

Inbound Tourism and Sectoral Development in Latvia

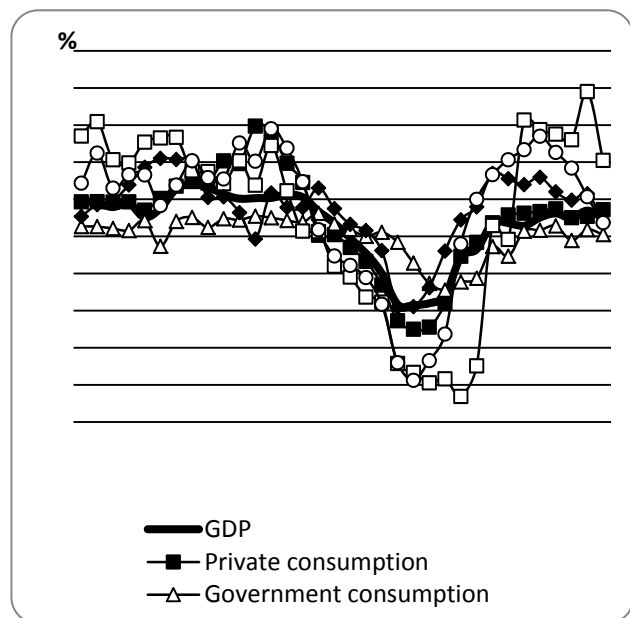
Velga Ozoliņa¹, Astra Auziņa-Emsiņa², ¹⁻²*Riga Technical University*

Abstract – The paper deals with the interaction of tourism demand and economic development at a sectoral level. Travel export is chosen as the most appropriate indicator of tourism demand. Correlation analysis is used to divide industries into three groups: industries, which are strongly correlated with tourism; industries, which were strongly correlated with tourism until 2008; and industries, which are weakly correlated with tourism. Travel export can be used for short-term estimates of the real value added for industries, which are strongly correlated to travel export.

Keywords – economic development, export, tourism demand, sectoral development

I. INTRODUCTION

Like many other countries, also Latvia faced economic downturn in 2008–2010, which was quite sharp after high growth rates in 2005–2007. Decomposition of GDP by expenditures shows that export has helped to overcome recession starting with the first quarter of 2010, followed by private consumption and investment in the third quarter of 2010 (see Fig. 1).



Source: The authors' calculations, based on CSB database [1]
Fig. 1. Growth Rate Dynamics of Expenditure of GDP, %

Also large amount of literature indicates on relation of export and growth, which is positive under certain circumstances. In recent years, several authors have examined these issues at a national level, for instance, L. Rangasamy (2009) investigates the case of South Africa [2]; J. Jarreau

and S. Poncet (2012) show the evidence of China [3], V. Songwe and D. Winkler (2011) examine 30 Sub-Saharan African countries and find that export is critical for increasing value added and labour productivity [4, p.248]. Moreover, export influences not only growth itself, but also growth volatility. For example, M.E. Haddad et al. (2010) argue that the composition of the export basket matters in the determination of whether the influence of export on growth volatility should be positive or negative [5, p.4]. J. Isham et al. (2005) in the study of 90 economies underline that growth deceleration in the 1980s was much less severe and shorter for countries, whose principal exports were diffuse [6, p.143], while M. C. Basri and S. Rahardja (2011) in a study of Indonesia argue that export substantially supports economic growth; however, domestic demand ensures greater stability [7, p.218].

Tourism is considered to be an important part of export in many studies; therefore, much attention is devoted to the evaluation of tourism influence on economic development. Different methods are used for tourism impact analysis. Input-output model and/or multiplier analysis [8; 9; 10; 11], macroeconomic model with tourism sub-model [12] and computable general equilibrium model [13] are among the most popular methods. In either case, the analysis is based on the opinion that impact can be evaluated within a macroeconomic system.

Several studies are conducted to evaluate the tourism impact in Latvia; however, they are focused on a particular area, not the whole country, or the analysis is based on qualitative methods. For example, I. Berzina and T. Grizane in 2011 [14] evaluated the economic impact of tourism on Ķemeri National Park, but R.S. Upchurch and U. Teivane in 2000 [15] analysed the influence of tourism the capital of Latvia, Riga, using a questionnaire of residents. Other studies focused on the development of tourism itself. For example, N. Gaņijeva and A. Magidenko in 2011 [16], I. Vasiljeva and A. Magidenko in 2010 [17] and V. Piskunova and A. Magidenko in 2010 [18] presented tourism development models based on qualitative and quantitative approaches. V. Kaže, R. Škapars and D. Ščeuļovs in 2011 [19] analysed the development of rural tourism, focusing on relevant human values.

