MEASURES OF INNOVATION ACTIVITIES IN TOURISM ACCORDING TO CIS SURVEY

Scientific paper

Emira Bečić
Kristina Črnjar
Mauro Licul

Abstract
Purpose – This paper addresses a series of key questions regarding the role of innovation in tourism industry, and its relation to economic performance and the competitiveness of Croatia with regard to the tourism sector. For detecting and evaluating the impact of innovation activities on tourism sector performance, this paper takes a look at recent statistics on innovation activities in the tourism sector in Croatia and selected countries. The focus is on innovation activities made by enterprises in Sector I - Accommodation and Food Service Activities.
Methodology – The majority of the statistical data will be taken from Eurostat and other data sources (UNWTO). Descriptive analysis and correlation analysis were preformed to analyze the data.
Research findings and originality – Using the available data from CIS surveys, the paper analyzes the type of innovations by enterprises, estimates the impact on total turnover and tests the intensity of correlation between type of innovations, total Turnover and Receipts relative to GDP (for Croatia and selected countries). The paper analyzes trends in innovation evaluation and effects on employment in tourism. Therefore, it contributes to the existing literature on the effects of innovation in the tourism industry.
Keywords CIS survey, measures of innovation activities, Human capital, Innovation in Accommodation and Food Service Activities sector, Croatia

INTRODUCTION

In a remarkably short time, economic globalization has changed the world's economic order, bringing with it new challenges and opportunities. Many countries are now racing for a new high ground in which the capabilities for innovation – defined in such terms as human capital, investment, quality of ideas and stance to the future – matter more than ever (Business Panel on future EU innovation policy, 2010). The success of the states in the new economy shall be much more determined by the manner in which they will manage to push forward innovation[1], entrepreneurial relations, education and

[1] According to the Oslo Manual 2005, an innovation is the implementation of a new or significantly improved product (goods or service) or process, a new marketing method, or a new organisational method in business practices, work place organisation or external relations. Four type of innovation are in use:Product, Process, Organisational and Marketing innovation. An *organisational innovation* is a new organisational method in an enterprise's business practices (including knowledge management), workplace organisation or external relations that has not yet be enused by the enterprise. It must be the result of strategic decisions taken by management; this excludes mergers or acquisitions, even if for the first time. A *marketing innovation* is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing. Marketing innovations are aimed at better addressing customer needs, opening up new markets, or newly positioning a firm's product on the market, with the objective of increasing the firm's sales. This excludes seasonal, regular and other routine changes in marketing methods.

specialized qualifications and the transformations of all the organizations towards the new competences in various sectors of economic activities (OECD, 2005).

Technological progress and tourism have been going hand in hand for years (Buhalis, Law, 2008). Innovation is playing an increasing role in service and is particularly important for the tourist industry (Hjalager, 2002). Today innovations are strongly based on the results of new technological developments, new combinations of existing technology or on the utilization of other knowledge acquired by an enterprise. Creating a positive climate in which entrepreneurs and businesses can flourish is considered by many as the key to generating growth and jobs; this is all the more important in a globalized economy, where some businesses have considerable leeway to select where they wish to operate.

Tourism represents a specific economic and social phenomenon of modern society today. It has been a phenomenon characterized by immense innovativeness (Hjalager, 2010). Through its size and complex content, tourism engages a vast natural, material and human potential, having profound implications on the progress of the economy and society and on the international relationships. Acting as a dynamic element of the global economy and economic systems in countries, tourism significantly contributes to the diversification of the economic structure. In a competitive global market nowadays, there is a great need for a powerful national branding of tourism management which could optimize resources. This will need a certain type of interest for a coordinated approach to marketing in order to optimize the vision of Croatia as a competitive tourist destination. The main arguments which determine the necessity of tourism development in general, and in Croatia in particular, are the following: *the complex exploitation and revaluation of tourism resources accompanied by efficient promotion on the external market may significantly contribute as an important source of revenue in national economies (in recent years it is one of the crucial sources for Croatia); tourism resources are practically inexhaustible; tourism can be an important factor in generating - directly and indirectly - jobs of varied skill requirements in other economic sectors; and, through its multiplicative effect, tourism can generate a specific demand for goods and services which brings about an increase in the structure of the non-financial business economy, contributing considerably to the diverse specialization the national economy's structure by sector and subsector.* Regarding guide lines to achieving progress and being successful in the national economy, oriented towards innovation, the government shall focus their policies in mentioned fields on the path to achieve prosperity and well-being of Croatia's citizens and a strong economic increase.

