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Evaluating international competitiveness and comparative advantage of European travel services

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Resumo

Este artigo analisa a competitividade internacional e do padrão dos fluxos de comércio no sector dos serviços de viagens nos 27 países membros da União Europeia, através da abordagem das vantagens comparativas reveladas, com dados sobre importação e exportação, para o período 2004-2012. Pretende-se identificar possíveis mudanças estruturais ao nível dos fluxos comerciais destes países no sentido de averiguar como a competitividade externa deste sector tem sido afetada pela crise financeira global desde 2008. Os resultados sugerem que a competitividade externa da maioria dos países da UE manteve-se estável ao longo do período em análise. Os resultados não identificam um enfraquecimento da intensidade das vantagens comparativas. No entanto, os países do sul da Europa, nomeadamente a Grécia, Itália e Portugal têm visivelmente melhorado a sua competitividade externa. Os países do sul e do leste europeus apresentam vantagens comparativas fortes em serviços de viagens, enquanto os países do norte e da Europa central têm um perfil menos competitivo. Os primeiros são especializados em produtos homogêneos e os outros em serviços de viagens diferenciados embora especializando-se com uma desvantagem comparativa. Estes resultados implicam que os decisores políticos devem atualizar os seus serviços de viagens e os seus produtos turísticos, especialmente nos países detentores de uma vantagem comparativa revelada baixa, para melhorar a sua competitividade e sustentar o crescimento econômico.

Palavras-chave: competitividade do turismo, vantagem comparativa revelada, serviços de viagens, comércio de serviços, União Europeia

Abstract

This paper analyzes the international competitiveness and the pattern of European trade flows in travel services in relation to that of the rest of the world using a revealed comparative advantage approach, and import and export data, for the period 2004-2012. Moreover, it compares the structural change in trade flows across countries to determine how the state of the external competitiveness of the tourism and travel service activities has been affected by the global financial crisis since 2008. The findings suggest that competitiveness in most EU countries remained stable over the sample period. There is little evidence of a weakening of intensity of comparative advantage. However, southern European countries, namely Greece, Italy and Portugal have noticeably improved their external competitiveness. The southern and eastern European countries present strong comparative advantages in travel services, whereas northern and western European countries have a less competitive profile. The former specialize in homogenous products and the later in differentiated travel services no matter what their apparent state of comparative disadvantage. These results imply that policy makers should further upgrade their travel services and tourism products, particularly in those countries which have a weak or no revealed comparative advantage, to improve competitiveness and sustain economic growth.

Keywords: Tourism competitiveness, revealed comparative advantage, travel services, services trade, European Union

1. Introduction

Tourism and services are major economic activities with a broadly impact on economic growth and employment in the European Union (called hereafter EU) 27 member states (EC, 2007). Services provide support to the economy as a whole and account for about three quarters in the European Union value added in 2009 (EC, 2011). Three categories, namely transport, travel and other business services, accounted for about two thirds of EU's exports and imports in 2012. However, the financial and economic crisis, which has affected all economies since 2008, has had an important effect on demand for tourist services. While global economic growth has been in low gear, macroeconomic imbalances have built up in Europe, and this is reflected by the sustained and important losses in tourism and service activities. Table 1 shows the contribution of trade in travel services to total external trade in services for the sample of the EU countries. It becomes plainly apparent that some countries have registered a trade loss during the economic downturn. Export and import shares have for the most part declined between 2007 and 2012. It depicts that trade year-on-year growth rates, from 2011 and 2012, correspond in the main to negative trade growth.

Against the background of weak growth triggered by the financial and economic crisis, the service sector could help sustain long term growth. Hence maintaining and enhancing its external competitiveness has become of increasing concern in many source markets. Most services are relatively labour intensive and a strong growth performance of these sectors is likely to absorb unemployed citizens hit by restructuring. This industry also represents a major source of foreign exchange earnings. Tourism receipts are important to maintain somewhat sustained economic growth. Moreover, the downturns being experienced in many countries since the onset of the global financial crisis have reduced tourist arrivals, resulting in a further decline in global tourism demand and foreign exchange earnings for these states. Given the importance of tourism and travel services to the EU, increasing (or at the very least, maintaining) the part of tourism and travel services has been an important objective of policymakers. This has resulted in questions about how the international competitiveness of the tourism and travel services industry has content with the global recession triggered by the financial crisis since 2008. In fact, competitiveness is the most widely used concept to analyze and encourage the sustainable development of the tourism industry.