The aim of the present paper is to identify the linkage of tourism and sectoral development in Latvia and to substantiate the choice of tourism demand indicator most suitable for modelling. Further steps will include the elaboration of model for tourism demand forecasting and the application of the model to perform the analysis of tourism impact on the economic development of Latvia.

The time period of analysis is 2000–2011 as sectoral data (NACE classification 2.rev.) is available only starting with 2000. The use of prior data would require transforming available data in NACE 1.1. rev., which can lead to imprecise or even false conclusions, if done inaccurately. However, to emphasise important aspects of development, data for the period 1995–1999 are also used.

The paper is structured as follows: the first section analyses export diversification process in Latvia and the role of tourism in it, the second section deals with methodological issues of tourism impact analysis and the third part provides the results of the research, followed by conclusions.

II. EXPORT DIVERSIFICATION IN LATVIA

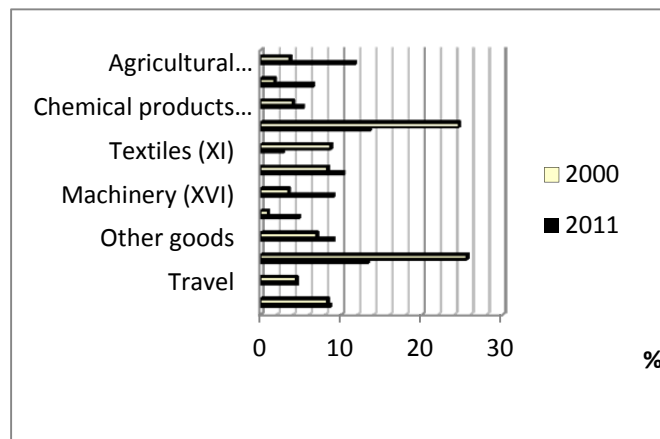
Two main diversification directions, which can be analysed from the macroeconomic point of view, are the following: diversification by countries and by groups of products and services. In the 1990s, there was an urgent need to find new market in the European Union, instead of Russia and other CIS countries, especially in 1998–1999 when Russia faced a financial crisis. The export structure of Latvia changed from 44.0% to EU-15 and 38.2% to CIS countries in 1995 to 64.6% to EU-15 and 8.7% to CIS countries in 2000. The accession of Latvia and 9 other European countries to the EU in 2004 provided opportunities to trade in the enlarged EU market more easily, which resulted in decrease in the share of the EU-15 countries in Latvia's export structure. However, the importance of new member states is still growing (in 2011 it was 39.5%, while the share of the EU-15 was 32.4% and the CIS – 14.6%). However, the main market is still Europe with the share of almost 90%. Asia is the next largest market with only 5.6% in 2011. [1]

Situation for export of services is somehow similar, and EU-15 countries are still leading with about 37% in 2011, followed by other countries (about 30%), the EU member states, which joined the European Union in 2004, and CIS countries (both 15–17%). [20]

Data analysis shows that it is possible for exporters to diversify their markets by countries. If the need for new markets is urgent as it was in the 1990s, than significant changes can occur in a relatively short period of time, otherwise changes are less obvious. It is worth outlining that the government is also ready to provide some assistance. For example, LIAA (Investment and Development Agency of Latvia) organizes seminars regarding trade in particular countries or regions, provides export warranties, gives funds for marketing activities abroad etc [21]. However, issues of trade barriers in several countries are still topical. Also distance and cultural differences play their role. Therefore, diversification by countries is a longer-term issue, which is gradually dealt with.

Diversification by groups of goods and services, on the other hand, depends to a great extent on the ability of companies to improve the existing products and services and provide new ones. Fig. 2. illustrates the structure of export of goods and services by commodity and service sections. In 2000, two sections dominated – wood, wood products and

transportation. However, in 2011, the share of the above-mentioned sections decreased, while the share of other sections mostly increased. Conclusion can be drawn that the export is now more diversified; however, there are sections, development of which can further facilitate diversification of export.



Source: The authors' calculations based on CSB database [1]

Fig. 2. Export structure by principal commodity sections and services, %

One of such sections is travel, export of which depends both on tourism and related business activities, supply and infrastructure in Latvia and on foreign demand, i.e., the number of tourists and the amount of money they are willing to spend for travel purposes. Latvia is conveniently located near the tourism generating regions of Europe and Russia, which is important, while tourists prefer destinations close to their homes [22, p.171]. However, the share of travel export in Latvia is still comparatively low and it has not changed much in 2000–2011.