1. METHODOLOGY

The aim of this paper is to address a series of key questions regarding the role of innovation in tourism industry, and its relation to economic performance and the competitiveness of Croatia with regard to the tourism sector. For detecting and evaluating the impact of innovation activities on tourism sector performance, this article takes a look at recent statistics on innovation activities in the tourism sector in Croatia and selected countries. The focus is on innovation activities made by enterprises in Sector I - Accommodation and Food Service Activities. Using the

available data from CIS surveys, we will analyze the type of innovations by enterprises in that sector and estimate the impact of the type of innovation (marketing and organizational) on total turnover used in a correlation analysis model to test the intensity of correlation between criteria and variables. We also analyze trends in innovation intensity evolutions in Accommodation and Food Service Activities sector (Nace Rev.2 division I55-I56) and the potential effects on employment in tourism. An explanation of this approach and the assumptions - correlation between type of innovations, total Turnover and Receipts relative to GDP (for Croatia and selected countries), and the use of the potential effects of the assumptions on employment and economy - will be discussed and tested. The majority of the statistical data will be taken from Eurostat and other data sources World Tourism Organization (UNWTO).

2. THE ROLE OF TOURISM IN NATIONAL ECONOMY

This analysis is based on economic data extracted from different sources of official statistics, in particular, community innovation statistics (CIS), structural business statistics (SBS) and UNWTO data. The discussion below refers to selected indicators: number of enterprises, number of persons employed, turnover, value added at factor cost, international tourism receipts and tourism expenditures – first at the Croatian level and then at the level of selected countries.

Over the past six decades, tourism has experienced continued expansion and diversification, becoming one of the largest faster-growing economic sectors in the world. Tourism in 2012 represents 9% of world GDP, 6% of the world's exports, 1 in 11jobsin the world. Despite occasional shocks, international tourist arrivals have shown virtually uninterrupted growth –from 25 million in 1950, to 278 million in 1980, 528 million in 1995, and 1,035 million in 2012 (UNWTO Tourism Highlights 2013: 2).

Europe is seeing continued growth despite economic challenges. Accounting for 52% of all international arrivals worldwide, Europe reached 534 million tourist arrivals in 2012, 18 million more than 2011. The number of international tourist arrivals in the EU‑27 increased by 168.9 million between 1990 and 2012, but the EU‑27's share of worldwide tourist arrivals dropped from 52.9 % to 38.7% (2011:39.2 %) over the same period (UNWTO Tourism Highlights 2013: 2).

The EU is a major tourist destination, with five of its Member States among the world's top 10 destinations for holidaymakers in 2012[2], ranked according to UNWTO data by the key two tourism indicators – international tourist arrivals and international receipts (UNWTO 2013). The growth of the tourism sector in 2012 has been crucial for many countries in the European region, offering employment opportunities and a considerable revenue stream. Growth was led by destinations in Central and Eastern Europe which saw 7% more international arrivals. Western Europe recorded a 3% increase in arrivals with the best results for Germany at 7% and Austria at 5%. Destinations in Southern Mediterranean Europe saw a 2% increase in arrivals. Of the

[2] World's top tourism destinations, Rank 2012: 1. France; 2. USA; 3. China; 4. Spain; 5. Italy; 6. Turkey; 7. Germany; 8. UK; 9. RussianFederation; 10. Malaysia.

larger destinations, Croatia (+4%), Portugal (+4%), Spain (+3%) and Turkey (+3%) recorded growth in arrivals above the average for the sub-region (UNWTO Tourism Highlights, 2013:7).

Tourism plays an important role in the EU because of its economic and employment potential, as well as its social and environmental implications. According to the Eurostat data in 2010, more than one in seven enterprises in the European non-financial business economy belonged to the tourism industries. These 3.4 million enterprises employed an estimated 15.2 million persons. Enterprises in industries with tourism related activities accounted for 11 % of the persons employed in the whole non-financial business economy and 29 % of persons employed in the non-financial services sector. The tourism industries' shares in total turnover and value added at factor cost were relatively lower, with the tourism industries accounting for 6 % of the turnover and 9 % of the value added of the non-financial business economy.

According to the World Bank, Croatia can be considered as a high-income market economy (World Bank, World Bank Country Classifications 2008, 2009). Eurostat data show that in 2012 the Croatian nominal GDP stood at EUR 44 billion (0.3% of EU-28 total), while the purchasing power parity GDP per capita was EUR 10,300. In 2011, economic output was dominated by the service sector which accounted for 66% of GDP, followed by the industrial sector with 27.2% and agriculture accounting for 6.8% of GDP. According to 2011 data, 2.7% of the workforce was employed in agriculture, 32.8% by industry and 64.5% in services. Tourism has the potential to contribute towards employment and economic growth, as well as to development in rural, peripheral or less-developed areas because *tourism dominates the Croatian service sector and accounts for up to 20% of Croatian GDP.* Annual tourist industry income for 2012 was estimated at EUR 6.83 billion. Its positive effects are felt throughout the economy of Croatia in terms of increased business volume observed in retail business, processing industry orders and summer seasonal employment. The industry is considered an export business, because it significantly reduces the country's external trade imbalance. The bulk of the tourist industry is concentrated along the Adriatic Sea coast, offering services ranging from mass tourism to catering and various niche markets, the most significant being nautical tourism and cultural tourism. Inland areas offer mountain resorts, agritourism and spas. Zagreb is also a significant tourist destination, rivaling major coastal cities and resorts.