Against this backdrop, this paper evaluates the international competitiveness of the EU's external trade in travel services between 2004 and 2012. In an attempt to shed some light on this issue, we compute several trade indicators to investigate the competitiveness and the pattern of trade flows for different European countries. The revealed comparative methodology adopted here to assess the external competitiveness of the EU is that of previous studies on tourism

competitiveness. However, this paper addresses some of the shortcomings in the published literature that has focused on small island developing states (Jackman, Lorde, Lowe & Alleyne, 2011), international tourism specialization on a number of small economies or individual countries (Algieri, 2006; Bobirca & Bucuresti, 2007), and emphasized on a large set of developing countries (Seyoum, 2007). The literature remains scarce on studies that provide some insight into the level of competitiveness of EU member states. Therefore the findings and policy recommendations can be used to improve the competitiveness of their service sector.

This paper aims at evaluating the underlying changing structure of European trade in travel services by employing revealed comparative advantages analysis at the country level. We will analyze the structural change in trade flows across countries and make a comparative analysis of their revealed comparative advantages to assess the effect of the global financial, and subsequent economic recession, on the tourism and travel service activities. This study will review the EU's travel services sector's international competitiveness and highlight its strengths and weaknesses. This approach addresses some need of policy makers that can evaluate the competitiveness of the EU travel services and thereby improve the effectiveness of tourism planning and policy.

The concept of comparative advantage is central to international trade theory. Theories of why trade occurs are almost entirely dominated by supply-side perspectives because of the standard assumptions in the neoclassical economic paradigm. In earlier trade theories, such as the Ricardian and the factor proportion (Heckscher-Ohlin/Ricardo-Viner)models, trade flows are explained respectively by technological differences and factor endowment differences (Dornbusch, Fischer & Samuelson, 1977; Ohlin, 1933; Samuelson, 1948). The former differs from other neoclassical trade models in that it assumes only one factor of production, whereas the latter rules out technological differences. All these models focus on differences between countries as a source of trade. The Heckscher-Ohlin model assumes that differences in labour, labour skills, physical capital and natural resources between countries lead to productive differences and are the source of gains from trade. According to its theorem, countries export goods that use intensively their relative abundant factors. While the Heckscher-Ohlin theory has lost significance especially due to the information technology revolution and asset-based economy, the essence of the Ricardian comparative advantage theory remains.

The Ricardian model states that only differences in productivity of labour across countries cause productive differences leading to gains from trade. It explains gains from trade through the concept of comparative advantage. A country has a comparative advantage in producing a good if the opportunity cost of producing that good is lower in the country than it is in other countries. The opportunity cost of producing something

measures the cost of not being able to produce something else. A country with a comparative advantage uses its resources most efficiently when it produces that good compared to producing other goods. The rationale behind this model is that countries will gain from international trade if each country produces and exports the goods in which they have a comparative advantage. If countries specialize according to their comparative advantage, they all gain from this specialization and from trade. According to this theoretical model, when countries specialize and trade, the relative price of the produced goods increases, income for labourers rises and imported become less expensive for consumers. Although, empirical evidence supports trade based on comparative advantage, barriers to trade, transportation costs and other factors reduce the tendency of specialization or even prevent complete specialization which may cause each country to produce the same good or service.

So far, the classical trade theories revisited are based on perfect competition and constant returns to scale assumptions to explain national country conditions as country advantages that enable trade to happen. By contrast, the foundations of the so-called modern or new trade theories that emerged in the eighties have elaborated on the neoclassical framework. They emphasize economies of scale (i.e. unit cost reductions associated with a large scale of output), imperfectly competitive markets and product differentiation. With increasing returns to scale, trade is mutually beneficial and some specialization and trade will occur even between countries with identical tastes, technology, and factor endowments (Helpman & Krugman, 1985; Krugman, 1979; 1980, 1981; Lancaster, 1980). A large portion of output of modern economies involves differentiated rather than homogeneous products. Trade occurs because of differentiated products of the same industry or broad product group benefiting consumers due to the wider range of choices. This international trade is called intra-industry trade as opposed to inter-industry trade in complete different products (Helpman, 1981).