III. METHODOLOGY OF TOURISM IMPACT ANALYSIS

Tourism affects economy both directly through tourist expenditures and indirectly via the multiplication effect, when income received from tourists is spent once again [23,p.65]. Therefore, a complex model is needed to assess the impact on a particular industry and the whole economy. The authors do not attempt to provide a full-scale analysis of tourism impact in Latvia, but rather to give an insight into diverse impact of tourism on different industries. Simple correlation analysis can indicate, whether the influence on a particular industry may be plausible, possible, influenced by crisis or too weak to measure.

The first stage of analysis implies the choice of the most appropriate tourism demand indicator. It is important to use a tourism indicator, which can be forecasted more precisely and credibly, because it will give more plausible results in impact modelling.

As the most popular statistical measure of tourism demand in different studies, the indicator of tourist arrivals is used, followed by tourist expenditure, tourism revenues, employment, import and export [24, p.9]. Given indicators are sometimes used also disaggregated, for example, tourist

2013/23

arrivals by countries or by motives. The choice of the demand indicator or indicators, modelling methods and the used factors depend on the aim of the study and to a great extent on the available data. Information regarding tourist arrivals is usually more comprehensive and, thus, more convenient to use. However, in order to evaluate economic impact of tourism, tourist expenditure or export indicators seem more appropriate as they include both flows of tourists and their expenditures abroad.

The use of econometric methods in tourism demand forecasting also implies the selection of influencing factors. The most important determinants of tourism demand, used in econometric models, are tourists' income, tourism prices in a destination relative to those in the origin country, tourism prices in the competing destinations and exchange rates [24,p.12]. The choice of these factors depends on disaggregation of tourism demand indicators, as well as on statistical analysis of tourism flows and expenditure, which provide hint on the most appropriate proxies, if more aggregated demand indicators are used. Also these indicators can be used to characterise the impact of tourism; however, they are associated also with other processes, therefore, do not show the impact of tourism alone.

Therefore, for correlation analysis two indicators are chosen – tourist arrivals and travel export. Tourist arrivals characterise the number of travellers to Latvia. Travel export takes into account expenditures of all inbound tourists. Travel export is also suitable for incorporation in a macroeconomic model, comparing with tourist expenditure.

At the first stage of the analysis, the following industries, which are more exposed to tourists, are used:

- Transportation and storage (H^1) – inter alia international passenger transportation, public transport, taxi services. The share of passenger transportation in transportation export has risen from 2.2% in 1996 (lowest in 1995–2011) to 17.9% in 2010 (highest in 199–2011) [25].
- Accommodation and food service activities (I). The share of foreign visitors staying at Latvian accommodation facilities has risen from 52.2% in 2000 to 67.1% in 2011 [1].
- Arts, entertainment and recreation (R). 22.4% of tourists in 2011 visited Latvia for leisure activities [1].

Of course, trade, communications, financial services, education and health can also be associated with travel; however, tourists do not form a significant share in the structure of customers in these industries.

Further values of the correlation coefficients are calculated between the real value added in chosen industries and tourist arrivals or travel export for the period of 2000–2011 and of shorter one, if the value of correlation coefficient does not exceed 0.8. The obtained results are compared and the indicator with a higher value of correlation coefficient is chosen.

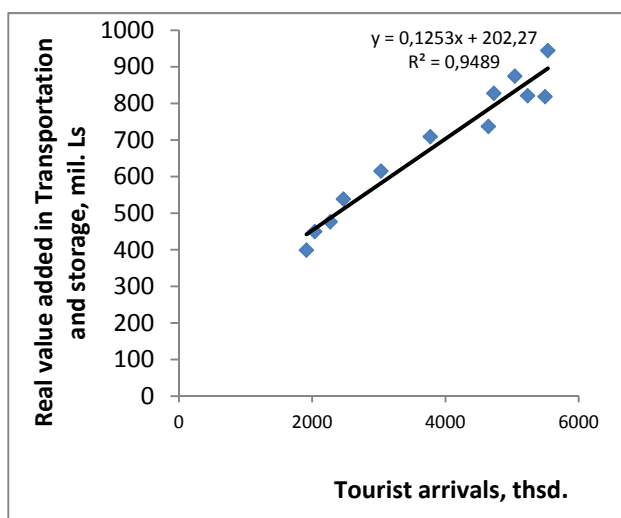
At the second stage of the analysis, the chosen tourism demand indicator is correlated to the real value added of 17

industries (NACE classification, rev. 2). Based on the results, industries are divided into 3 groups – industries, which are strongly correlated with tourism; industries with a strong correlation with tourism until 2008; and industries, which are weakly correlated with tourism. In this study, correlation coefficient value above 0.9 indicates a strong correlation.