Out of the 3.4 million enterprises in the tourism industries in the EU in 2010, 56 % were located in four Member States: Italy, Spain, France and Germany. Croatia accounted for only 0.87% enterprises in the EU tourism industries EU and only 0.57% enterprises in the EU Accommodation and food sector (see Table 1).

Table 1: **Number of enterprises in selected countries in EU, 2010**

			Tourism industries, of which					
	Total non-financial business economy (1)	of which: **Tourism industries (2)**	**Transport related (3)**	**Accom-modation related (4)**	**Food related (5)**	**Real estate (6)**	**Car and other rental (7)**	**Travel agencies and tour operator (8)**
EU 28	21,927,107	3,389,515	340,455	269,634	1,494,827	1,146,330	46,741	91,525
DE	**2,073,915**	**426,330**	**23,844**	**44,768**	**168,380**	**174,515**	**4,374**	**10,449**
IE	152,693	25,744	:	2,136	12,799	8,428	:	463
ES	**2,500,574**	**473,932**	**62,067**	**23,197**	**:**	**120,815**	**3,324**	**10,798**
FR	**2,513,679**	**438,861**	**38,833**	**36,650**	**195,552**	**149,724**	**12,140**	**5,962**
HR	**165,490**	**29,589**	**2,309**	**2,631**	**16,663**	**5,483**	**592**	**1,911**
IT	**3,867,813**	**561,319**	**28,864**	**44,498**	**247,773**	**222,083**	**3,815**	**14,286**
CY	46,354	7,881	1,150	543	4,799	683	187	519
NL	777,869	81,345	6,442	7,157	33,047	29,917	1,511	3,271
AT	301,739	68,638	5,350	14,934	28,936	17,163	701	1,554
PT	861,135	128,736	11,679	6,478	78,473	29,019	724	2,363
SI	115,243	12,205	1,150	1,011	7,091	2,135	181	637
UK	618,478	219,659	11,299	15,077	107,022	75,289	4,607	6,365

Source: Eurostat (sbs_na_sca_r2), (sbs_na_1a_se_r2)

In terms of employment (see Table 2), Germany recorded 2.7 million persons employed in the tourism industries, followed by the United Kingdom (2.5 million), Italy (1.8 million) and Spain (1.7 million). Croatia recorded 0.124 million persons employed in the tourism industries. The highest shares of employment in the tourism industries in the total non-financial business economy were observed in Ireland (18 %) and the Netherlands (15 %), followed by Austria, the United Kingdom and Spain (14 %). *Share of employment in the tourism industries in the total non-financial business economy in Croatia was 11.5%. This is close to the recorded share at the EU-28 level (11.4%).*

Table 2: **Number of persons employed in selected countries in EU, 2010**

			Tourism industries, of which					
	Total non-financial business economy (1)	of which: **Tourism industries (2)**	**Transport related (3) parts NACE H49,H50, H51**	**Accommodation related (4) NACE I55**	**Food and beverage serving activities (5) NACE I56**	**Real estate (6) NACE L68**	**Car and other rental (7)**	**Travel agencies and tour operator (8)**
EU28	133,577,542	15,215,768	2,092,691	2,365,274	7,426,892	2,649,377	181,414	499,767
DE	24,932,382	2,702,381	296,824	495,870	1,360,303	44,747	24,633	84,004
IE	1,080,859	189,605	:	45,859	93,753	21,597	:	4,495
ES	11,989,152	1,654,188	188,139	252,265	:	202,050	17,385	54,174
FR	15,208,233	:	395,341	201,107	763,751	299,193	:	39,418
HR	1,075,442	123,510	13,191	32,421	59,940	10,477	1,314	6,167
IT	15,309,796	1,817,243	158,906	284,259	965,607	346,183	13,358	48,925

	Total non-financial business economy (1)	of which: Tourism industries (2)	Tourism industries, of which					
			Transport related (3) parts NACE H49,H50, H51	Accommodation related (4) NACE I55	Food and beverage serving activities (5) NACE I56	Real estate (6) NACE L68	Car and other rental (7)	Travel agencies and tour operator (8)
CY	242,049	:	:	16,874	23,151	1,700	731	2,640
NL	3,864,883	586,079	109,793	73,698	288,485	82,137	8,102	23,864
AT	2,557,287	366,673	47,069	105,232	155,329	44,570	3,291	11,182
PT	3,257,064	:	:	54,019	234,186	51,311	4,374	9,965
SI	604,720	:	:	10,334	23,164	5,069	319	1,898
UK	17,738,876	2,487,677	243,845	378,338	1,247,572	473,598	43,160	101,166

Source: Eurostat (sbs_na_sca_r2), (sbs_na_1a_se_r2)

EU-28 tourism industries accounted for 5.58 % of the total turnover and 9.37% of the total value added at factor cost. For *Croatia as an small EU economy* turnover and value added of the tourism industries amounted to EUR 4.19 billion and EUR 1.78 billion, respectively (Eurostat, 2010). Expressed as a share of the total non-financial business economy, *Croatia's tourism industry accounted for 5.38 % of the total turnover and 8.31 % of the total value added at factor cost*. Its indicated that Croatia continues stabile growth regarding tourism industries. Follow by positive trend measured with an increase relative to GDP in % the growth in international tourism receipts matched the growth in arrivals.