Another strand of the new trade literature has incorporated the role of the multinational companies in the location of production (Ethier, 1986; Ietto-Gillies, 2000; Markusen, 1995). These firms have economies through multi-plant operation that offer increased technical efficiency (Ethier & Markusen, 1996; Markusen, 1984). Multinationals are more important in total activity when countries are similar in incomes and in relative factor endowments (Markusen & Venables, 1998). Multinational firms have ownership advantages and superior technology compared to local firms. Therefore host governments have an incentive to attract foreign direct investment due to technological transfer when it is particularly attractive to those who host the multinational companies (Glass & Saggi, 2002). Another direction in the literature has focused the role of spatial agglomeration economies or industry clusters and their long-run effects on the growth of urban economies (Ottaviano & Puga, 1998). An additional stream, the technology trade theories,

proposed a radical departure from the neoclassical framework, by stressing the central role of technology and innovation that creates temporary unique products (Krugman, 1979; Vernon, 1966).

These trade theories can be applied to analyze trade in tourism and travel services. Tourists may choose to visit a particular country given their preferences because of cultural affinity as in pilgrim tourism, but they can also be attracted by the natural endowments such as sun, sand, sea and cultural heritage. Price competition among tourism destination countries can also be the cause of foreign exchanges. Foreign-owned tour operators and international hotel chains are frequently viewed as having certain attributes in terms of reputation, branding, product recognition that are likely to attract customers and tourists to the countries where these multinational companies invest. Tourism destinations compete with each another to attract more visitors.

Therefore, they benefit from foreign direct investments to build their tourism capacities, raise productivity and enhance the competitiveness of the tourism industry. The travel and tourism industry ranks innovation very high nowadays. Innovation applications in tourism such as online booking, selling, marketing, advertising, web sites of tourism companies, more sophisticated forms of tourism such as green travel packages, creative tourism, education tourism, etc., play a crucial role in attracting tourists. Tourism agglomeration effects are equally important because tourists are likely to choose locations with abundant supply of tourism infrastructures and services as it is the case in tourism clusters.

Several papers that analyse the relationship between goods and tourist flows can be found in the literature (Adams & Parmenter, 1995; Eilat & Einav, 2004; Katircioglu, 2009; Khan, Toh, & Chua, 2005; Kulendran & Wilson, 2000; Narayan, 2004; Nowak, Sahli, & Cortés-Jiménez, 2007; Nowak, Sahli, & Sgro, 2003; Prideaux, 2005; Shan & Wilson, 2001). The literature is composed by both conceptually and empirically based studies for specialization analysis of tourism industry on a basis of the revealed comparative advantage approach (Heung-Sik & Narae, 2010; Webster, Fletcher, Hardwick & Morakabati, 2007). The results render strong support for the relevance of supply-side factors such as natural endowments, technology, and infrastructure in explaining international tourism flows (Zhang & Jensen, 2007). This tourism literature is largely centred on demand models (Crouch, 1994; Lim, 1997; Song, Dwyer, Li & Cao, 2012).

This paper is organized as follows. Section 2 contains the description of the empirical methods, namely of the revealed comparative advantage approach, to assess external competitiveness of the travel services industry. Section 3 presents and discusses the results, leading on to the concluding remarks in the final section.

2. Measurement of international trade specialization

2.1. Revealed comparative advantage

The concept of comparative advantage is a core concept in traditional international trade theory. The theory of international trade defines comparative advantage as the ability of a country to produce goods and services at a lower opportunity cost than other countries. If a country has a comparative advantage it means that it is better off at producing a particular good or service and therefore it is likely to become more successful by focusing on that sector. A comparative advantage gives a country the ability to sell goods and services at a lower price than its competitors.

