

COMPETITIVENESS IN THE EUROPEAN UNION

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Abstract

The main aim of the paper is to analyze price competitiveness in the Slovak Republic. The paper analyses what is behind the changes of price competitiveness in Slovakia using both nominal and real exchange rates. The real effective exchange rates, based on Consumer and Producer price indices and real effective exchange rates based on the Producer price index for manufacturing since the creation of the Slovak Republic have been used to analyze the price competitiveness of the Slovak economy. Based on the analysis, one comes to the conclusion that nominal exchange rates have appreciated since 2002 until the introduction of the single currency in Slovakia. This positive trend was supported by the growth in productivity as well as by the inflow of foreign direct investment. In addition, price competitiveness has remarkably influenced the competitiveness of Slovak exports, in particular, when Slovakia adopted the single currency.

Key words: competitiveness, exchange rates, price indices

JEL Code: D41, F33, E31

Introduction

In line with the process of globalization and growing interconnectedness between individual countries, a theory exists under new circumstances, which offers various interpretations of competitiveness. Despite using the basic approaches to measure competitiveness, the latest research papers have provided new approaches that are more complex in comparison with the previous ones in terms of definition of competitiveness. The present theory of competitiveness covers broad-based issues that are related to national competitiveness, macro- and micro-competitiveness, etc.

To better understand the complexity of competitiveness' definition, it is necessary to take into account some kind of price competitiveness. In this regard, it is of paramount importance to analyze the development of nominal effective exchange rates and real effective exchange rates that could significantly influence the overall result of competitiveness between

different countries. A number of research papers and articles exist that deal with the latest interpretation of competitiveness as a whole.

1 Literature overview

Researchers, academia and policy-makers in the advanced economies, including economists in some emerging countries, have been concentrating on determining comprehensively the terms of competitiveness. Despite the fact that there exist generally accepted opinions on how to increase competitiveness as a whole, there are some internationally well-known economists that are skeptical about the category of competitiveness itself (Krugman, 1994; De Grawe, 2000). Currently, there are different approaches regarding the definition of competitiveness in different countries. For example, in the USA and mainly in some advanced economies, the definition of competitiveness is closely related to the main goals of economic performance such as employment, economic growth, opportunity and prosperity, etc.

In emerging market economies, the term competitiveness is often used and related mostly to the low level of labour costs that creates very favorable conditions for inflows of foreign direct investment. In reality, it means that these countries have a strong comparative advantage in terms of cheap labour costs and this fosters economic growth, which is driven by productivity growth and bolsters export and this eventually leads to a growing standard of living in some countries such as Singapore, South Korea, Taiwan, China, etc.

However, currently there is ongoing discussion between academia researchers concerning the comprehensiveness of the interpretation of the definition of competitiveness. Therefore, many studies conducted at universities as well as at international, economic, monetary and financial institutions, have been provided for reference. For example, OECD defines competitiveness as a stage at which under honest conditions in the market the goods and services are verified in the international markets; however, at the same time maintaining the real income of the population.

A very interesting interpretation of competitiveness was presented by staff in the European Commission DG III using the term „competitive pyramid“, which noted that the real growth of standard of living is critical, which is supported by the growing of employment and productivity growth. The study emphasized that for the competitive pyramid, all necessary conditions should be present such as quality of labour, favorable demographic trends, the level of research and development, as well as the tax systems in individual countries.

One of the most prominent economists and a well-known specialist on the theory of comparative advantage, Porter (2003), pointed out that for better understanding of the complexity of explaining competitiveness, all factors related to both the macro- and micro economic policies, including the country's specific factors, should be taken into consideration.

1.1 National Competitiveness and the Exchange Rate

The latest researcher papers concentrate on the definition of competitiveness that are relevant with respect to the factors that have an impact on the economic performance. Here, the most important for assessing the level of competitiveness are the demographic trends and the level of productivity growth. However, is it a generally accepted opinion that the high level of national competitiveness depends on the country's conditions e.g., the level of labor costs, sustainability of public finance, both internal and external economic equilibriums, exchange rate stability, etc.