We analyze ranking top tourism destination according to two key tourism indicators: *international tourist arrivals* and *international tourism receipts*. In 2012, France, Spain, Italy and Germany were the most common tourism destinations in the EU-28 for non-residents (people coming from abroad). Croatia, with 10.4 million international arrivals and EUR 8.8 million receipts, is ranked eleventh. The number of nights spent (nights spent by residents and non-residents at tourist accommodation establishments per inhabitant) provides an indicator of *tourism intensity*. In 2012, using this measure, the Mediterranean destinations of Malta, Cyprus, Croatia, and Austria were the most popular tourist destinations in the EU-28 (Eurostat, 2012). According to the quantitative projections of international tourism demand over a 20-year period by region presented in Tourism Towards 2030, international tourist arrivals in destinations in Central and Eastern Europe and Eastern Mediterranean Europe will grow at double the pace (+4.4% a year) (UNWTO Tourism Highlights, 2013: 14).

Economic aspects of international travel. Visitor expenditure on accommodation, food and drink, local transport, entertainment and shopping is an important contributor to the economy. We measured the economic importance of international tourism by looking at *the ratio of international travel receipts relative to GDP*. In 2012, the ratio of travel receipts to GDP was the highest in Croatia (15.5 %), Malta (14.4 %) and Cyprus (11.4 %), confirming the high importance of tourism to these countries (see Table 3).

Table 3: **Travel receipts and expenditure in balance of payments in selected EU countries, 2008–2012**

	Receipts (EUR million)			Expenditures (EUR million)		
	2008	**2012**	**Relative to GDP, (2012,%)**	**2008**	**2012**	**Relative to GDP, (2012,%)**
EU28	74,301	95,355	0.7	90,428	90,912	0.7
DE	**27,137**	**29,666**	**1.1**	**61,854**	**65,238**	**2.4**
IE	4,287	3,174	1.9	7,046	4,988	3.0
ES	**41,901**	**43,521**	**4.2**	**13,834**	**11,911**	**1.2**
FR	**38,465**	**41,794**	**2.1**	**27,926**	**28,923**	**1.4**
HR	**7,448**	**6,819**	**15.5**	**766**	**715**	**1.6**
IT	31,090	32,067	2.0	20,922	20,365	1.3
CY	**1,869**	**2,023**	**11.4**	**1,084**	**995**	**5.6**
MT	**729**	**985**	**14.4**	**210**	**265**	**3.9**
NL	9,072	10,809	1.8	14,777	15,705	2.6
AT	14,677	14,706	4.8	7,721	7,881	2.6
PT	**7,440**	**8,606**	**5.2**	**2,939**	**2,946**	**1.8**
SI	**1,827**	**2,007**	**5.7**	**922**	**715**	**2.0**
UK	24,612	28,528	1.5	46,788	41,055	2.1

Source: Eurostat (bop_q_eu), (bop_its_det) and (nama_gdp_c)

Previous trend analysis in the tourism sector based on selected indicators: Number of enterprises, Number of person employed, Turnover (EUR million), Value added at factor cost (EUR million), International Tourism Receipts (EUR million) and Expenditures (EUR million), confirmed two important points: (1) *Tourism has the potential to contribute towards employment and economic growth, and (2) Tourism can play a significant role in the development of the economies of Croatia and Europe.*

The growth of the tourism sector has been crucial for many countries, offering employment opportunities and a considerable revenue stream; this is particularly true for a number of European member economies which have been transformed by a vibrant tourism industry. The data for expenditure in 2008 and 2012 presented in Table 8 show that tourists from the EU-28 spent less abroad (EUR 90.9 billion) in 2012 than international tourists spent in the EU-28 (EUR 95.5 billion). Surplus of receipts over expenditure was recorded in 19 Member States including Croatia. By contrast, tourists from Croatia spent several times less abroad (EUR 715 million) than international tourists spent in Croatia (EUR 6.6 billion) in the same year. This indicator confirms that the tourism sector has a strong impact on the growth of economy for Croatia as well as for the Mediterranean countries (such as Greece, Spain, Cyprus and Malta).