Measuring comparative advantages is not straightforward and it is not possible to measure it directly. First, comparative advantage is defined as being the difference between two countries in relative prices in autarky equilibrium, which means no trade occurs between the two countries. Thus, autarky is not observable. Second, comparative advantage is defined in terms of relative autarky prices, which are generally not observable. Moreover, relative prices change by the process of trade and therefore they are not directly measurable. To measure comparative advantage, we can apply the principle of revealed comparative advantage which states that observed trade flows are generated by comparative advantage (Balassa, 1965). Comparative advantage of the trading countries is revealed on the assumption that the commodity pattern of trade reflects inter-country differences in relative costs as well as in non-price factors (Balassa, 1977). We can use this principle to work back from observed flows to infer the underlying pattern of comparative advantage. We will measure comparative advantages such as they are revealed from trade data by computing a specialization indicator, often called the index of revealed comparative advantage.

This study uses two RCA indices to measure comparative advantages in EU travel service activities. International trade statistics for travel services are obtained from the World Trade Organisation statistics database which allows retrieving statistical information of international trade statistics in merchandise and commercial services. Annual data on exports (credits or receipts) and imports (debits or payments) of commercial services derived from statistics on international service transactions are included in the balance of payment statistics in conformity with the concepts, definitions and classification of the fifth edition of the International Monetary Fund Balance of Payments Manual. Travel services include goods and services acquired by personal travelers for health, education or other purposes, and by business travelers. Unlike other services, travel is not a specific type of service, but an assortment of goods and services consumed by travelers. The most common goods and services covered are lodging, food and beverages, entertainment and transportation, gifts and souvenirs within the country visited.

International trade in services statistics are geographically allocated according to the residence of the trading partner. It is possible to distinguish between intra-EU and extra-EU transactions. The former correspond to the sum of transactions declared by EU member states with other

EU member states. The later are the transactions declared by EU member countries with countries outside the EU. This study takes into account the world transactions that are equal to the sum of intra-EU transactions and extra-EU transactions.

The first RCA index computed in this study is the revealed comparative advantage index formulated by Balassa (1965):

$$\text{RCA} = \left(\frac{\frac{X_{ij}}{X_{is}}}{\frac{X_{nj}}{X_{ns}}} \right)$$

where X represents exports, i is a country, j is a service, s is a set of commercial service exports (all exports) and n is a set of countries (EU 27 member countries). In other words, X_{ij} and X_{it} refer respectively to foreign exports of country i and service sector j and foreign exports of country i and all commercial service exports s. X_{nj} and X_{ns} refer respectively to foreign exports of EU and service sector j and foreign exports of EU and all commercial service exports s. The standard Balassa index measures how specialized country i is in exporting service j relative to the world as a whole (here EU world exports). Comparative advantage is revealed if RCA is greater than 1, or in other words, if it has greater specialization in the service than is typical of EU world trade. The greater is the index, the stronger the advantage. Accordingly, values less than unity are taken to reveal comparative disadvantage in service j by country i (a lesser degree of specialization than in EU foreign trade). The smaller is the index, the greater the disadvantage.

The original Balassa RCA indices are calculated by taking the whole world as the group of reference. This approach may not yield sound results as the countries in the sample are quite diverse regarding the market conditions that their partners face. On the other side, they are relatively homogeneous concerning the distortions that their exports face. For these reasons, EU countries are employed instead of taking the world as the reference group of countries. Moreover, the Balassa's RCA index has been criticized for not providing either an ordinal measure (to rank industries/commodities according to the level of comparative advantage) or a cardinal measure (to measure the magnitude of comparative advantage of different industries/commodities) of a country's revealed comparative advantage (Yeats, 1985).