The literature on competitiveness offers also an overview of both macro- and microeconomic competitiveness. In this regard, the latest study (Porter, 2006) found that microeconomic competitiveness depends on the level of incentives in the economy and that public investment might help to increase productivity growth. In addition, some other economists (Rajan and Zingales, 1998) came to the conclusion that to increase the competitiveness of a country, access to financial resources is key. Furthermore, Barro (2002) noted that competitiveness is determined by the quality of the education system, including the skilled labour force that has a positive impact on the productivity growth as well as on the performance of the whole economy.

Lately, in line with the global financial crisis and global recession, some economists (Reihart and Rogoff, 2010) emphasized that the level of competitiveness depends on the macroeconomic policy mix, i.e., fiscal and monetary policies, including the policy of exchange rates. The latter is very important for measuring competitiveness using the approach of price competitiveness.

Price competitiveness is related to the real effective exchange rate. The price level between two or more countries is determined by the exchange rate. The level of nominal exchange rates of developed and some emerging countries is predetermined by the markets. The main base for the determination of the nominal exchange rates is the supply and demand for different currencies on the international financial markets. There is a strong relation between the level of exchange rates and the level of competitiveness. Therefore, to measure

the price competitiveness, the level of real effective exchange rates is critical. To assess the real effective exchange rate, the selection of the price indices is crucial. Currently, for analysis of price competitiveness, a Consumer price index (CPI) and Producer price index (PPI) are mostly used. In addition, in real practice, Gross Domestic Product deflator (GDPD) has also been used (see Figure 1).

Table 1: Price Indices

Price indices	Definition	Partners ¹	Sequence
Consumer price index (CPI)	Harmonized consumer price index (HCPI)	EER 40 and EER 20	Monthly
Industrial production index (PPI)	Index of industrial production	EER 20	Monthly
GDP deflator (GDPD)	Current price of GDP divided by GDP	EER 20	Quarterly
Manufacturing labor costs (ULCM)		EER 20	Quarterly
Labor costs for the whole economy	Employee compensation	EER 20	Quarterly

Source: ECB

To assess Slovakia's competitiveness since 1993, the paper will concentrate on price competitiveness. In this regard, for the analysis, the nominal effective exchange rate (NEER), the real effective exchange rate based on Consumer price index (REER CPI), the real effective exchange rate based on Producer price index (REER PPI) and the real effective exchange rate based on the Manufacturing price index (REER PPI) will be used.

In this analysis, data since the beginning of the creation of Slovakia will be used, i.e., since 1993, up to the latest development and the focus will be on the development of all the mentioned indices, then comparing the changes in comparison with the previous period, a comparison of the changes in all indices. Figure 1 shows the development of all indices (NEER, REER CPI, REER PPI and REER PPI manufacturing), was almost identical between the years 1993 and 1998, i.e., before the introduction of the European Economic and

¹ EA12 = Austria, Belgium, Finland, France, Germany, Greece, Netherlands, Ireland, Luxemburg, Portugal, Spain and Italy.

EA17 = EA12, Estonia, Cyprus, Malta, Slovakia and Slovenia.

EU27 = EA17, Bulgaria, Czech Republic, Denmark, Hungary, Latvia, Lithuania, Poland, Romania, Sweden, and Great Britain.

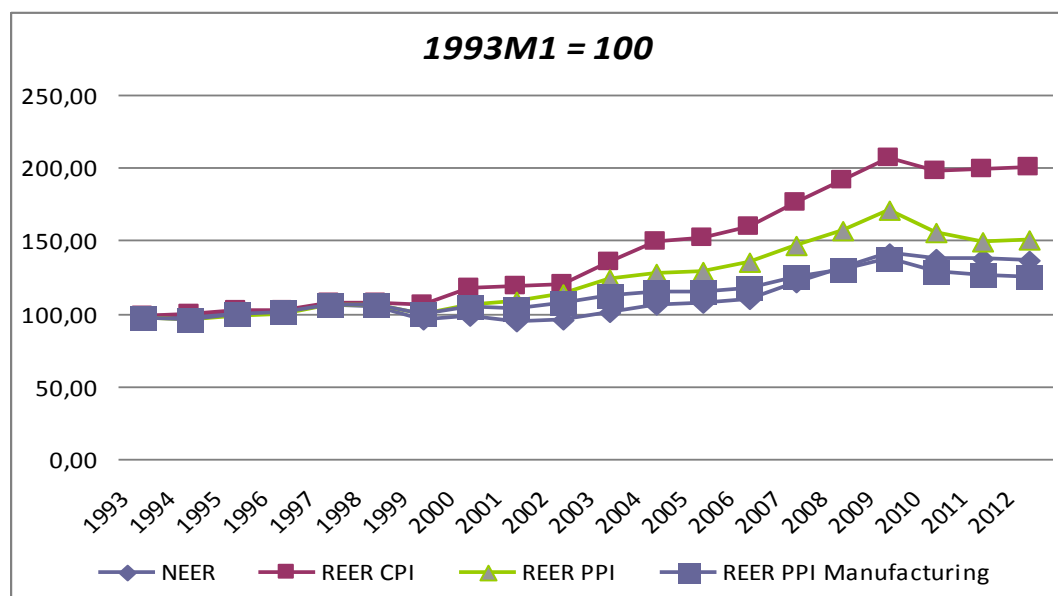
IC24 = EA12, Australia, Canada, Denmark, Japan, Norway, New Zealand, Mexico, Sweden, Switzerland, Turkey, Great Britain and USA.