3. INNOVATION IN CROATIA'S ENTERPRISES ACCORDING TO CIS SURVEY

The demand for new hotel services, whether by businesses or for private purposes, tends to fluctuate more strongly than the demand for many other products or services. Business demand tends to fluctuate with the economic cycle, and individuals are more likely to curb their spending on tourism activities during periods of low consumer confidence. Apart from economic fluctuations, investment by enterprises in the tourism sector in innovation activities can also have a considerable impact on demand. Underlining the importance of the tourism sector and the international nature of business and leisure travel, our analysis in this part of the paper will focus on marketing and organizational innovation, testing the correlation between trends and challenges facing enterprises. This analysis is based on data collected on a regular basis by Eurostat in particular community innovation statistics (CIS) and selected innovation indicators and variables that are collected for Croatia's enterprises and for enterprises in selected countries. The focus is on innovation in the tourism sector - *Accommodation and food service activities* (NACE code I55-I56), which is an important engine of growth for the economies and labor markets of many countries.

The analysis refers to two types of innovation (marketing and organizational innovation), four selected indicators and eight variables: *Enterprise with organizational and marketing innovation (CIS data codes: inn_cis7_mo; and inn_cis6_mo); Implementation type of a new marketing method (CIS data codes:inn_cis6_mktype; and inn_cis7_mktype); Highly important objectives for organizational innovation (CIS data codes:inn_cis7_orobj; and inn_cis6_orobj); and Highly important objectives for marketing innovation (CIS data codes:inn_cis7_mkobj; and inn_cis6_mkobj)* – first at the Croatian level, then at the level of selected countries. The main aim of this analysis is to explore the correlation between innovation variables and objectives, and estimate their impact on business changes in tourism enterprises.

According to the data reported in the CIS survey[3] on innovation activities in Croatian enterprises in the period from 2008 to 2010, the share of product and process innovators and organizational and marketing innovators in the Croatian economy was almost equal and those two groups of innovations were usually simultaneously introduced in an enterprise. Innovative enterprises introducing both groups of innovations were more frequent in industrial enterprises (24.1%) than in service enterprises (15.7%). Almost half of large enterprises (49.9%) introduced a product and process innovation and organizational and marketing innovation simultaneously, unlike 16.1% of small enterprises (CBS, 2012). A similar trend was recorded in the period 2006-2008. Innovative enterprises introducing both groups of innovations were more frequent in industrial enterprises (26.9%) than in service enterprises (17.0%). More than a half of the large enterprises (54.9%) introduced a product and process innovation

[3] The Community Innovation Survey (CIS) is designed to monitor the progress of innovation activity in Europe. It allows a better understanding of the innovation process and analyses the links between innovation and economic fields as competitiveness, employment, economic growth. The survey is conducted every two years. Seven waves of CIS have been launched so far. Our analysis is based on the two latest waves, CIS 2010 (enterprises with innovation activities in time period 2008-2010), and CIS 2008 (enterprises with innovation activities in time period 2006-2008).

and organizational and marketing innovation simultaneously, unlike 16.3% of small enterprises. (CBS, 2012)

Table 4: **Distribution of innovative enterprises by size and by region for the period 2006-2010**

NUTS regions	Size	Share in total number enterprises by size								Share in innovative enterprises				Share Non-innovators enterprises in total number of enterprises	
		Innovators		Product and process innovators only		Organizational and marketing innovators only		Product and process and organizational and marketing innovators simultaneously		Innovators		Organizational and marketing innovators only			
		CIS 2008	CIS 2010	CIS 2008	CIS 2010	CIS 2008	CIS 2010	CIS 2008	CIS 2010	CIS 2008	CIS 2010	CIS 2008	CIS 2010	CIS 2008	CIS 2010
RH / NUTS 1	Small enterprises	34,28	33,44	8,09	6,51	9,87	10,79	16,33	16,14	23,59	19,45	28,78	32,28	65,72	66,56
	Medium-sized enterprises	55,25	50,86	11,60	13,42	10,28	11,51	33,37	25,92	21,00	26,39	18,61	22,64	44,69	49,21
	Large enterprises	72,92	69,03	10,42	11,80	7,55	7,37	54,95	49,85	14,29	17,09	10,36	10,68	27,08	30,97
	Total	39,19	37,27	8,77	7,74	9,85	10,78	20,56	18,76	22,38	20,76	25,14	28,92	60,81	62,72
NUTS2_HR01	Small enterprises	36,40	37,32	8,17	7,82	11,68	12,19	16,54	17,75	22,46	20,72	32,10	32,29	63,6	62,22
	Medium-sized enterprises	59,43	55,60	10,26	13,42	12,29	10,37	36,99	31,81	17,27	24,13	20,68	18,66	40,45	44,54
	Large enterprises	80,79	73,74	9,36	10,06	8,37	7,83	63,05	55,31	11,59	13,64	10,37	10,61	18,72	26,26
	Total	41,76	41,59	8,55	8,70	11,64	11,78	21,57	21,09	20,48	20,92	27,87	28,31	58,24	58,41
NUTS2_HR02	Small enterprises	32,70	26,82	8,54	6,33	7,08	6,40	17,08	14,08	26,11	23,62	21,66	23,87	67,3	73,18
	Medium-sized enterprises	47,51	47,84	11,09	17,58	7,92	9,22	28,51	21,33	23,33	36,75	16,67	19,28	52,49	51,87
	Large enterprises	58,97	58,82	8,97	11,76	3,85	4,41	46,15	42,65	15,22	20,00	6,52	7,50	39,74	41,18
	Total	36,84	31,86	9,14	8,58	7,14	6,85	20,56	16,43	24,81	26,94	19,38	21,49	63,16	68,14
NUTS2_HR03	Small enterprises	31,99	30,31	7,70	4,49	8,71	11,07	15,58	14,75	24,07	14,81	27,22	36,53	68,05	69,69
	Medium-sized enterprises	55,10	45,56	14,10	10,44	9,09	15,11	31,73	20,00	25,59	22,93	16,50	33,17	44,9	54,67
	Large enterprises	67,31	67,39	13,46	15,22	9,62	7,61	44,23	44,57	20,00	22,58	14,29	11,29	32,69	32,61
	Total	36,67	33,60	8,88	5,66	8,77	11,55	19,02	16,38	24,22	16,86	23,90	34,38	63,33	66,40

