ISSN 1822-6515

RELATION OF INFRASTRUCTURE NATURAL MONOPOLIES AND NATIONAL COMPETITIVENESS

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Abstract

Seeking to define the interaction between infrastructure natural monopolies (INM) and national competitiveness, it is important to study the notion of competitiveness, it's types and to identify, in which level this interaction can be analyzed.

The aim of the paper is to analyze the relation between infrastructure natural monopolies and national competitiveness.

Under the assumption, that national competitiveness is formed by the competitiveness of countries enterprises and industries competitiveness, it is important to distinguish, what decisions enterprises and industries can take, facing the change of the prices for INM products and services. By changes of the prices of INM products and services caused different decisions of the enterprises and industries can influence countries competitiveness positive or negative.

It was determined that it is appropriate to distinguish INM prices impact to country‘s competitiveness through the enterprises (industries) operating decisions on the price changes of the production factors. The INM price of products and services is treated as an external factor, affecting country‘s competitiveness groups of factors and affecting the whole country‘s competitiveness through taken decisions of the manufacturing industries.

Keywords: Infrastructure, natural monopoly, competitiveness.

Introduction

Globalization has weakened traditional trade barriers and integrated virtually separate countries' economies into a huge free market. This means that high national competitiveness and it's sustainability becomes more and more important for separate countries. Infrastructure creates the base for the state's economic activity. The economic theory and world experience shows that the activity of infrastructure branches plays important role in the economic development. Infrastructure products and services providing enterprises often have natural monopoly features. They used to be state owned or their activity was administered by state.

The object of the paper is relation between infrastructure natural monopolies and national competitiveness.

The aim of the paper is to analyze the relation between infrastructure natural monopolies and national competitiveness.

Methods of the study: systemic comparative analysis of scientific economic literature, structural analysis and logical analysis.

Many scientists (R. Camagni, 2002, J. Reiljan ir kt., 2000, A. Bohlto, 1996, H. P. Fröhlich, 1989, E. H. Fidel, 2005) agree that competitiveness is miscellaneous and controversial concept, but it is not unified and unanimous defined. Opinions differ in if enterprises, or countries compete with each other, what means of economic policy are most suitable to increase competitiveness and how it is related with international trade, firstly with export. (R. Vilpišauskas, 2004). Some economists couple competitiveness with low costs or the level of the currency exchange rate, others – with the technological progress of the country and its growth. (A. Boltho, 1996, H. P. Fröhlich, 1989). E. H. Fidel (2005) states, that there is disagreement about its measurement, the indexes to be used in its measurement, ant the interpretation of whatever results that would emerge from such measurements. Lithuanian scientists analyze competitiveness in different aspects. Competitiveness researches and comparisons are made by A. Saboniene (2009), V. Juscius, V. Snieska (2008), J. Ciburiene, G. Zaharieva (2006). Regional competitiveness is analyzed by V. Snieska, J. Bruneckiene (2009), Z. Simanaviciene, J. Bruneckiene, I. Simberova (2007), the importance of the competitiveness forming factors is studied by J. Urbonas, I. Maksvytiene (2003), D. Bernatonyte, A. Normantiene (2007), V. Navickas, A. Malakauskaite (2007).

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Concept of the National Competitiveness and it's Relation to the Prices of Infrastructure Products and Services

The analysis of the national competitiveness and its factors goes back to the XIV century when mercantilists had a notion that in the better situation is that country, which can accumulate more capital and this is possible to achieve by motivating export and limiting import. The followers of the classical theory thought that international trade is beneficial to both countries and allows to increase the efficiency of the production. D. Ricardo (1817) has developed the absolute advantage concept of the A. Smith (1776) by proposing, that country has a comparative advantage in the production of a particular product, if the price of this product in the country is lower than in the markets of the other countries. The neoclassical attitude towards national competitiveness is often defined by the theory of Hecksher-Ohlin, according to which country produces and exports products, for what production surplus (or cheaper) production factors are used. The early competitiveness theories relate national competitiveness with "comparative advantage", when the main factors increasing competitiveness were low resource costs and cheap labor force. In this early competitiveness concept we can find relation between infrastructure natural monopoly and competitiveness. The price for INM services and products composes some part of the productions resource costs. The the prices for INM products and services will be lower and production resources cheaper, the easier producers will gain the competitive advantage. M.E. Porter (1990) has introduced some broader competitiveness concept proposing, that the competitive advantage can be recognized as the ability of the country to create such environment, which would enable enterprises to improve and innovate faster as the foreign competitors would do. Here the competitiveness of the country is related with the effectiveness of using resources and productivity. New technologies are created, seeking to use resources effectively. They ensure the same or even higher production volume with the lower usage of the resources. The employment of the innovations also is related with the costs of INM products and services in that sense, that innovations can be addressed to decrease the volume of the consumption of the INM products and services for the production. INM products and services are production recourses which ensure production of products and services.

