

INTERNATIONAL COMPARATIVE ADVANTAGE IN TRANSPORT SERVICES: THE CASE OF SLOVENIA

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Abstract

Competitiveness in the world markets is getting increasingly tougher, and that is why it is crucial for countries to gain comparative advantages if they want to keep their established market positions in the international environment in the long run. Participation in the international trade has become one of the most important factors of economic growth and welfare of individual countries. In the article the export and the import models of Slovenia in transport services, as well as the comparative advantages are defined using the Balassa index. In comparison with the most important foreign trade partners Slovenia is gaining comparative advantages in transport services; however, the transport infrastructure, the technology and the promotion of the exports of transport services will have to be improved in order to preserve the competitive position of Slovenia in the international environment

Key words: *comparative advantage, transport services, internationalization, export performance, import profile, Balassa Index.*

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1. Introduction

In the last years the world economy has been largely influenced by the global impacts and the increasing internationalization of the countries. Competition in the world markets is getting tougher, and that is why countries have to enhance their comparative advantages if they want to keep their established market positions in the international environment in the long run. The impacts of the economic crisis are visible mainly in individual activities, in which the international trade significantly has dropped; the consequences are reflected in the transport sector, in which the demand for transport services is decreasing.

Participation in the international trade has become one of the most important factors of economic growth and welfare of individual countries, reflected by their National Export Performance and their National Import Profile (ITC, 2003). Countries gain the comparative advantage in products, as well as in services, of which transport services shall be highlighted in this article. Javalgi and Martin (2007) draw special attention to the importance of the service sector in the global economy, as internationalization of the services influences the competitiveness of the

companies and the increase in comparative advantages of individual countries. The service sector is also an important support factor of the international trade in goods, causing individual countries to take their decisions mainly in relation to the markets in which they should provide their services, in order to gain their comparative advantage, and regarding the potential obstacles to overcome at internationalization of their services. At exporting services Winsted and Patterson (1998) draw attention to the export and import barriers, to the international competition, know-how and limited resources. The authors particularly focus the export motivation with the globalisation of partners as its crucial driver.

The comparative advantages of individual countries can be considered from many aspects. Balassa (1965) presented comparative advantages of countries by the trade flow of goods, as both relative costs and the differences in non-price components are comprised in the traded goods. Numerous authors applied the comparative index (Balassa index or *RCA Revealed Comparative Advantage Index*) for the international comparison, including the indicators of international trade, i.e. imports, exports, as well as the share of each category in the world. (Vollrath, 1991). For their analysis of comparative advantages of countries Benedictis and Tamberi (2001) chose the dynamic concept for the RCA index examination, which considers the impacts on the specialization of countries. The specialisation of countries depends also on the economic development of a particular country and on the level of its current development. The diversification of countries pertaining to the various stages of their development is more expressed in the initial stages of the development of each country, whereas in the latter stages it is less expressed; comparative advantages of individual countries closely related to this process (Benedictis et al., 2009). Benedictis and Tamberi (2001) examined the comparative advantages of the RCA index at the three levels, i.e. at the intersectoral, interstate and dynamic levels. The intersectoral analysis of the comparative advantages refers to the exports of the selected sector in a particular country in comparison to the world exports, whereas in the interstate analysis the defined RCA indexes of the selected countries are compared, and the dynamic calculation takes into account various time periods and analyzes the dynamics of the changes in the RCA index during a longer time period. Amador et al. (2009) propose the application of the average RCA index to draw comparison among individual countries, as it allows for the determination of the export profiles of an individual country.

Regarding their strategic position and economic development some countries are competitive in individual products, whereas others are competitive in their services, thus gaining their comparative advantage. In his research Seyoum (2007) compared the advantages in services of developing countries by applying the RCA index and established that certain developing countries have comparative advantages in various service sectors (business, financial, transport, travelling services), whereas others only in individual service sectors. The author proposes to countries that would like to improve their market competition to significantly invest in infrastructure, technology and promotion of the export services. Wang et al. (2010) established the comparative advantages of the service sector in China, in which the comparative advantages of the transport sector have been increasing since 1988.