Source: CIS 2010, CIS 2008, authors' calculation

From Table 4 it can be seen that in Northwestern Croatia frequent innovation is in organization and marketing (11.6 %) compared with the innovation of products and processes (8.55 %).In Central and Eastern (Pannonian) Croatia product and process innovations (9.14 %) are more frequent relative to innovation in organization and marketing (7.14 %), while in Adriatic Croatia both types of innovations are equally present (product and process innovations with 8.88 % and innovation in organization and marketing with 8.77%). Product innovation and process innovation in organization and marketing in all three NUTS2 regions appear simultaneously in companies. From this we can conclude that the introduction into the market of new products or services or new manufacturing processes is generally followed by changes in the business practices of the company, new methods of work organization and decision-making, new methods of organizing relations with other firms, as well as changes in marketing concepts or strategies. In this trend there is no difference between NUTS2 regions in Croatia. If we observe the distribution of product and process innovation parallel with innovation in organization and marketing, it is clear that the share of such innovation in all three regions increases with firm size.

Data availability for marketing and organizational innovation in Accommodation and food sub-sectors show that these types of innovations were introduced by enterprises in the following Member States: DK, ES, HR, MT, NL, CZ, FR and NL. In 2010, 73.83% of enterprises in the Accommodation and food sector in Croatia introduced organizational and/or marketing innovation. In 2008, this percentage amounted to 57.14%, the lowest among all countries analyzed (see Table 5).

Table 5: **Enterprises with organizational and marketing innovation, in %**

Country	Enterprises that introduced organizational and/or marketing innovation	Of which: Enterprises that introduced organizational innovation	Of which: Enterprises that introduced marketing innovation
CIS2010			
Denmark	0.6833	0.4667	0.6333
Spain	0.4892	0.3746	0.3099
Croatia	0.7383	0.5638	0.6711
Malta	0.76	0.56	0.68
Netherlands	0.4413	0.2417	0.3842
CIS 2008			
Czech Republic	0.6512	0.7772	0.4085
Spain	0.8055	0.9092	0.2091
France	0.7196	0.7629	0.3542
Croatia	0.5714	0.7218	0.3759
Malta	0.6429	0.3571	0.1429
Netherlands	0.6246	0.4426	0.0495
CIS 2010 total all enterprises*			
CIS2010			
Denmark	0.4402	0.3583	0.2818
Spain	0.2847	0.241	0.1511
Croatia	0.3308	0.2286	0.2421

Country	Enterprises that introduced organizational and/or marketing innovation	Of which: Enterprises that introduced organizational innovation	Of which: Enterprises that introduced marketing innovation
Malta	0.326	0.2641	0.2063
Netherlands	0.3806	0.3006	0.231
CIS 2008			
Czech Republic	0.4704	0.3399	0.3564
Spain	0.3094	0.2701	0.155
France	0.3977	0.3379	0.2093
Croatia	0.3392	0.2464	0.2548
Malta	0.2685	0.1885	0.181
Netherlands	0.2993	0.2133	0.1825

Source: Eurostat, (CIS data codes: inn_cis7_mo; and inn_cis6_mo);*All Core NACE activities related to innovation activities (B, C, D, E, G46, H, J58, J61, J62, J63, K and M71)

The highest percentage of innovative enterprises implementing different types of new marketing methods (marketing innovations) in the Accommodation and food sector were recorded in Croatia between 2008 and 2010 (see Table 6).