Competitiveness can be described as the ability of economic subject to aware of its position and either improve that or at least keep it stable. Traditionally competitiveness analysis emphasizes three levels - country, industry and enterprise. (M. E. Porter 1990, B. Heitger, K. Shrader, E. Bode, 1992).

1. Enterprise has competitive advantages if it can produce and sell in the competitive markets homogenous products by lower price than the other enterprises without subsidies or if it can produce unique product, develop unique characteristics for the available products – innovative products, their improvements, which other enterprises cannot.
2. Industry or segment has competitive advantages, if a) competition is enough to improve productivity and promote innovations, b) consumers are more demanding and progressive than rivals consumers, c) the possibilities for synergies between enterprises exists, possibilities to start new business and favorable external environment is available, d) enterprises have improved their production factors.
3. Country has competitive advantages if business environment is favorable for the development of separate economic segments and countries economy can mobilize recourses for their productive usage.

In the view of several economists competitiveness of a country is based on the competitiveness of various industries and/or enterprises. (M. E. Porter, 1990). Competitiveness of a country depends o the competitiveness of enterprises and their products. (P. Peura, 1979). This approach encompasses foreign trade indicators, such as exports to GDP ratio and foreign trade balance to GDP ratio. Competitiveness is defined as the ability of a country to acquire and maintain a market share in international markets. (A. Figueroa, 1998). Competitiveness of a country depends on the growth of gross production and the latter becomes possible only if the foreign trade (export) is increased. (J.Koskivaara, J. Pilli-Sihvola, 1989)

A country's international competitiveness is often judged in terms of its ability to maintain a favorable position in its international (trade) transactions with the rest of the world. This ranges from having a low-cost export production base to the attraction of large inflow of foreign capital. A number of studies assert that a country would be losing international competitiveness if it suffers from such factors as poor research and development (R&D) record, a growing trade deficit in high-tech products, an ill-trained labor force, and declining productivity. This would indicate an overall weakness in its ability to effectively compete with its trading partners. (E. H. Fidel, 2005).

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J. R. Markusen (1992) researches shows that trade performance measure do not adequately reflect the state of competitiveness of a nation. Therefore, there is need for a depiction of international competitiveness that would be consistent Always in terms of covering all aspects of the term adequately reflect the various levels.

E. H. Fidel (2005) models international competitiveness as a phenomenon composed of the dual-level dimensions of the necessary and sufficiency conditions of the competitiveness, namely, its micro- and macro-level dimensions. The micro parameters are those that shape competitiveness at the firm or industry level, while the macro parameters are those that determine competitiveness at the national level. At the necessary condition (micro) level, global competitiveness may be generally defined in terms of technology and scale: a country is competitive if its industries have an average level of total factor productivity greater than or equal to that of its foreign competitors. This aspect f competitiveness may also be depicted in terms of costs: a country is competitive ir its industries have an average level of unit costs (average costs) lower than or equal to that of its foreign competitors.

T. Klemetti (1989) proposes that competitiveness of a country can be defined as an ability to compete for export markets; to maintain economic growth and employment rates.

Traditional economic theories define, that country with international trade can grow over it's production possibilities. Instead of producing everything, what it needs for consumption, country can concentrate on the production of that products and services, where it has a comparative advantage. It raises specialization and therefore productivity increases.

D. Dollar and E.N. Wolff (1993) interpret competitiveness as following: the competitive country is successful in international trade with high technology and quality and at the same time maintains high incomes and high wages. This way a country can compete internationally with both high wages and high profitability. (D. Dollar et al 1993) Considering competitiveness of a country to be identical to a country's ability to export is definitely too limited approach to the issue. National economy is a sophisticated conglomerate of mico-economic decisions, meso-economic structures and political-economic interests. Estimation of national competitiveness should reflect all aspects mentioned above. (T. Straubhaar, 1994)

Under certain conditions it is meaningful to talk about competition between countries. They compete, but not only in international trade, but also in the attraction of the capital. In other words, countries compete by setting conditions of economic environment (for example, taxes and economic regulations), which can attract foreign investments. R. Vilpišauskas (2004) proposes, that researches about such kind of competition are very pure and it is not agreed, when it determines lowering of taxes and regulation restrictions.