2. Methodology

The export profile of a country stands for the export performance of Slovenia with its most important partners in transport services, taking into account the total export of services in 2009 as recorded in the international trade centre data (ITC). Transport services comprise all transport related services, provided by the residents of Slovenia for non-residents and vice versa., e.g. transport of passengers, transport of goods, lease of means of transport with a crew and ancillary transport services pertaining to maritime traffic, air traffic, railway traffic, road traffic, and other traffic (Official Gazette of the Republic of Slovenia No. 107, 2008). Due to the

specificity of transport activities only European countries are considered, of which Slovenia contributes only a small share to the world transport activities. The share of an individual country in Slovenian exports of transport services to Europe is defined as to:

$$\frac{X_p}{X_e} \times 100, \quad (1)$$

whereby

X_p – stands for the exports of transport services of Slovenia to a partner country,

X_e – stands for the exports of transport services of Slovenia to Europe.

At determining the export profile it is necessary to consider also the import performance of a five-year period of eight most important Slovene partners in transport, that are ranked on the basis of the statistical data of ITC regarding the value of the imports of transport services from Slovenia. The import performance is defined as to:

$$\left(\left(\frac{M_d^t}{M_d^{t_0}} \right)^{\frac{1}{t-t_0}} - 1 \right) \times 100, \quad (2)$$

M_d – stands for the imports of the transport services of the selected country,

t and t_0 – stand for the last and first year of the examination

As regards the defined comparative indicators some countries are more competitive than the compared ones, however the total imports of transport services should also be taken into account, depending on the size of a particular country and on the development of its transport sector, as well. The value of the import of transport services is defined as to:

$$\frac{M_d}{M_e} \times 100, \quad (3)$$

whereby

M_d – stands for the imports of transport services of the selected country,

M_e – stands for the total imports of the transport services of the European countries.

The import profile represents the imports of transport services from the European countries and a share of an individual partner country in Slovenian exports, whereby the total imports of the transport services in the year 2009 as recorded in the international trade centre (ITC) data is taken into account. The share of an individual country in the Slovene imports of transport services in Europe is defined as to:

$$\frac{M_p}{M_e} \times 100, \quad (4)$$

whereby

M_p – stands for the imports of Slovenian transport services from a partner country,

M_e – stands for the total imports of transport services of European countries.

At determining the import profile it is necessary to take into account also the export performance of a five-year period of eight most important Slovenian partners in transport, that are

ranked according to the statistical data recorded in ITC regarding the value of export of transport services in Slovenia. The export performance is defined as to:

$$\left(\left(\frac{X_d^t}{X_d^{t_0}} \right)^{\frac{1}{t-t_0}} - 1 \right) \times 100, \quad (5)$$

whereby

X_d – stands for the exports of transport services of the selected country.

The export value is defined as to:

$$\frac{X_d}{X_e} \times 100, \quad (6)$$

whereby

X_d – stands for the exports of transport services of the selected country,

X_e – stands for the total exports of transport services of the European countries.

The comparative advantage of an individual country is defined using the RCA index, which was first introduced by Balassa (1965) as a quotient of the exports of an individual country and the total world exports, that is defined as to:

$$RCA1 = \frac{\frac{X_{ij}}{X_{it}}}{\frac{X_{nj}}{X_{nt}}}, \quad (7)$$

whereby

X – stands for exports,

i – stands for the examined country,

j – stands for the selected service,

t – stands for the total export,

n – stands for the selected compared countries

The comparative advantage is gained when the value of the RCA 1 index exceeds 1 (RCA 1 > 1).

Due to the specific characteristics of the service sector some researchers modified the RCA index, that is focused only on services and does not consider the total exports of an individual country (Seyoum, 2007). The modified RCA 2 index is defined as to:

$$RCA2 = \frac{\frac{X_{ij}}{X_{is}}}{\frac{X_{nj}}{X_{ns}}}, \quad (8)$$

whereby

s – stands for the service sector.

The comparative advantage is gained when the value of the RCA 2 index exceeds 1 (RCA 2 > 1).