The third stage of analysis implies the calculation of real value added in the second group of industries, in case trends of 2000–2008 continued also in 2009–2011. This would apply to the situation, when changes in demand were proportional rather than structural. At this stage, linear equations are estimated for industries of the second group in 2000–2008, and afterwards these equations are used for calculation of the real value added in 2009–2011, using the current values of travel export in this period.

IV. IMPACT OF TOURISM ON SECTORAL DEVELOPMENT IN LATVIA

The first stage of analysis shows that the real value added in transportation and storage industry is strongly correlated with tourist arrivals (see Fig. 3) with the determination coefficient R^2 of 0.95. However, the relationship with tourist expenditures (travel of export in Balance of payments deflated by private consumption price index) is also very strong – correlation coefficient is 0.94 compared to 0.97 in case of tourist arrivals. Therefore, both indicators can be used to evaluate the impact of tourism on transportation and storage industry.

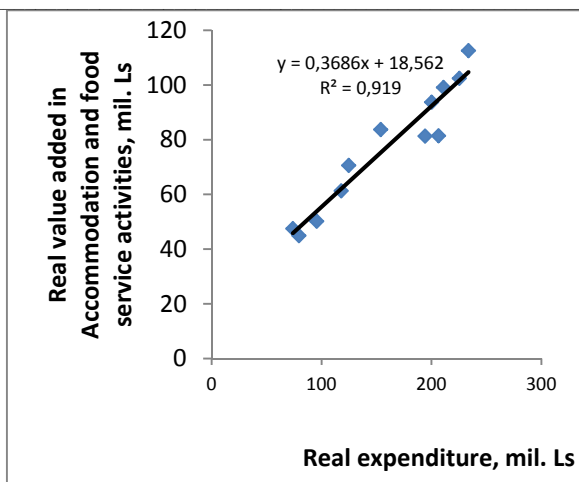


Source: The authors' calculations, based on CSB database [1]

Fig. 3. Relation between the real value added in transportation and storage industry and tourist arrivals

In case of accommodation and food service activities, stronger correlation is in the case of tourist expenditure ($R^2 = 0.92$) as shown in Figure 4; however, the difference by using tourist arrivals is very small. It should be noted that correlation is stronger, when tourist expenditure is deflated by private consumption price index rather than export price index; therefore, the private consumption price index is used in further analysis.

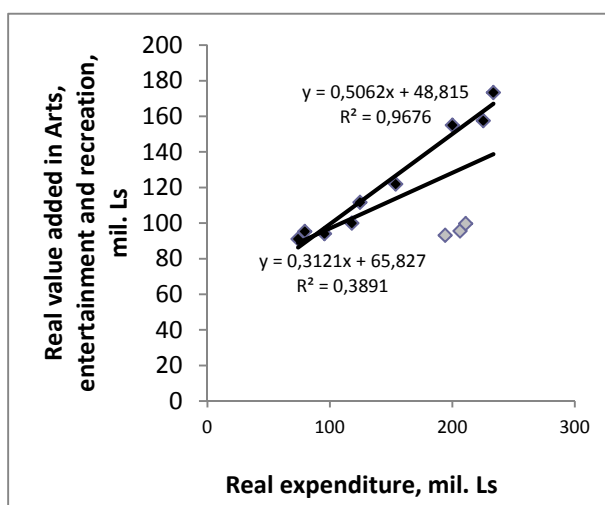
¹ According to NACE classification, rev. 2



Source: The authors' calculations, based on CSB database [1] and Balance of Payments Statistics [25]

Fig. 4. Relation between the real value added in accommodation and food service activities and tourist expenditure

The situation with arts, entertainment and recreation industry is slightly different. Like in the case of accommodation and food service activities, relation with tourist expenditure is closer than with arrivals. However, the difference lies in the pattern of correlation. Fig. 5 shows that the value added in three periods falls substantially below a trend line. These three values are of 2009, 2010 and 2011. If outliers are eliminated, the value of R^2 grows from 0.39 to 0.97. However, the value of correlation coefficient falls from 0.98 in 2000–2008 to 0.62 for the entire study period. It means that economic downturn has altered previous tendencies – the value added has decreased more significantly during the crisis than foreign tourists' expenditure. It may indicate that tourists are still willing to travel; however, their expenditure structure has changed. In addition, we can conclude that demand for arts, entertainment and recreation industry is more elastic regarding foreign tourists' expenditures.