This study further employs a second RCA index. It is another measure of comparative advantage that takes into account exports and imports (Donges & Riedel, 1977). This indicator is usually computed as the ratio of a country's net exports share of a particular sector in that sector's total trade, divided by the corresponding share of net exports for all sectors, and adjusted for the surplus or deficit in all sectors. The numerator of this measure is known as the net export ratio. It is used in this study to compute the net export index as follows:

$$\text{NX} = \left(\frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}} \right)$$

where *Xij* and M_{ij} represent country *i*'s exports and imports of service *j*. NX>0 (if it exhibits a positive trade balance) indicates country *i* has a comparative advantage in service sector *j*. If it exhibits a negative trade balance (trade deficit), country *i* reveals a disadvantage in service *j*. The larger the trade surplus or deficit in relation to total trade (sum of exports and imports) in service *j* by country *i*, the stronger the revealed advantage or disadvantage. This index ranges between two extreme values of -1 and +1. In the former, country *i* is completely specialized in importing service *j*. In the latter, country *i* exports service *j* but does not import it.

The use of the net export index is superior to the export index of revealed comparative advantage on trade-theoretical grounds because the former measures the effect of comparative advantage on the relationship between exports and imports rather than on exports alone (Balassa & Noland, 1989). The disadvantage of the net export index is that it can be influenced by the idiosyncrasies of national import protection and prohibitive protection in the extreme case. As a result, we will use both indices in the discussion of the changing pattern of revealed comparative advantage in tourism services. It is worth mentioning that trade deficits and indications that country does not have comparative advantages in a sector do not necessarily mean that it constitutes a problem. The RCA values below 1 for travel services industries indicate that citizens in the EU on average spend more money in third countries than third country tourists spend in the EU. This is because the relatively high standard of living allows people in the EU to travel to third countries and spend money.

The interpretation of the results is ensured by consistency tests. Indeed, if we want to compare the results between the indices, we need to know if these results are consistent. In other words, it is important to assess if the indices identify comparative advantages in the same way (Ballance, Forstner & Murray, 1987). If RCA indices are interpreted as cardinal measures, they identify the extent to which a country has a comparative advantage (or disadvantage) in a sector. In this case, the consistency of the indices is tested by computing Pearson correlation coefficients among all RCA indices for every time period. The results generated by the RCA indices presented and discussed in section 3 are consistent as cardinal measures and consistent in their identification of comparative advantage. The consistency test of the indices shows that all Pearson's correlation coefficients for the pairs of comparative advantage indices are higher than 0,75. Hence, it can be inferred that this result is indicating that the RCA indices are correctly interpreted.

Table 2 reports the measurements of the revealed comparative advantage indices for the travel services in the EU. These are calculated for the twenty seven European Union member countries. Whether trade is of an inter-industry trade (that reflects natural comparative advantage) or intra-industry trade nature is investigated with the intra-industry trade index. The results of the intra-industry trade indices are reported in Table 3. Estimates have been computed

for the years from 2004 to 2012, so as to evaluate changes in revealed comparative advantages and intra-industry trade in three years intervals. The countries are geographically allocated in northern (Denmark, Estonia, Finland, Ireland, Latvia, Lithuania, Sweden, United Kingdom), western (Austria, Belgium, France, Germany, Luxembourg, Netherlands), eastern (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia) and southern (Cyprus, Greece, Italy, Malta, Portugal, Slovenia and Spain) European countries.

2.2. Intra-industry trade

This study uses the most often used method for calculating the extent of intra-industry trade, namely a measure known as the Grubel-Lloyd index (GL hereafter). This index measures intra-industry trade as a share of a country's total trade (Grubel & Lloyd, 1971). The GL index for service j in country i's international trade is defined as:

$$\mathrm{GL} = 1 - \left| \left(\frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}} \right) \right|$$

where X_{ij} and M_{ij} are defined previously. If all trade is balanced, that is exports equal imports, then GL would be equal to 1. This index is capable to distinguish between one-way (unidirectional or inter-industry) trade, either imports or exports in a given sector of the, and two-way (bidirectional or intra-industry) trade, that is both imports and exports in a given sector of the country. If all trade is one-way, GL takes the value zero. Thus, the closer GL is to 1 (that is exports equal imports), the more trade in service j is intra-industry trade. The closer GL is to zero (that is, exports are equal to zero or imports are equal to zero), the more trade in service j is inter-industry trade. Overall, GL ranges from values of 0 to 1 as the extent of intra-industry trade augments ($0 \leq GL \leq 1$). High values imply that intra-industry trade is the dominant pattern of trade. Low values mean that comparative advantage and international trade specialization is applicable. Intra-industry trade occurs due to economies of scale, rather than technical differences or the allocation of resources generated by comparative advantages. This type of trade is in fact consistent with trade based on differences in factor endowments and comparative costs, while the comparative advantage seems to determine the pattern of inter-industry trade. When products are homogeneous, we have only inter-industry trade, but when trade is based on production differentiation, we have both inter- and intra-industry trade between the same industries. The more similar countries are in factor endowments and technology, the smaller is the importance of inter-industry trade relative to intra-industry trade and vice-versa.

