparison according to the World Economic Forum. Roughly a half of the countries that figure in the top ten in recent years are a part of the European Union. The best score in the European Union is consistently reached by the countries from North-Western Europe. In the last assessment, for instance, the Nordic economies out of twelve monitored pillars achieved a kind of a weaker performance only in the market size (all three countries) and the efficiency of the labour market (only Sweden and Finland). In the remaining pillars they scored very high in general. A high level of global competitiveness, according to the rating, is exhibited also by Germany, the Netherlands and the UK, but for different reasons. Germany dominates in the most competitive factors - innovation and sophistication of the business environment, and also in terms of infrastructure. The advantages of Great Britain can be found in the efficiency of the labour and financial markets. As for the Netherlands it does well in technological readiness, effectiveness, commodity markets and the sophistication of the business environment.

Table 1: Comparative profile of the EU countries according to international competitiveness rankings

Country	**World economic forum (Global Competitiveness Index)**		**Heritage Foundation (Index of Economic Freedom)**		**World economic forum (Europe 2020 Competitiveness Index**	
	2012-2013		**2012**		**2012**	
	Scores	**Ranking**	**Scores**	**Ranking**	**Scores**	**Ranking**
Sweden	4.	5,53	71,7	21.	5,77	1.
Finland	3.	5,55	72,3	17.	5,71	2.
Denmark	12.	5,29	76,2	11.	5,60	3.
Netherlands	5.	5,50	73,3	15.	5,46	4.
Austria	16.	5,22	70,3	28.	5,33	5.
Germany	6.	5,48	71,0	26.	5,28	6.
United	8.	5,45	74,1	14.	5,23	7.

Kingdom						
Luxembourg	22.	5,09	74,5	13.	5,13	8.
Belgium	17.	5,21	69,0	38.	5,04	9.
France	21.	5,11	63,2	67.	4,98	10.
Estonia	34.	4,64	73,2	16.	4,74	11.
Ireland	27.	4,91	76,9	9.	4,66	12.
Slovenia	56.	4,34	62,9	69.	4,59	13.
Portugal	49.	4,40	63,0	68.	4,59	14.
Spain	36.	4,60	69,1	36.	4,52	15.
Czech Republic	39.	4,51	69,9	30.	4,49	16.
Cyprus	58.	4,32	71,8	20.	4,40	17.
Malta	47.	4,41	67,0	50.	4,39	18.
Latvia			65,2	56.	4,36	19.
Lithuania	45.	4,41	71,5	23.	4,31	20.
Italy	42.	4,46	58,8	92.	4,30	21.
Slovak Republic	71.	4,14	67,0	51.	4,13	22.
Poland	41.	4,46	64,2	64.	4,08	23.
Hungary	60.	4,30	67,1	49.	4,06	24.
Greece	96.	3,86	55,4	119.	3,95	25.
Romania	78.	4,07	64,4	62.	3,84	26.
Bulgaria	62.	4,27	64,7	61.	3,79	27.

Source: Holmes, 2012; Schwab, 2012,

On the other hand, the worst ranking according to the Global Competitiveness Index was achieved by the new Member States and the countries of Southern Europe. In geographical terms this group of countries is marked South-Eastern Europe. The lowest competitiveness at present shows a group of Balkan countries (Greece, Romania and Bulgaria), as well as Slovakia. South-Eastern Europe is lagging behind in all 12 monitored sub-indexes compared to the North-Western Europe. The largest differences in the values achieved are in the case of the following sub-indexes: institutions, innovation, macroeconomics and financial market stability.

For the comparison of the Member States of the European Union in terms of the economic freedom we will use the index formulated by Heritage Foundation in 2012. Table 1 shows the scorecard of the index. From the table we can read that in terms of economic freedom the EU economies do not reach, in the international comparison, such positions as it was the case of the multi-criteria assessment of the World Economic Forum. This is true mostly in case of the developed economies of North-Western Europe - the Scandinavian countries, Germany, Austria, France, etc. The cause, however, is not generally low economic freedom, but the specificity of European economic models. Building of the so-called welfare states associated with high levels of redistribution and a large role of the state in the economy negatively affects the position of the developed European countries within the sub-indexes regarding fiscal policy, size of government and regulation of the labour market. Relatively high taxation of companies and individuals, a high share of public expenditures in GDP, etc., are rather negatively reflected in the reached score. The values in the other indicators in most European countries, to the contrary, quite significantly exceed the average values achieved in other countries of the world. For these reasons, in this global comparison, we may find only one state of the European Union - Ireland in the top ten most successful economies. Other exceptionally successful countries (Denmark, Luxembourg, Estonia, the Netherlands, Great Britain, Finland and Cyprus) belong to the second ten. Traditional welfare states - Sweden, Germany and Austria occupy a place in the third ten, Belgium and France in the fourth to the sixth. The lowest placed countries within the European Union Member States may be found in Southern Europe - Greece and Italy.