Source: The authors' calculations, based on CSB database [1] and Balance of Payments Statistics [25]

Fig. 5. Relation between the real value added in arts, entertainment and recreation industry and tourist expenditure

Also data on tourist motivation indicates the structural changes in travel expenditure. Table 1 shows that the share of tourists, who visited Latvia for the purpose of tourism, has mainly been above 50%. Although there was a small increasing trend in 2008, when the share of tourists reached 60.2%, already in 2009 it dropped to 51.2%, and has been declining ever since. This means that also tourist expenditure, which is more related to leisure activities, decreases more than other expenditures, for example, such typical tourist expenses as accommodation and food.

TABLE I
INBOUND TOURISTS' MOTIVES, %

Period	Tourism	Other motives
1996	55.3	44.7
1997	51	49
1998	49.4	50.6
1999	54.3	45.7
2000	51	49
2001	51.5	48.5
2002	55.8	44.2
2003	51.9	48.1
2004	55	45
2005	53.2	46.8
2006	57	43
2007	53.6	46.4
2008	60.2	39.8
2009	51.2	48.8
2010	50.7	49.3
2011	50.2	49.8

Source: CSB database [1]

The first stage of analysis shows that there is not much difference between the use of data on tourist arrivals and that of travel export in case of industries, which are closely related to tourism. However, if the relationship is not so close, travel export is a more appropriate factor. Moreover, quarterly data on tourist arrivals are available only from 2002 to 2007, but travel export data are available both quarterly (from 1995 onwards) and monthly (from 2000 onwards).

Using seasonally adjusted quarterly data, the results show that the correlation is strong between tourist expenditure and the real value added in transport and storage industry (correlation coefficient $r = 0.93$) and between tourist expenditure and accommodation and food service activities ($r = 0.91$). As expected, the value of the correlation coefficient between tourist expenditure and arts, entertainment and recreation industry is lower ($r = 0.56$).

The second stage of analysis implies the calculation of correlation coefficients for all major industries and travel export. Calculation results are presented in Table II.

TABLE II
CORRELATION COEFFICIENTS BETWEEN REAL VALUE ADDED IN INDUSTRIES
AND TRAVEL EXPORT

Industry (NACE rev. 2)	Correlation coefficient	
	2000-2008	2000-2011
(A.S) Gross value added	0.990	0.958
(A) Agriculture, Forestry and Fishing	0.873	0.828
(BDE) Mining and quarrying; Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation activities	0.938	0.922
(C) Manufacturing	0.882	0.722
(F) Construction	0.996	0.805
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	0.993	0.919
(H) Transportation and storage	0.972	0.943
(I) Accommodation and food service activities	0.988	0.959
(J) Information and communication	0.951	0.550
(K) Financial and insurance activities	0.976	0.950
(L) Real estate activities	0.963	0.959
(M) Professional, scientific and technical activities	0.975	0.959
(N) Administrative and support service activities	0.958	0.840
(O) Public administration and defence; compulsory social security	0.971	0.751
(P) Education	0.978	0.628
(Q) Human health and social work activities	0.845	0.542
(R) Arts, entertainment and recreation	0.984	0.624
(S) Other service activities	0.816	0.771

Source: The authors' calculations, based on CSB database [1] and Balance of Payments Statistics [25]

Based on data from Table II, all industries can be categorised in three groups:

- Industries, which are closely related to travel export (correlation coefficient > 0.9) for the entire study period sample – mining and utilities (BDE), trade (G), transportation and storage (H), accommodation and food service activities (I), financial and insurance activities (K), real estate activities (L), professional and scientific and technical activities (M).
- Industries, which are closely related to travel export in 2000–2008, but afterwards there is a shift in trend – construction (F), information and communication (J), administrative and support service activities (N), public administration and defence (O), education (P) and arts, entertainment and recreation (R).
- Industries with comparatively weak relation to travel export – agriculture (A), manufacturing (C), health care (Q) and other service activities (S).

It will not be correct to argue that the first group of industries is significantly influenced by tourism, although tourists use, for example, water, which is provided to hotels by water supply industry (E), money exchange services from financial and insurance industry (K) etc. However, it can be noted that dynamics of these industries is somewhat similar to travel export, and/or all respective indicators depend on

similar factors, for example, private consumption. Nevertheless, travel export can be used for short-term estimates of the real value added in these industries, because statistics on travel export is released earlier than the value added. This is more topical at the beginning of the year, when data of travel export are available for the whole year, but data on the value added – only for three or even two quarters.