As RCA 1 and RCA 2 indexes take into account only exports, it is necessary to consider the comparative advantages of the imports, as well, when determining the comparative advantages of an individual sector. For the purpose of determining the competitiveness of the Hungarian agricultural and food sector Ferto and Hubbard (2003) used the indexes of the import advantages (RMA) and the relative export advantages (RXA), whereby $RXA = RCA 2$. RMA is defined as to:

$$RMA = \frac{\frac{M_{ij}}{M_{is}}}{\frac{M_{nj}}{M_{ns}}}, \quad (9)$$

The modified RCA 3 index is defined as to:

$$RCA 3 = RCA 2 - RMA \quad (10)$$

The comparative advantage is gained when the value of the RCA 3 index exceeds 0 ($RCA 3 > 0$).

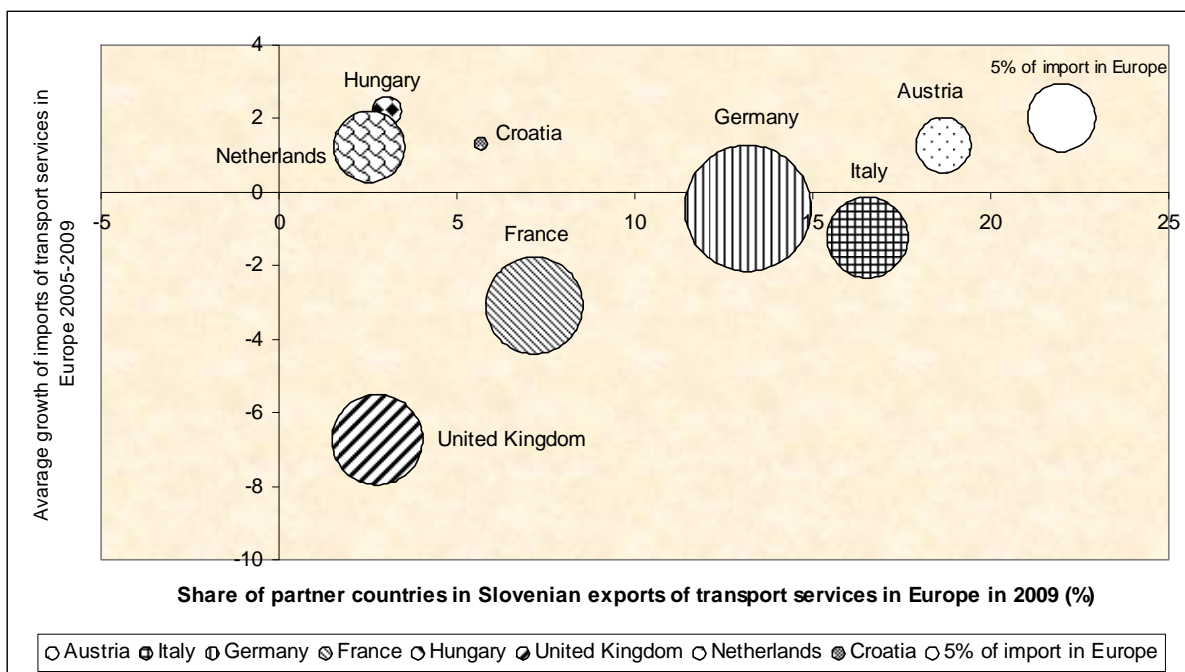
3. Results and Discussion

For reasons of the economic crisis and diminished foreign trade activities the exports and imports of goods and services in Slovenia have been decreasing, the consequence of this trend being reflected in the transport sector, as well. In 2008 and 2009 the value of exports and imports of transport services was reduced by almost 25%, which was mainly due to the negative impacts of the economic crisis, in which many companies lowered the prices of their services as a result of the diminished economic activities, providing for a short-term existence, whereas posing financial problems and liquidity threats in the long run. The economic status of the most important trade partners of Slovenia is also influencing the functioning of the transport sector of Slovenia, whereby it is crucial to ensure high-quality services and to maintain the competitive position of individual countries, depending also on the development of the transport infrastructure and on the geostrategic position of individual countries. International competitiveness of transport services is analysed using the export and import profiles with the defined index of the comparative advantages (the RCA indexes). In his research Seyoum (2007) ranked Slovenia among the countries that gained the comparative advantage of transport services during 1998 in 2003.