IC36 = EU27, Australia, Canada, Japan, Mexico, New Zealand, Norway, Switzerland, Turkey and USA.

Briad-based group = IC36, Russia, China, Brazil, South Korea and Hong Kong.

Monetary Union. However, after that period, but namely since 1999, all indices have gradually started to have different trends until the outbreak of the global financial crisis. However, most changes in terms of increases were in the indices REER CPI and REEP PPI. Since 2009, all indicators had slightly decreased; however, the latest trend is that both indices, i.e., the REER CPI and REEP PPI, have almost the same trend.

Fig. 1: Development NEER, REER CPI, REER PPI and REER PPI for manufacturing 1993-1998



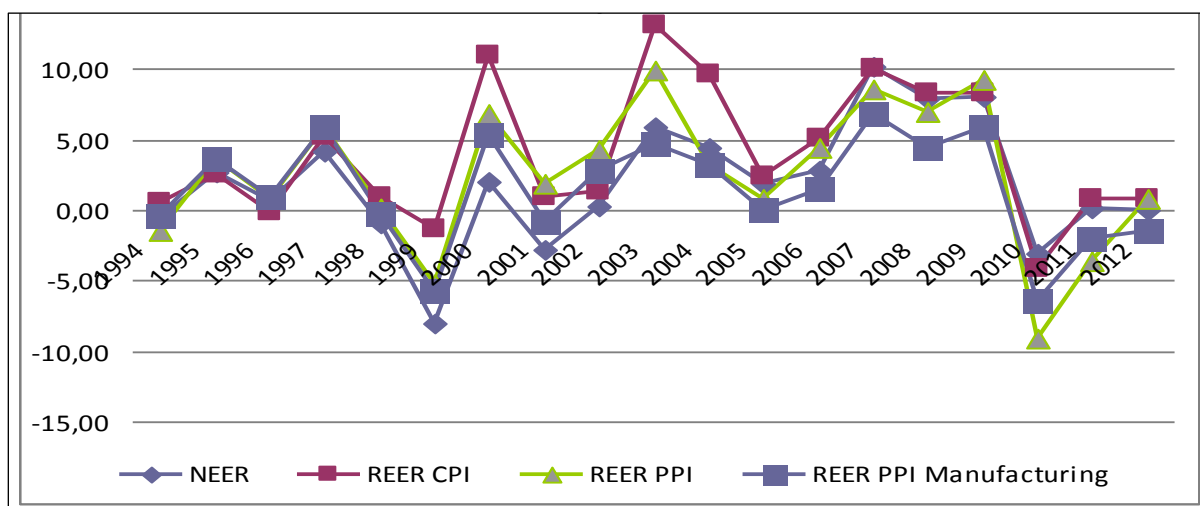
Source: Author's graph set up from EC and ECB data

One lesson that might be learnt here is that the higher the level of REER CPI and REEP PPI vis –a- vis the NEER, the more severe the competition is. On the other hand, the comparison of the development between the indices of NEER and REER PPI manufacturing demonstrates that the trend during the whole period was more or less identical, although since 2009, the REER PPI manufacturing index was lower than the NEER index. This trend creates better conditions for competition of Slovak products in the international markets with goods and services.