The main characteristic of the second group of industries is that there is a significant shift in trends, which according to the authors of the paper is caused by the economic crisis. In this case, if tourism is a factor influencing the development of these industries, then other factors are more significant, at least in such dynamic situations as recent economic crisis.

The third group of industries are not closely related to travel export; however, in some cases, for example, health care (Q), this might change, as Latvian specialists become more experienced and qualified, including both professional and communication (language) skills, and are able to provide services needed to foreigners at comparatively lower prices and sooner as in their home countries.

According to the results of the third stage, it is possible to state: if there had not been significant structural changes in 2009–2011, then the real value added would have decreased by almost 5% points in 2009 (value added decreased by -15.6%), increased by 1.4% in 2010 (decreased by -0.5%); however, in 2011 the increase rate would have been slightly lower (5.3% instead of 5.5%). As a result, the value added would have been higher by 7.7% in 2011.

These results do not show the impact of travel export alone. In this case, also domestic demand should be stronger and government expenditure should decrease less than at present. Knowledge about the extent of impact of all relevant factors would provide useful information to tourism policy makers and promoters for substantiation of their decisions.

V. CONCLUSION

Export growth is an important factor for the economic growth in Latvia. The more diversified export, the less volatile the dynamics of output is and, thus, the more stable and sustainable the economic development is.

There are several potential ways for export diversification: one includes also tourism, which currently is one of the smallest segments in the structure of export of goods and services. Therefore, it is important to model, how travel export will develop and how it will influence the economic development of particular industries and the whole economy.

In case of Latvia, travel export is the most suitable indicator of inbound tourism, as annual, quarterly and monthly data are available and their relation to sectoral development is closer (in terms of correlation coefficient).

Real value added of several industries develop in line with travel export; in other industries there is a shift in trends as fewer inbound tourists are interested in tourism in Latvia recently. There are also industries, which behave differently and do not show significant relations to travel export.

Travel export can be used for short-term estimates of the real value added for industries, which are strongly correlated

with travel export, namely, mining and utilities, trade, transportation and storage, accommodation and food service activities, financial and insurance activities, real estate activities and professional, scientific and technical activities.

REFERENCES

- [1] CSB Database. [Online]. Available: www.csb.gov.lv [Accessed September 10, 2012]
- [2] L. Rangasamy. "Exports and economic growth: The case of South Africa." in *Journal of International Development*, Volume 21, Issue 5, July 2009, pp. 603-617
- [3] J. Jarreau, S. Poncet. "Export sophistication and economic growth: Evidence from China." in *Journal of Development Economics*, Volume 97, Issue 2, March 2012, pp. 281-292
- [4] V. Songwe, D. Winkler. "Exports and Export Diversification in Sub-Saharan Africa: A Strategy for Postcrisis Growth." in *Managing Openness: Trade and Outward-Oriented Growth After the Crisis*. ed. Haddad M., Shepherd B., 2011, pp. 247 - 258
- [5] M.E. Haddad, J.J. Lim, C. Saborowski. "Trade Openness Reduces Growth Volatility When Countries Are Well Diversified." in *Policy Research Working Paper No.5222*, The World Bank Poverty Reduction and Economic Management Network International Trade department & Development Economics Vice-Presidency Development Prospects Group, February 2010, 38 p.
- [6] J. Isham, M. Woolcock, L. Pritchett, G. Busby. "The Varieties of Resource Experience: Natural Resource Export Structures and the Political Economy of Economic Growth." in *World Bank Economic Review*. Volume 19, Issue 2, 2005, pp. 141 - 174
- [7] M. C. Basri, S. Rahardja. "Should Indonesia Say Goodbye to Its Strategy of Facilitating Export?" in *Managing Openness: Trade and Outward-Oriented Growth After the Crisis*. ed. Haddad M., Shepherd B., 2011, pp. 217 - 232
- [8] S. S. Kim, K. Chon, K. Y. Chung. "Convention industry in South Korea: an economic impact analysis." in *Tourism Management*, Volume 24, Issue 5, October 2003, pp. 533 - 541.
- [9] W. H. Chang. "Variations in Multipliers and Related Economic Ratios for Recreation and Tourism Impact Analysis." Dissertation, Michigan State University, USA, 2001, 150 p.
- [10] T. J. Tyrrell, R. J. Johnston. "A Framework for Assessing Direct Economic Impacts of Tourist Events: Distinguishing Origins, Destinations, and Causes of Expenditures." in *Journal of Travel Research*, vol. 40, No. 1, August 2001, pp. 94 - 100.
- [11] C. K. Lee, T. Taylor. "Critical reflections on the economic impact assessment of a mega-event: the case of 2002 FIFA World Cup." in *Tourism Management*, Volume 26, Issue 4, August 2005, pp. 595 - 603.
- [12] J. Zhang. "Tourism Impact Analysis for Danish Regions." in *Tourism Economics*, Volume 8, No.2, 1 June 2002, pp. 165 - 188.
- [13] G. Sugiyarto, A. Blake, M. T. Sinclair. "Tourism and globalization: Economic Impact in Indonesia." in *Annals of Tourism Research*, Volume 30, Issue 3, July 2003, pp. 683 - 701.
- [14] I. Berzina, T. Grizane. "Economic impact of tourism in Ķemeri National Park." in *Economic Science for Rural Development*. No. 25, 2011, pp. 31. - 37.
- [15] R. S. Upchurch, U. Teivane. "Resident perceptions of tourism development in Riga, Latvia." in *Tourism Management*, Volume 21, Issue 5, October 2000, pp.499 - 507
- [16] N. Gaņijeva, A. Magidenko. "Latvijas tūrisma konkurētspējas modelis." in *RTU zinātniskie raksti*. 3. sēr., Ekonomika un uzņēmējdarbība. 9. sēj., 2011, 53. - 60. lpp.