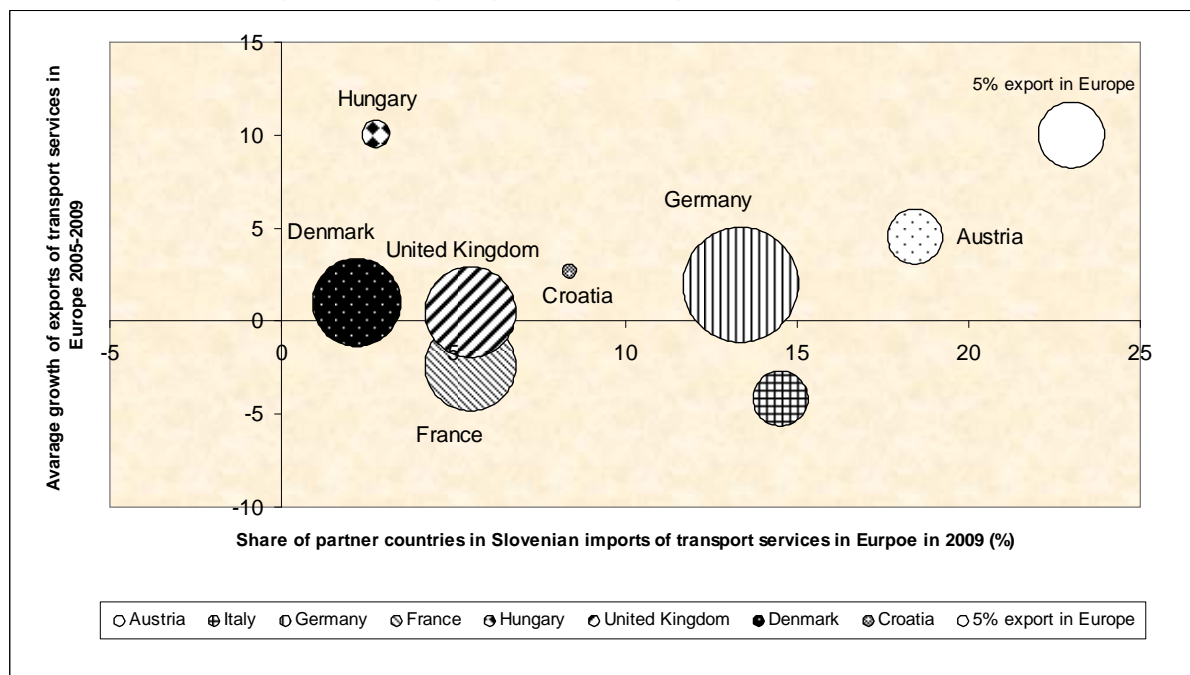
Austria, Italy and Germany are the most important trade partners of Slovenia in the exports of transport services, which contributed the greatest share of exports of transport services from Slovenia to Europe in 2009. Due to the diminished European and also world trade activities, the impacts of the economic crisis were also witnessed in the reduced imports of the transport services during the years 2005-2009, in which the majority of the examined countries recorded the decrease in the imports of transport services, with the exception of Austria, the Netherlands, Hungary and Croatia, in which a slight increase in the imports of transport services was noticed. The imports of transport services recorded the largest drop in Great Britain, amounting to nearly 7%, which exerted a negative influence also on their most important trade partners. Germany and France are the leading importers of transport services in Europe.

In the import profile of Slovenian transport services Austria, Italy and Germany occupy the first three places, whereby in the period from 2005-2009 the exports of transport services grew up in Germany and Austria, whereas in Italy the exports of transport services were reduced by 4%, attesting to the reduced trade activities of this country, consequently influencing its economic status. The highest growth of exports of transport services is recorded in Hungary, however the exports of Hungary account for only less than 3% of the Slovenian imports of transport services.