A country becomes more or less competitive if its ability to sell on international and domestic market will improve or decline. This is mainly based on cost and price development. (Fr□hlich, 1989). Non-price factors, like technological innovation and quality can be as important or even more important but deserve less attention in analyses as they are difficult to measure and compare quantitatively (M. Durand, 1998)

Ability to export (to sell) and to be attractive for foreign direct investment are two aspects of competitiveness of a country that have been stressed by many researchrs. H. Trabold (1995) calls those two components: "ability to sell" and "ability to attract". (H. Trabold, 1995) T. Straubhaar (1994) points attention to the micro- and macroeconomic levels of national competitiveness. On microeconomic level success is guaranteed by company's ability to break through which can be supported by governmental structural policy. Macroeconomic level refers to a country's attractiveness as a business location. (T.Straubhaar, 1994) The same idea is expressed by I. Gough (1995). He differentiates between performing competitiveness (refers to a company's ability to sell in international markets) and underlying of structural competitiveness (a country's ability to secure high and rising incomes for its people, while its companies being exposed to foreign competition). (I. Gough, 1995)

Studies on the competitiveness have tended to use the term in ways that relate to various economic parameters such as trade performance and real exchange rates (A. Cas, 1988), terms of trade (H. V. Arndt, 1993), relative unit labor cost (C. A. Enoch, 1978, P. S. Rao ir T. L. Lempriere, 1992), growth rate of GDP per capita (WEF, 1996–2001), and productivity and total factor productivity growth (M. E. Porter, 1990, A. Markusen, 1992; D. Dollar ir E. N. Wolf, 1993, E. H. Fidel, 1995).

International competitiveness is usually defined in terms of two levels, namely, the firm-industry level and the national level (H. C. Moon ir N. S. Peery, 1995, D. Dollar ir E. N.Wolf, 1993, M. E. Porter 1990). This categorization, however, does not seem to enclose all the diverse aspects of the concept, especially as it relates to the dynamics of the concept's determinant indicators. For example, competitiveness at the firm level clearly indicates micro level competitiveness, while national level competitiveness reflects the macro level. (E. H. Fidel, 2005).

The USA president's commission on competitiveness in the year 1985 has defined competitiveness as follows "a nation's competitiveness is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens". Competitiveness is associated with rising living standards, expanding employment opportunities and the ability of a nation to maintain its international obligations.

OECD experts define national competitiveness as the degree to which, under open market conditions, a country can produce goods and services that meet the test of foreign competition while simultaneously maintaining and expanding domestic real income. (OECD,1996).

Many authors define competitiveness on a broad sense as an ability to produce goods and services, which meet the test of international markets, ensure and expand real income of the citizens.

The definition of the OECD, analyzing relation between INM competitiveness, is more exact, because in the definition of the USA president's commission on competitiveness free market is highlighted. Under free market conditions buyers and sellers act in the market without governmental regulation. As we analyze INM, which products and services are needed as a necessity goods and services and their prices often are regulated by government, the broader competitiveness definition is more acceptable. These competitiveness definitions show us the relation of infrastructure and competitiveness. "To produce goods and services" means, that to do this, some products or services of INM will be needed. It defines possible impact of the price for INM products and services to the competitiveness trough the production costs (resources). "To ensure and expand real income of the citizens" relates INM with competitiveness through the consumption, because INM products and services are necessity goods and services and they have no substitutes, so if the price for INM products and services increases, citizens can not react to it reducing its consumption suddenly, so it can cause the decrease of the expenditure for other goods and services.

Relation of Infrastructure Natural Monopolies and National Competitiveness through the industries operating decisions

Taking into account the importance of the infrastructure products and services for the national economy we understand, that it is needed and used by individual consumers and by enterprises, which need infrastructure products and services to fulfill their activities: produce goods or services. The price for infrastructure products and services if very important, because they can be described as the necessity goods or services. If these products and services are provided by natural monopolies, their prices are usually regulated. When these price increase, countries enterprises and citizens inevitably feel this change because of the necessity of infrastructure products and services. The enterprises face the increase of the costs and citizens the decrease of their purchasing power.