- [17] I. Vasiļeva, A. Magidenko. "Latvijas tūrisma attīstības politikas izstrāde." in *RTU zinātniskie raksti* 3. sērija Ekonomika un uzņēmējdarbība. 8. sējums, 2010, 168. - 180. lpp.
- [18] V. Piskunova, A. Magidenko. "Tūrisma uzņēmumu attīstības stratēģijas izstrāde Latvijā." in *RTU zinātniskie raksti* 3. sērija Ekonomika un uzņēmējdarbība. 8. sējums, 2010, 157. - 167. lpp.
- [19] V. Kaže, R. Škapars, D. Ščelovs. "Development of Rural Tourism in Latvia Capitalizing on Regionally Relevant Human Values." in *Management theory and studies for rural business and infrastructure development*. Nr.2 (26), 2011, pp. 97. - 104.
- [20] Country Profiles [Online]. Available: www.em.gov.lv [Accessed July 1, 2012]
- [21] Information of the Investment and Development Agency of Latvia [Online]. Available: www.liaa.gov.lv [Accessed July 5, 2012]
- [22] I. Druva-Druvaskalne, I. Abols, A. Slara. "Latvia tourism: decisive factors and tourism development." in *Tourism in the New Europe: The Challenges And Opportunities of EU Enlargement*. ed. D. R. Hall, M. K. Smith, B. Marciszewska, CABI, 2006. - pp. 170-182
- [23] Dž. K. Holovejs. *Tūrisma bizness*. Rīga: Jāņa rozes apgāds, 1999, 367 lpp.
- [24] H. Song G. Li, "Tourism Demand Modelling and Forecasting. A Review of Recent Research." in *TourismManagement*, 29 (2), 2008, pp. 203-220
- [25] Balance of Payments Statistics [Online]. Available: www.bank.lv [Accessed July 3, 2012]



Velga Ozoliņa¹ holds a PhD Degree in Economics (Dr.oec.), Riga Technical University, Latvia, 2009.

The author is an Assistant Professor since 2010 and Researcher since 2006 at the Faculty of Engineering Economics and Management of Riga Technical University. The author is involved in macro-economic modelling and is elaborating a macro-econometric model of Latvia. Research interests include different issues of economic analysis, macroeconomic modelling and external trade of Latvia.

She is a Member of the Association of Latvian Econometrists. The author's Doctoral Thesis

"Elaboration of Latvia's Macroeconometric Model and Its Application for Economic Analysis and Forecasting" is awarded as the Research of Young Scientist of 2010 in the group of Doctoral Theses by the Association of Latvian Econometrists. Address: Kalnciema Str. 6 - 216, LV-1048, Riga, Latvia. E-mail: velga.ozolina@rtu.lv



Astra Auziņa-Emsiņa² holds a PhD Degree in Economics (Dr.oec.), Riga Technical University, Latvia, 2008.