Further as a part of the analysis of price competitiveness in Slovakia, the same indices i.e., the NEER, REER CPI, REER PPI and REER PPI manufacturing with yearly changes have been used (see Figure 2). It is evident from this figure that there have been permanent changes between the real effective exchange rates and nominal exchange rates. In particular, these changes have been significant between the years 1999 and 2000 when the single currency was introduced. Furthermore, during the years between 2001 and 2008 remarkable changes in terms of REER CPI and NEER occurred. Since the outbreak of the global financial

crisis, but especially since 2010, all changes of indices (NEER, REER CPI, REER PPI and REER PPI manufacturing) had similar downward trends until 2011 and again increases with almost the same trends in 2012.

Fig. 1: NEER, REER CPI, REER PPI and REER PPI for manufacturing (% changes in comparison with the same period of previous year)



Source: Author's graph set up from data EC and ECB

Based on this analysis, one comes to the conclusion that macroeconomic policy has an impact on price competitiveness. The Slovak authorities during this period, namely since 1999, adopted a macroeconomic stabilization plan, including the restructuring of the banking sector. After the macroeconomic stabilization, the changes of the real effective exchange rates mainly in 2003 and 2004, were related to the increasing prices of both consumer as well as producing price indices. One explanation could be that between the years 2006 and 2007, the prices of energy and raw material caused significant changes in all indices (NEER, REER CPI, REER PPI and REER PPI manufacturing).

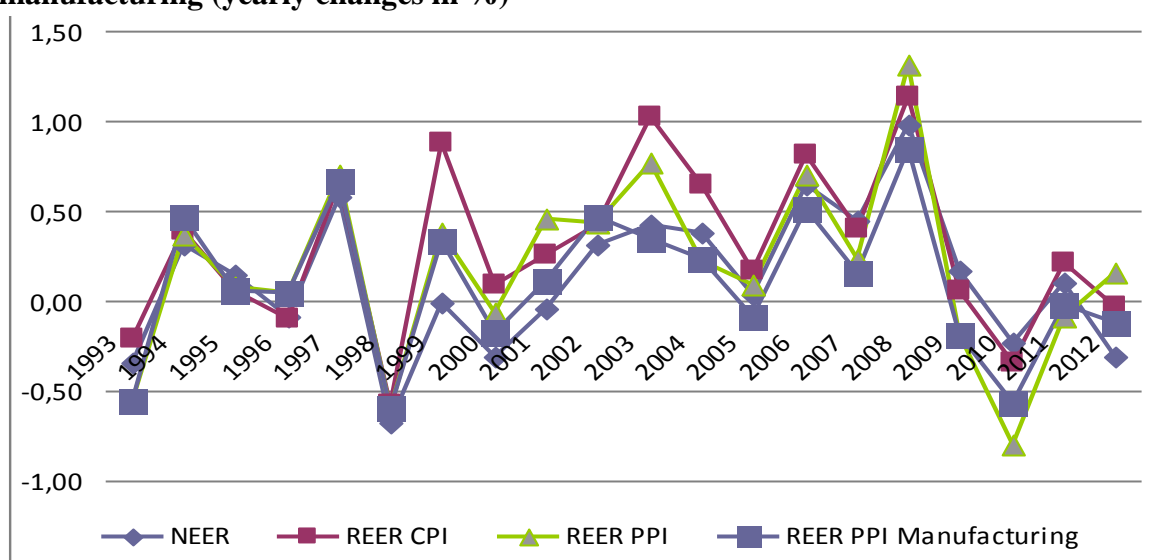
The global financial crisis and global recession brought about the decreasing of all indices; however, the most significant changes were in 2010 where after the initial optimism of the global recovery, the global economy turned to the debt crisis, but in particular, in the eurozone countries. After a gradual recovery, although uneven in the eurozone in 2011, the real effective exchange rates in comparison with nominal effective exchange rates have been relatively stabilized.

The figure shows that in terms of price competitiveness based on the effective exchange rate producing price index of manufacturing, the most favorable years were 1994, 1996, 1998, 2000, 2001, 2005, 2010, 2011 and 2012. During these years, the real effective

exchange rate was negative or reached the zero level. Here, one might conclude that this trend led to better or more competitive Slovak products in the international markets.