Graph No. 1: Export profile of transport services in Slovenia

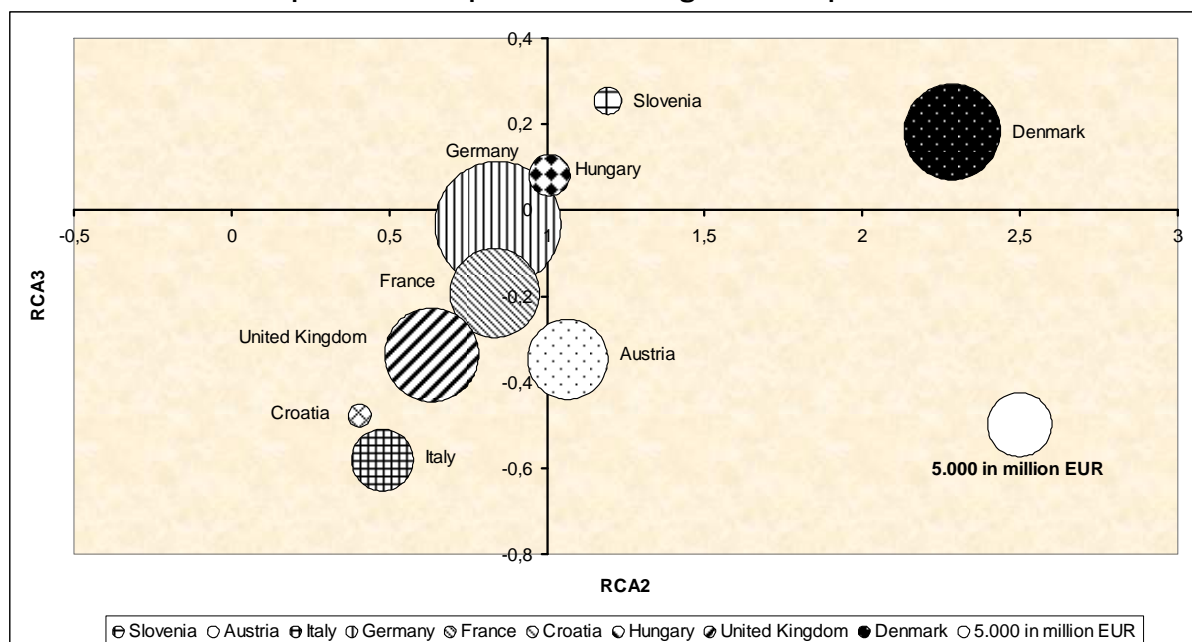


Graph No. 2: Import profile of transport services in Slovenia



Regarding the defined comparative indexes (RCA 2 and RCA 3) the greatest comparative advantages in transport services are recorded in Denmark and Slovenia, as in both countries the RCA 2 index exceeds 1 and the RCA 3 index exceeds 0. Comparative advantages are also exhibited by Hungary, whereas the remaining countries do not exhibit comparative advantages. Non-competitiveness of the transport sector in international business is most pronounced in Italy and Croatia.

Graph No. 3: Comparative advantages of transport services



4. Conclusion

The economic crisis is still present in the EU. Macroeconomic indicators show a poor economic status, noticed mainly in the economic activities of the companies, and diminished foreign trade activities; consequently, the transport sector is affected, as well. As a small open economy Slovenia should more actively participate in the international environment, in which new business opportunities are emerging, in order find a way out of the economic crisis; at the same time the competitive position is to be maintained mainly in sectors, in which comparative advantages are gained as to the defined foreign trade indicators. The comparative advantage is also exhibited in the sector of transport services, as due to its geostrategic position and competitive pricing strategy Slovenia is attractive to foreign businesses; however, in order to maintain the established position mainly the transport infrastructure of Slovenia will have to be improved. According to the statistical data of OECD Slovenia is a highly internationalized economy, which presumes a substantial dependance on its trade partners and their economies, and consequently, has a powerful impact on the export and import profiles of its transport services and on the international competition, which is mainly shown in road transport, that could be confirmed in further research.

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