3. Results and discussion

In the first stage of the analysis, the Balassa revealed comparative advantage indices and the net export indices are computed for each country. The calculated averages reveal that Estonia, Lithuania in the north; Austria, France and Luxembourg in the west; Bulgaria, Czech Republic, Hungary, Poland and

Slovakia in the east; Cyprus, Greece, Italy, Malta, Portugal, Slovenia and Spain in the south of Europe have revealed comparative advantages in all two indices during the period 2004-2012, whereas the remaining countries have comparative disadvantages. The strongest revealed comparative advantages are essentially found in Southern and Eastern European countries. Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Hungary, Italy, Lithuania, Malta, Poland, Portugal, Spain, Slovakia, Slovenia show the highest Balassa indices. These findings are robust to the net exports index. There is only mixed evidence in the case of Poland and Lithuania. Of particular note, Austria and France have also strong revealed comparative advantages in each of these indices.

In the second stage of the analysis, to further assess the competitiveness, on the basis of Table 2, we will look how those countries with a revealed comparative advantage in the period 2004-12 have performed in the three years sub-periods in the interval to assess the impact of the financial crisis and economic downturn (started around 2007-08) on external competitiveness. In other words, we compare RCA indices in the period 2004-06 (considering it is the period that precedes the financial crisis) with the time periods 2007-09 and 2010-12. Looking at the calculations, we find that the competitiveness of the studied travel services providers, measured by the two comparative advantage indices, have remained relatively stable over time. Only two countries, namely Lithuania and Romania, start with a revealed comparative advantage in the period 2004-06, but then switch to revealed comparative disadvantages, in one index, and in one or more subsequent periods.

Furthermore, the revealed comparative disadvantage of Latvia in 2004-06 becomes a revealed comparative advantage in 2010-12. A closer look at the figures, reported in Table 2, indicate that the values of the RCA indices have slightly improved in a few countries. There is evidence that the revealed comparative advantages of countries such as Austria, Bulgaria, Greece, Italy, Portugal and Slovenia have increased. However, some countries, such as Belgium, Denmark, Ireland, have worsen their comparative disadvantages. The exception are clearly the Netherlands and Sweden, and to some extent the United Kingdom.

While the above analysis provides some insight into the competitiveness of EU trade in travel services, it is complemented with the GL measurements. The GL index ranges from zero in which no intra-industry trade occurs, to one when exports and imports in travel services are balanced and intra-industry trade is at its maximum. The calculated GL indices are relatively stable over time.

The average levels of intra-industry trade indicate high values for nearly all northern and western European countries which have revealed comparative disadvantages. We include in this group a few eastern European countries, in particular, Poland, Romania and Slovakia, for which we have neither a strong comparative advantage nor strong disadvantage. Clearly, the lowest indices are from southern European countries,

typically, Greece, Malta, Portugal and Spain, for which we have measured strong comparative advantages. In the former, the exchange of similar services belonging to the same industry, both imported and exported, occurs in differentiated services whatever their apparent state of comparative disadvantage. In the latter, intra-industry trade is lower indicating that these countries trade mainly homogenous services for which they present a strong and revealed comparative advantage.

4. Conclusions

An analysis of the external competitiveness and the pattern of the EU's trade flows in travel services has been presented, based on trade specialization indicators, and calculated for the period 2004 to 2012. The revealed comparative advantages indices provide a useful tool to assess the international competitiveness of the EU travel services. Taken altogether, the results suggest that the external competitiveness has remained stable over the sample period. Using two alternative measures of comparative advantage, the findings indicate that under the global financial crises and economic downturn the structure of the revealed comparative advantages among the reviewed countries has not changed a lot. There is little evidence of a weakening of intensity of comparative advantage as shown in the RCA calculations. However, the southern European countries, such as Greece, Italy and Portugal have been able to improve noticeably their revealed comparative advantage and external competitiveness.