If we analyze the problem in the national level, so all enterprises in the same country have to pay the same price of INM products and services. Competing with each other and taking into account the use of INM products and services, they can try to be more competitive in such ways:

1. Changing the volume of INM products and services consumption.
2. Changing the volume of other resources consumption.
3. Implementing new technologies and innovations for the decreasing of INM products and services consumption.
4. Using cheaper resources.

We have to take into account that enterprises (domestic and also foreign capital enterprises which operate in the country) compete also in international markets. Under the assumption, that national competitiveness is formed by the competitiveness of countries enterprises and industries competitiveness, it is important to distinguish, what decisions enterprises and industries can take, facing the change of the prices for INM products and services. Industries and their enterprises because of INM products and services price change can decide:

1. To change the volume of INM products and services consumption.
2. To implement innovations for the decreasing of the INM products and services consumption.
3. To change their operating volume.
4. To transfer business activity to another country (to country from another country).
5. To transfer particular processes of the business activity to another country (to country from another country).
6. To terminate the business activity in the country (to start business activity in the country).

ISSN 1822-6515

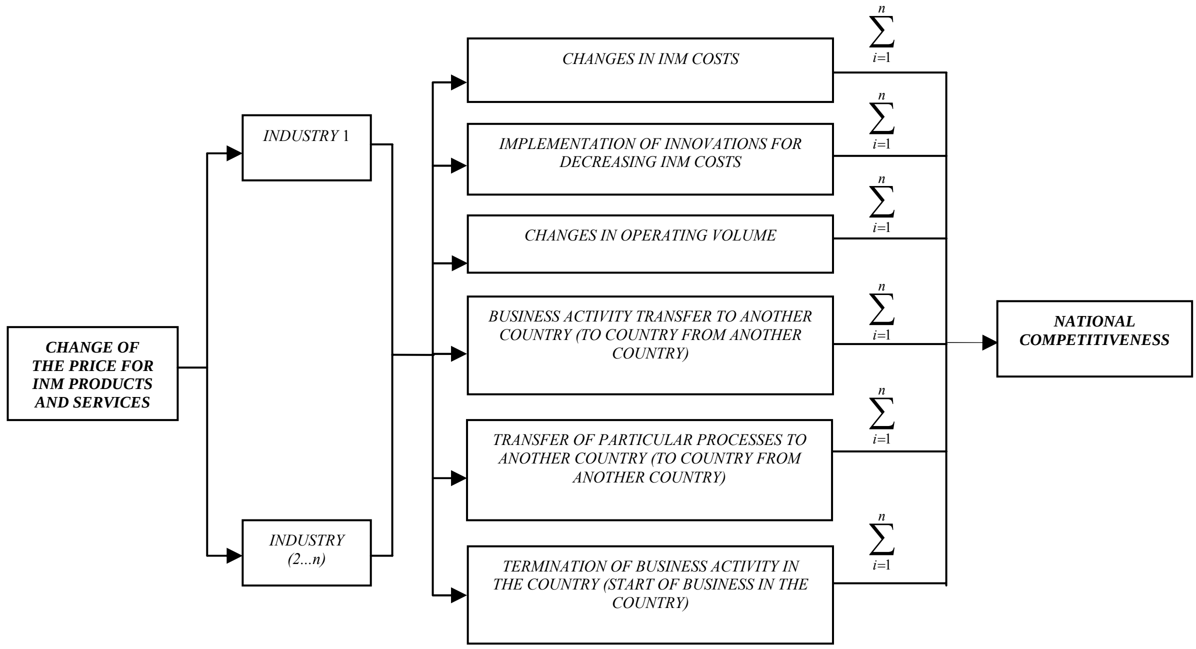

Figure 1. The relation of price change for INM products and services and national competitiveness

By changes of the prices of INM products and services caused different enterprises and industries decisions can influence countries competitiveness positive or negative.

The relation of price for INM products and services and competitiveness, which is formed by the competitiveness of industries, is illustrated in the figure 1.

Enterprises, operating in other countries can have competitive advantages because of the cheaper INM products and services, therefore it is purposeful to analyze the competitiveness and it's dependence on the prices for INM products and services, seeking to sustain high competitiveness of domestic producers.

Conclusions

1. Due to the lack of close substitutes and for meeting necessity needs, prices change for INM products and services is a factor affecting country's competitiveness.
2. It is appropriate to distinguish INM prices impact to country's competitiveness through the enterprises (industries) operating decisions on the price changes of the production factors. The INM regulated price of products and services is treated as an external factor, affecting country's competitiveness groups of factors and affecting the whole country's competitiveness through taken decisions of the manufacturing industries.

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