Table 6: **Implementation type of a new marketing method**

Country	Enterprises that introduced significant changes to the aesthetic design or packaging	Enterprises that introduced new media or techniques for product promotion	Enterprises that introduced new methods for product placement	Enterprises that introduced new methods of pricing goods or services
CIS2010				
Spain	0.1471	0.8129	0.4762	0.5403
Croatia	0.4085	0.7277	0.4507	0.615
Malta	0.3429	0.8	0.2857	0.3429
Netherlands	0.0968	0.9124	0.4156	0.2914
CIS 2008				
Czech Republic	0.538	0.9254	0.2986	0.7411
Spain	0.3617	0.641	0.5213	0.5053
France	0.5401	0.7718	0.3676	0.6761
Croatia	0.5161	0.6839	0.4903	0.471
Malta	0.3571	0.6429	0.2143	0.5714
Netherlands	0.2205	0.7866	0.4053	0.417

Source: Eurostat, (CIS data codes:inn_cis6_mktype; and inn_cis7_mktype)

The main type of marketing activities focused on introducing new media or techniques for product promotion. A similar trend was observed in Spain. The eight variables presented in terms of *highly important objectives for organizational innovation* (Table 7) and *highly important objectives for marketing innovation* (Table 8) recorded a relatively high share in Croatia, follow by Spain and France.

Table 7: **Highly important objectives for organizational innovation**

Country	Enterprises for which reducing time to respond to customer or supplier needs is a highly important objective	Enterprises for which improving ability to develop new products or processes is a highly important objective	Enterprises for which improving quality of goods or services is a highly important objective	Enterprises for which reducing costs per unit output is a highly important objective	Enterprises for which improving communication or information sharing is a highly important objective
CIS2010					
Spain	0.5815	0.183	0.6792	0.3534	0.2281
Croatia	0.619	0.3333	0.7619	0.5357	0.619
Malta	0.7857	0.4286	0.7143	0.5	0.2857
CIS2008					
Czech Republic	0.2757	0.3218	0.6308	0.5639	0.4606
Spain	0.483	0.1718	0.6483	0.235	0.3112
France	0.5235	0.3736	0.7808	0.3818	0.431
Croatia	0.5714	0.7218	0.3759	0.4511	0.4737
CIS 2010 total all enterprises*					
CIS2010					
Spain	0.5653	0.373	0.5738	0.3875	0.3865
France	0.5188	0.4014	0.6094	0.374	0.3662
Croatia	0.4632	0.3581	0.6145	0.3709	0.3838
Malta	0.6667	0.4296	0.6296	0.4222	0.4148
CIS2008					
Czech Republic	0.3918	0.3727	0.5315	0.3634	0.3205
Spain	0.5509	0.2978	0.5335	0.3114	0.3916
France	0.4812	0.3101	0.5897	0.3678	0.3311
Croatia	0.4854	0.35	0.5817	0.35	0.4667

Source: Eurostat, (CIS data codes:inn_cis7_orobj; and inn_cis6_orobj);*All Core NACE activities related to innovation activities (B, C, D, E, G46, H, J58, J61, J62, J63, K and M71)

Analysis of variables regarding *highly important objectives for organizational innovation* (Table 7) were reported on: *reducing time to respond to customer or supplier needs, and on improving quality of goods or services* as a highly important objectives for enterprises. Highly important objectives for marketing innovation (Table 8) was reported on *activities which contributed increasing or maintaining market share*.

Table 8: **Highly important objectives for marketing innovation**

Country	Enterprises for which increasing or maintaining market share is a highly important objective	Enterprises for which introducing products to new customer groups is a highly important objective	Enterprises for which introducing products to new geographic markets is a highly important objective
CIS2010			
Spain	0.7061	0.5848	0.2545
Croatia	0.72	0.61	0.2
Malta	:	0.0588	0.1765
CIS 2008			
Czech Republic	0.7506	0.3274	0.0538
Spain	0.3856	0.3457	0.2021
France	0.6303	0.3563	0.2387
Croatia	0.4194	0.3935	0.1355

Source Eurostat, (CIS data codes:inn_cis7_mkobj; and inn_cis6_mkobj)

The analysis results obtained by the correlation coefficient show a high degree of correlation between the observed variables in the range 0.996 to 0.999.

The performance analysis of type of marketing and organizational innovations and variables (see Table 5 and table 7) regarding important objectives for introducing organizational and marketing innovation and implementing new methods (see Table 6 and table 8) carried out for enterprises in the tourism sub-sector I 55 – 56 in the period from 2006 to 2010 clearly illustrates that the impact of innovation on the growth of the tourism sector has been important for both Croatia and the countries analyzed.

Analysis of the impact of innovation activities in selected countries (Croatia, Malta, Spain, Netherland and Denmark) that have had innovation in enterprises in the tourism sub-sector I55 and I56 shows a mixed picture of the impact of the variables measured, according to the calculated correlation coefficients. The following variables were analyzed and the following correlation coefficients (CORREL) obtained:

- Enterprises that introduced organizational and marketing innovation in Accommodation and food service activities /Receipts (EUR million) Relative to GDP,% *(CORELL: 0.752),*
- Enterprises that introduced organizational innovation in Accommodation and food service activities/ Receipts (EUR million) Relative to GDP,% (*CORELL: 0.815*),
- Enterprises that introduced marketing innovation/ Receipts (EUR million) Relative to GDP,% *(CORELL: 0.661),*
- Enterprises that introduced organizational innovation in Accommodation and food service activities /International tourist arrivals, share %, 2012 *(CORREL: -0.275),*
- Enterprises that introduced marketing innovation / International tourist arrivals, share %, 2012 *(CORREL: - 0.718).*

4. SOME REMARKS INSTEAD OF A CONCLUSION

This article takes a look at recent statistics on tourism in Croatia and in the European Union (EU), in particular the final results for 2006-2010 evolutions. Although the paper focuses on innovation in the tourism sector (NACE I 55 and I 56 - Accommodation and food service activities), it also looks at trends in tourism industries and the non-financial business economy regardless of selected countries.