The author is an Assistant Professor since 2009 and Researcher since 2006 at the Faculty of Engineering Economics and Management of Riga Technical University. The author has been involved in research devoted to economic modelling and sectoral interlinkages since 2004 and has developed several multisectoral macroeconomic models (INFORUM type model and CGE models for Latvia's economy). The special research interests

are the following: macroeconomic modelling, intersectoral relations, industrial development, economic development and sectoral competitiveness.

She is a Member of International Input-Output Association, Member and Co-founder of the Association of Latvian Young Scientists, Member of the Association of Latvian Econometrists.

Address: Kalnciema Str. 6 - 216, LV-1048, Riga, Latvia. E-mail: astra.auzina-emsina@rtu.lv

Velga Ozoliņa, Astra Auziņa-Emsiņa. Ienākošais tūrisms un nozaru attīstība Latvijā

Latvijā ekonomiskā attīstība lielā mērā ir atkarīga no eksporta tendencēm. Eksports kā ekonomiskās attīstības virzītājs ir analizēts arī virknē citu autoru pētījumu, daļā no tiem kā būtisks analizēts arī tūrisma eksports. Liela nozīme literatūrā tiek piešķirta arī eksporta diversifikācijai kā stabilas ekonomiskās attīstības pamatam. Raksta mērķis ir identificēt saikni starp tūrisma un nozaru attīstību Latvijā un pamatot tūrisma pieprasījuma rādītāja izvēli. Pētījuma pirmajā posmā no vairākiem literatūrā minētiem rādītājiem tiek izvēlēts piemērotākais tūrisma pieprasījumu raksturojošais rādītājs, analizējot korelāciju ar reālo pievienoto vērtību transporta, izmitināšanas un izklaides pakalpojumu nozarēs. Otrajā posmā izvēlētais rādītājs tiek korelēts ar reālo pievienoto vērtību 17 nozarēs (NACE 2. red.). Trešajā posmā tiek aprēķināta iespējamā IKP vērtība 2009. - 2011. gadā pie nosacījuma, ka pieprasījuma dinamika nav novērojamas strukturālas izmaiņas. Pētījuma rezultātā braucienų eksports ir izvēlēts kā piemērotākais tūrisma pieprasījumu raksturojošais rādītājs. Izmantojot korelācijas analīzi, nozares ir iedalītas 3 grupās - nozares, kas būtiski korelē ar tūrisma, nozares, kas ar tūrisma korelē līdz 2008. gadam un nozares, kam nav ciešas korelācijas ar tūrisma. Novērtēts,

2013/23

ka reālā IKP vērtība 2011. gadā būtu par 7,7% augstāka nekā tā faktiskā vērtība, ja būtu turpinājušās iepriekšējās tendences strukturālajā ziņā. Braucienu eksportu iespējams izmantot reālās pievienotās vērtības īstermiņa novērtēšanai nozarēs ar augstām korelācijas koeficienta vērtībām.

Велга Озолиня, Астра Аузиня-Эмсиня. Въездной туризм и отраслевое развитие в Латвии

Латвийское экономическое развитие в значительной степени зависит от тенденций экспорта. Экспорт в качестве движущей силы экономического развития был проанализирован в ряде работ других авторов, в некоторых из них проанализирован также экспорт туризма как важная отрасль. Большое значение в литературе уделяется диверсификации экспорта как основе устойчивого экономического развития. Цель статьи заключается в выявлении взаимосвязи между туризмом и развитием отрасли в Латвии и обосновании выбора индикатора спроса на туризм. В первой стадии из некоторых показателей, представленных в литературе, выбран наиболее подходящий индикатор туристского спроса, при анализе соотношения с реальной добавленной стоимостью в сфере транспорта, гостиниц и развлекательных услуг. На втором этапе выбранный показатель коррелирует с реальной добавленной стоимостью 17 секторов (КДЕС 2. Ред.). Третий этап заключается в расчете потенциальной ценности ВВП в 2009 - 2011 году, при условии, что в динамике спроса структурных изменений нет. В результате экспорт туризма был выбран как наиболее подходящий показатель, характеризующий спрос туризма. Используя корреляционный анализ, отрасли разделены на 3 группы - отрасли, которые тесно связаны с индустрией туризма, отрасли, которые коррелируют с туризмом до 2008 года, и отрасли без тесной взаимосвязи с туризмом. Расчеты показывают, что реальный ВВП в 2011 году был бы на 7,7% выше, чем его фактическая величина, если бы продолжились прошлые тенденции в структурном плане. Поездки могут быть использованы для краткосрочной оценки реальной добавленной стоимости в отрасли с высоким значением коэффициента корреляции.