In order to better understand the overall approach to price competitiveness, it is necessary to compare the changes of the real effective exchange rates with the previous period. Below is a comparison of the development of the nominal effective exchange rates and real effective exchange rates (see Figure 3). In comparison with Figure 2, the percentage changes of the development of both the nominal effective exchange rates and real effective exchange rates have reached bigger changes.

Fig. 3: Development of NEER, REER CPI, REER PPI and REER PPI for manufacturing (yearly changes in %)



Source: Author's graph set up using Eurostat data

The figure above shows the biggest differences of the real effective exchange rates based on the index for industrial production occurred in 2008 and 2011. These big differences could be a result of the increasing level of prices for energy and raw materials. Based on this analysis, one could make the conclusion that the price competitiveness was very favorable in terms of the real effective exchange rate based on the price index for competitiveness. So, the changes in this index have positively influenced the export of Slovak products abroad.

Conclusion

It is critical to use price competitiveness to measure competitiveness. This approach shows how the price competitiveness of individual countries is influenced by changes in price indices. Based on the data analysis we found that, the price competitiveness is influenced by

the real effective exchange rate measured by the consumer price index, producing price index and by the producing price index for manufacturing.

Since the beginning of the creation of the Slovak Republic, there have been different trends in terms of both the nominal effective and real effective exchange rates. Based on the above analysis, one comes to the conclusion that nominal exchange rates have appreciated since 2002 up until the introduction of the single currency in Slovakia. This positive trend was supported by the growth in productivity as well as by the inflow of foreign direct investment. The Consumer price index in Slovakia was higher in comparison with some other countries, but namely, in comparison with the Višegrad countries. An increase in inflation undermined the competitiveness of Slovak products in international markets.

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References

- BOLTHO, A. (1995). The Assessment: International Competitiveness. *Oxford Review of Economic Policy*, 12 (3), 1-16.
- BARRO, J.R. (2002). Education as a Determinant of Economic Growth, in E. Lazear (ed.), *Education in the Twenty-First Century*, Stanford, CA: Hoover Institute.
- De GRAUWE, P. (2010). Introduction, in: P. De Grauwe (ed.). *Dimensions of Competitiveness*, CESifo Seminar Series, Cambridge: MIT Press, IX-XVI, 2010.
- European Central Bank (2008). *Globalization and the Competitiveness of the Euro Area*. Occasional Paper Series No. 97, Frankfurt, European Central Bank.
- European Commission (2010). *Europe 2020: A European Strategy for Smart, Sustainable, and Inclusive Growth*, COM 2020, Brussels, European Commission.
- FAGERBERG, J. (1988). International Competitiveness. *Economic Journal* 98, 355-374.
- FISCHER, S. (1993). The Role of Macroeconomic Factors in Growth. *Journal of Monetary Economics*, 32 (3), 485-512.
- KRUGMAN, P. (1994). Competitiveness: A Dangerous Obsession. *Foreign Affairs*, 73(2), 28-44.
- OECD (2005). *Economic Policy Reforms: Going for Growth 2005*. Paris, OECD.
- OECD (2008). *Handbook on Constructing Composite Indicators*. Paris, OECD.

PORTER, M. E. (2003). Building the Microeconomic Foundations of Prosperity: Findings from the Microeconomic Competitiveness Index. *The Global Competitiveness Report 2002-2003*, P. Cornelius (ed.), New York, Oxford University Press.

PORTER, M. E. (1998). Measuring the Microeconomic Foundations of Economic Development. *The Global Competitiveness Report 1998*, Geneva, World Economic Forum.

PORTER, M. E. (2006). The Microeconomic Foundations of Prosperity: Findings from the Business Competitiveness Index, s C. Ketels a M. Delgado. *World Economic Forum (ed.), Global Competitiveness Report 2006-2007*, Geneva, World Economic Forum.

RAJAN, R., ZINGALES, L. (1998). Financial Dependence and Growth, *American Economic Review* 88 (3), 559-586.

REINHART, C.M., ROGOFF, K.S. (2010). Growth in a Time of Debt. *American Economic Review Papers and Proceedings*, 100(2), 573-78.

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