It is worth nothing that RCA calculations are based on observed trade data and it is not without its limitations. We have not taken into account the effectiveness of government interventions during the "times of crisis" on these indices. Assuming that market distortions (tariffs, quotas or subsidies) are at reasonably minimal levels, the results reveal that the southern and eastern European countries present high competitive profiles as compared to the northern and western European countries. According to the theories of international trade, in the former countries, foreign trade is predominantly based on differences in factor endowments. In the latter countries, international trade involves the exchange of differentiated rather than homogeneous services. In fact, the revealed comparative indices are used to measure the comparative advantage of the country, but they do not tell us on how competitiveness can be further improved, namely in the area where the country has a comparative disadvantage.

Yet, this paper has provided some insight on the international competitiveness in travel services at the EU country level. It should be noted that the indices computed in this paper can be used to perform a more detailed evaluation of tourism and travel services competitiveness, for instance, at the product level. Such a study is of interest since the main recommendation of this study to policy makers, business owners and managers is to further upgrade their products, particularly those with a weak or with no revealed comparative advantage, in order to improve

competitiveness which is essential to sustain tourism and economic growth.

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Table 1

Trade in travel services as a percentage of total EU trade in services

	Exports			Imports		
	2007	**2012**	**2011-12[a]**	**2007**	**2012**	**2011-12[b]**
Austria	34.8	31.0	-5.3	27.1	24.9	-4.3
Belgium	15.1	12.0	-3.5	25.4	24.4	-2.8
Bulgaria	54.5	51.6	-3.5	36.4	31.6	-1.6
Cyprus	32.4	33.3	10.5	40.6	35.7	2.3
Czech Republic	40.0	31.9	-3.7	24.9	23.7	-4.1
Denmark	9.9	9.5	-4.7	16.7	16.8	-3.2
Estonia	23.2	22.6	-2.6	22.0	21.9	-6.7
Finland	12.3	14.0	9.9	17.8	16.4	-3.3
France	36.6	25.5	4.7	29.8	23.2	-6.8
Germany	16.7	14.8	-0.7	32.0	29.1	-1.7
Greece	36.2	38.4	4.3	17.3	16.4	-6.0
Hungary	27.6	24.3	-6.5	16.8	14.5	-12.2
Ireland	6.6	3.5	-12.7	9.1	6.0	-5.4
Italy	38.5	40.1	-1.8	23.0	25.0	-0.1
Latvia	18.3	16.6	-4.8	34.6	29.4	-10.4
Lithuania	29.0	22.6	-11.4	34.9	23.2	-9.2
Luxembourg	6.2	6.4	-5.2	9.2	9.1	-2.8
Malta	28.5	26.0	2.1	10.8	10.9	6.1
Netherlands	12.2	10.6	0.2	19.6	17.0	-0.2
Poland	36.8	29.0	2.4	32.7	26.5	4.4
Portugal	44.1	45.7	6.3	28.1	26.3	9.3
Romania	17.1	15.0	6.3	17.5	20.7	-1.4
Slovakia	28.9	32.7	-11.1	23.8	30.7	1.7
Slovenia	40.2	39.5	-2.3	27.1	24.6	-12.7
Spain	45.4	41.2	-2.8	20.5	18.3	-5.9
Sweden	17.6	20.4	9.9	28.8	28.9	1.8
U. Kingdom	13.6	13.1	8.1	36.6	29.2	3.8

Note: [a. b] growth rates.
Source: Author's calculations.