The results of the countries of the European Union according to the Europe 2020 Competitive Index more resemble those of the Global Competitiveness Index than the ones presented by the Heritage Foundation. The reason is a focus on several factors, not only on the quality of the business environment. However, there are some noticeable differences. If we divide the Member States of the European Union according to the results for 2012, we can identify four distinct groups:

- Nordic countries (Finland, Sweden, Denmark) - achieved the highest index value above 5.50
- Western European countries (Germany, Great Britain, Austria, France, Ireland, the Benelux countries and Estonia) - index values between 4.60 and 5.50.

- Countries of the Southern and Eastern Europe (Czech Republic, Slovakia, Cyprus, Malta, Italy, Hungary, Spain, Portugal, Poland, Latvia and Lithuania) - index values between 4.00 and 4.60.
- South-Eastern Europe (Greece, Romania and Bulgaria).

Conclusion

Based on the above presented analysis, we may conclude that, indeed, there is no universal method of the evaluation of the factors of competitiveness and requirements of the long-term growth. The methodological approaches that we were trying to assess base the indexes on different assumptions, indicators, strengths, and other facts. Therefore, it is logical that they achieved different results in positions of the countries of the European Union.

From the comparison we find out that according to the Europe 2020 strategy the best rated are the economies which achieve excellent results especially in terms of the labour market indicators, indicators of sustainable development and spending on science and research. A kind of an ideal economy in this view is represented by a country that can achieve high employment and labour productivity. The multi-criteria assessment of the World Economic Forum is based on most frequently monitored variables and the largest number of indicators. In addition to these characteristics that assessment reflects the effectiveness of the functioning of markets, the functioning of the state, macroeconomic stability and technological readiness. In this respect, at the forefront we will find the Nordic countries and other Western European countries. A quite different assessment is provided by the Index of Economic Freedom formulated by the Heritage Foundation. In this case the methodology is mainly based on the assumptions of economic policy applied in developed countries outside the European Union. Therefore, it emphasizes more entrepreneurial/business environment, fiscal policy, quality of tax systems, the level of corruption, protection of property rights, etc. According to this index, therefore, successful economies are not the ones based on extensive state redistribution, but rather some less developed economies with flexible economic system.

Although throughout the paper we focused on the evaluation of methodologies used by renowned institutions, it should be noted that the results shall not be overstated. The assessments of competitiveness have large media and political response, but a slight move in the ranking does not mean anything important to the economy. Of course, a steady decline or significant improvement indicates a shift in the global competitive position. Also, large differences in the ranking of countries suggest different positions in international comparisons. However, there is not a clear correlation between ranking in yearbooks and economic growth and high standard of living in developed economies. There are clearly cases when the economically most developed countries that benefit from the specific comparative advantages and exhibit a solid long-term growth prospect do not take place on top of the world rankings (e. g. the comparative advantages of Luxembourg in the banking sector or the energy resources and balanced economic policy of Norway).

References:

ABRHÁM, J., HORVÁTHOVÁ, Z. 2010. Labour Market and Social Cohesion within the European Union. In *Politické vedy*, 2010, vol. XIII, no. 4.

BIČ, J. 2010. *Konkurenceschopnost jako základ ekonomické governance v Evropské unii.* Praha: Vysoká škola ekonomická v Praze, 2010.

BIČ, J. 2005. Konkurenceschopnost české ekonomiky (Lisabonský proces a globalizace). In. *Současná Evropa a Česká republika*, 2/2005.

BIČ, J. 2006. Pojetí konkurenceschopnosti. In. Abrhám, J. a kol.: *Klastry – nástroj zvýšení konkurenceschopnosti ekonomik.* Praha: Vysoká škola ekonomická, 2006.

ČAJKA, P. 2007. Postaveni vedy a výskumu v EÚ z pohladu zabezpečenia jej ekonomickém a technocko-technologickej konkurenceschopnosti. In *Geografická revue,* 3/2007.

HOLMES, K., MILLER, T. 2012. *Index of Economic Freedom. Heritage Foundation 2012.*

HOLMES, K., MILLER, T. 2011. *Index of Economic Freedom. Heritage Foundation 2011.*

MALÝ, J. 2007. Konkurenceschopnost Evropské unie a jejích členských zemí v mezinárodním srovnání. In: Klvačová, E., Malý, J., Mráček, K.: *Základy evropské konkurenceschopnosti.* Praha: Professional Publishing, 2007.

MALÝ, J. 2007. Klíčové problémy utváření a realizace evropských politik v oblasti výzkumu, vývoje a inovací. In: Klvačová, E., Malý, J., Mráček, K.: *Základy evropské konkurenceschopnosti.* Praha: Professional Publishing, 2007.

SCHWAB, K. 2012. *The Global Competitiveness Report 2012-2013.* Geneva: World Economic Forum, 2012.
SCHWAB, K. 2011. *The Global Competitiveness Report 2011-2012.* Geneva: World Economic Forum, 2011.
SCHWAB, K. 2010. *The Global Competitiveness Report 2010-2011.* Geneva: World Economic Forum, 2010.