This article presents recent statistics on the tourism industries in Croatia and the European Union. In this paper analysis is based on economic data extracted from Eurostat community innovation statistics (CIS database) and other areas of official statistics, in particular structural business statistics (SBS), with the aim of providing a more complete economic picture of this sector, which is an important engine of growth for the economies and labor markets of many countries. Main statistical findings presented refer to six selected indicators: number of enterprises, number of persons employed, turnover, value added at factor cost, travel receipts and expenditure – first at the EU level, and then at the country level.

In 2010, more than one in seven enterprises in the European non-financial business economy belonged to the tourism industries. These 3.4 million enterprises employed an estimated 15.2 million persons. Enterprises in industries with tourism related activities accounted for 11 % of the persons employed in the non-financial business economy and 29 % of persons employed in the services sector.

EU-28 tourism industries accounted for 5.58 % of the total turnover and 9.37 % of the total value added at factor cost. *Croatia's tourism industries accounted for 5.38 % of the total turnover and 8.31 % of the total value added at factor cost*. Its indicated that Croatia continues stabile growth regarding tourism industries. Followed by a positive trend measured with an increase relative to GDP in % (Table 8), the growth in international tourism receipts matched the growth in arrivals.

The growth of the tourism sector has been crucial for Croatia and many Member States, offering employment opportunities and a considerable revenue stream. The data for 2008 and 2012 presented in Table 8 regarding expenditure show that tourists from the EU-28 spent less abroad (EUR 90.9 billion) in 2012 than international tourists spent in the EU-28 (EUR 95.5 billion). Surplus of receipts over expenditure was recorded in 19 Member States including Croatia. By contrast, tourists from Croatia spent several times less abroad (EUR 715 million) than international tourists spent in Croatia (EUR 6.6 billion) in the same year. The economic importance of international tourism was measured by looking at the ratio of international travel receipts relative to GDP. In 2012, the ratio of travel receipts to GDP was the highest in Croatia (15.5 %), Malta (14.4 %) and Cyprus (11.4 %), confirming the importance of tourism to these countries (see Table 5). This indicator confirms that the tourism sector has a strong impact on the growth of economy in Croatia as well as in the Mediterranean countries (such as Greece, Spain, Cyprus and Malta).

The impact of innovation on the growth of enterprises operating in the tourism sector in Croatia was assessed on the basis of the following variables: number enterprises, number of persons employed, turnover (EUR million), GVA (EUR million) and international tourist arrivals (in 1000s). There is a high degree of correlation between the observed variables, in the range 0.996 to 0.999.

Marketing and organizational innovation in Accommodation and food sub-sectors was introduced by enterprises in the following Member States: DK, ES, HR, MT, NL, CZ, FR and NL. In 2010, 73.83% of enterprises in the Accommodation and food sector in Croatia introduced organizational and/or marketing innovations. In 2008, this percentage was 57.14%, the lowest among all countries analyzed. The main type of marketing activities focused on introducing new media or techniques for product promotion. A similar trend was observed in Spain. The eight variables presented in terms of *highly important objectives for organizational innovation* (Table 12) and *highly important objectives for marketing innovation* (Table 13) recorded a relatively high share in Croatia, follow by Spain and France. The performance analysis of type of marketing and organizational innovations and variables assessed for enterprises in the tourism sub-sector I 55 – 56 in the period from 2006 to 2010 clearly illustrates that the impact of innovation on the growth of the tourism sector has been important for Croatia and the countries analyzed.

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Emira Becic, PhD, Senior Adviser
Ministry of Science, Education and Sports
Directorate for Science and Technology
Donje Svetice 38, 10000 Zagreb, Croatia
Tel.: . + 385 1 45 94 515
Fax: + 385 1 45 94 429
E-mail: emira.becic@mzos.hr

Kristina Črnjar, PhD, Assistant Professor
University of Rijeka
Faculty of Tourism and Hospitality Management, Opatija
Primorska 42, 51410 Opatija, Croatia
Tel.: +385 51 294 715
Fax: +385 51 292 945
E-mail: kcrnjar@fthm.hr

Mauro Licul, Graduate student
University of Rijeka
Faculty of Tourism and Hospitality Management
Primorska 42, 51410 Opatija, Croatia
Tel.: +385 51 294 715
Fax: +385 51 292 945
E-mail: ds1764@fthm.hr