Table 2

Revealed comparative advantage and net exports indices in EU travel services

	2004-06		2007-09		2010-12		2004-12	
	RCA	**NX**	**RCA**	**NX**	**RCA**	**NX**	**RCA**	**NX**
Austria	1.529	0.258	1.604	0.291	1.630	0.300	1.588	0.283
Belgium	0.723	-0.205	0.614	-0.271	0.598	-0.307	0.645	-0.261
Bulgaria	2.119	0.271	2.491	0.329	2.651	0.492	2.420	0.364
Cyprus	1.471	0.440	1.366	0.270	1.503	0.327	1.447	0.346
Czech Rep.	1.672	0.330	1.711	0.280	1.644	0.255	1.676	0.289
Denmark	0.512	-0.134	0.441	-0.214	0.483	-0.205	0.479	-0.184
Estonia	1.204	0.344	1.079	0.230	1.154	0.230	1.146	0.268
Finland	0.537	-0.167	0.495	-0.186	0.631	-0.122	0.554	-0.158
France	1.488	0.178	1.477	0.153	1.234	0.126	1.399	0.153
Germany	0.750	-0.421	0.723	-0.396	0.733	-0.379	0.736	-0.399
Greece	1.583	0.642	1.671	0.629	1.809	0.656	1.688	0.642
Hungary	1.329	0.304	1.351	0.318	1.295	0.396	1.325	0.339
Ireland	0.318	-0.108	0.277	-0.214	0.195	-0.233	0.264	-0.185
Italy	1.613	0.247	1.867	0.199	2.005	0.200	1.828	0.215
Latvia	0.660	-0.208	0.843	-0.129	0.856	0.014	0.786	-0.108
Lithuania	1.205	0.091	1.255	-0.056	1.194	0.158	1.218	0.064
Luxembourg	0.357	0.094	0.308	0.076	0.327	0.102	0.331	0.090
Malta	1.513	0.464	1.161	0.557	1.254	0.571	1.309	0.531
Netherlands	0.479	-0.214	0.520	-0.223	0.535	-0.190	0.512	-0.209
Poland	1.552	0.052	1.545	0.116	1.435	0.094	1.511	0.087
Portugal	1.993	0.445	1.972	0.437	2.195	0.465	2.054	0.449
Romania	0.716	0.010	0.688	-0.035	0.699	-0.151	0.701	-0.058
Slovakia	1.066	0.150	1.510	0.094	1.789	0.059	1.455	0.101
Slovenia	1.804	0.327	1.818	0.330	2.017	0.412	1.880	0.357
Spain	2.020	0.536	2.017	0.504	2.091	0.545	2.042	0.528
Sweden	0.676	-0.191	0.790	-0.106	0.935	-0.060	0.801	-0.119
U. Kingdom	0.591	-0.315	0.584	-0.286	0.621	-0.193	0.599	-0.265

Source: Author's calculations.

Table 3

Grubel-Llyod indices in EU travel services

	2004-06	2007-09	2010-12	2004-12
Austria	0.742	0.709	0.700	0.717
Belgium	0.795	0.729	0.693	0.739
Bulgaria	0.729	0.671	0.508	0.636
Cyprus	0.560	0.730	0.673	0.654
Czech Republic	0.670	0.720	0.745	0.711
Denmark	0.866	0.786	0.795	0.816
Estonia	0.656	0.770	0.770	0.732
Finland	0.833	0.814	0.878	0.842
France	0.822	0.847	0.874	0.847
Germany	0.579	0.604	0.621	0.601
Greece	0.358	0.371	0.344	0.358
Hungary	0.696	0.682	0.604	0.661
Ireland	0.892	0.786	0.767	0.815
Italy	0.753	0.801	0.800	0.785
Latvia	0.792	0.871	0.982	0.882
Lithuania	0.909	0.942	0.842	0.898
Luxembourg	0.906	0.924	0.898	0.910
Malta	0.536	0.443	0.429	0.469
Netherlands	0.786	0.777	0.810	0.791
Poland	0.948	0.884	0.906	0.913
Portugal	0.555	0.563	0.535	0.551
Romania	0.968	0.950	0.849	0.923
Slovakia	0.850	0.906	0.941	0.899
Slovenia	0.673	0.670	0.588	0.643
Spain	0.464	0.496	0.455	0.472
Sweden	0.809	0.894	0.940	0.881
United Kingdom	0.685	0.714	0.807	0.735

Source: Author's calculations.