The Model for Synergic Effect between Traffic and Tourism in Dubrovnik-Neretva County of the Republic of Croatia by 2020.

Model sinergijskog učinka prometa i turizma Dubrovačko-neretvanske županije RH do 2020. godine

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Summary

This paper studies the synergic relationship between traffic and tourism in Croatia's Dubrovnik-Neretva County by the 2020., based on the idicators detected in 2014. It elects the variables that characterise the synergy of traffic and tourism i, speaking from the standpoint of traffic and geography, in the most problematic county in the Republic of Croatia. The basic hypothesis has been confirmed through scientifically obtained research results, through the quantification of the model's variables and the direct growth rates of the designed model. On the basis of scientific insights into the sustainable development of traffic and tourism in Dubrovnik-Neretva County, it is possible to propose a new information model for traffic at the service of the sustainable development of tourism in the County for period 2014.-2020.

Sažetak

Predmet istraživanja u ovom radu je sinergijski odnos prometa i turizma Dubrovačko-neretvanske županije do 2020. godine na osnovi pokazatelja iz 2014. godine. Određene su varijable koje karakteriziraju sinergiju prometa i turizma u prometno i geografski najproblematičnijoj županiji Republike Hrvatske. Temeljna znanstvena hipoteza dokazana je poslije znanstveno utemeljenih rezultata istraživanja, kroz kvantifikaciju varijabli modela i preko izravnih stopa rasta oblikovanog modela. Na temelju znanstvenih spoznaja o održivom razvoju prometa i pomorskog turizma Dubrovačko-neretvanske županije predložen je novi informacijski model prometa u funkciji održivog razvoja turizma Dubrovačko neretvanske županije od 2014. do 2020. godine.

1. INTRODUCTION / *Uvod*

The concept of Adriatic maritime orientation, as a part of Croatia's policy and strategy in the development of economy and tourism, will be implemented if all parties realize that modern traffic infrastructure has to reach all corners of the Republic of Croatia. The roads should not end at the shores – they should reach the islands. This involves the growth of island tourism capacities and the renewal of the ferry fleet. However, the increase of tourism capacities should be based on the principles of sustainable development and should be in line with the spatial features and constraints.

Connection of Croatia's north-eastern regions (Slavonia) with the south-east (Dalmatia) can be performed in the fastest and most natural way through the Republic of Bosnia and Herzegovina, by roads and railways running to the traffic node at Dalmatia's port of Ploče. The completion of the motor way Split-Dubrovnik is of vital importance for the economic development of the entire south. Southern parts of Dalmatia will be much more accessible to tourists, which will result in tourism income growth, higher standard of living across the coastal and insular populations, and lower rate of depopulation. In addition, the tourism in Dubrovnik-Neretva County

would not be so heavily reliant on air transfers.

As in other countries in transition, large investments will be necessary in the areas of transport and tourism services. Hence it will be necessary to achieve the liberalisation of foreign investments in transport companies, ports, infrastructural facilities, hotels, restaurants and real estate, and to shape the design of the sustainable development of transport within the context of tourism service development.

The tourism season in Dubrovnik-Neretva County should be extended by providing special forms of tourism

services, e.g. medical services, in a more intensive and enhanced way.

2. SUSTAINABLE DEVELOPMENT OF TOURISM IN CROATIA / *Održivi razvoj turizma u RH*

Prior to exploring the sustainable development of tourism in Dubrovnik-Neretva County, it is necessary to examine the state of the sustainable development of maritime tourism in the Republic of Croatia.

Foreign tourists arrive to Croatia mostly by their own cars or other forms of road transport (92.6%), whereas other means of transport are significantly less used (trains 0.4%, airplanes 5.5%, vessels 1.5%) [2].

As modern tourism trends are characterised by mass travels at very long distances [1], traffic systems have to deal with numerous challenges regarding the transport of large number of tourists over vast and geographically varying areas [7]. With regard to Dubrovnik-Neretva County, the first requirement – the long distance travelling – can be met by air transfers, whereas the large number of tourists can be best handled by modern and fast railways. In addition, the County needs a well structured road and sea transport system [6].

The European Union grants non-returnable funds to support the development of intermodal transport where cargo vehicles are used to cover shorter distances of up to 50 km, whereas beyond that limit the transportation should be organised by railways and waterways [5].

11,455,677 tourists visited Croatia from January to December 2013., i.e. 8% more than in the previous year. 9,926,674 among them were foreign tourists, which was a 9 per cent increase. Accordingly, the total overnight stays amounted to 60,354,275. Foreign tourists participated in this 7% increase by 90.7 per cent, while local tourists participated by 9.3 per cent [3]. The region of Dalmatia saw 4,497,049 arrivals and 25,481,565 overnights, with Dubrovnik-Neretva County accommodating 1,046,826 tourists (6.5% increase), making 4,775,161 (5.2 per cent more) overnights [3]. Out of 11,455,677 tourists, 4,499,231 stayed at hotels (8.9% more), 2,934,727 found accommodation in private homes

(9.3% more), whereas camping facilities accommodated 2,204,921 tourists (8% more than in 2012) [3].

From January to December 2013. there were 830 cruise travels of foreign vessels in the Republic of Croatia. These vessels accommodated 1,141,454 passengers, staying in Croatia for 1659 days, i.e. on average two days per person [2]. With regard to the structure of foreign cruise ship travel, the Dubrovnik-Neretva County is the area where most of these vessels made their first entrance into the territorial waters of the Republic of Croatia (71.3 per cent) [2].

The Croatian Civil Aviation Agency reported that Croatian airports handled 5,554,026 passengers in 2013, 7.2% more than in 2012. Last year there was an increase in passenger traffic at all Croatian airports [2]. The busiest among them was Zagreb Airport with 2,224,010 passengers during 2013, which was 7.56% more than the year before. Dubrovnik Airport remained the second busiest airport in Croatia, handling 1,332,733 passengers (+ 5.96%), tightly followed by Split Airport with the turnover of 1,272,317 passengers (+ 7.10%) [2].

3. TRAFFIC INFRASTRUCTURE OF DUBROVNIK-NERETVA COUNTY / *Prometna infrastruktura Dubrovačko-neretvanske županije*

The lack of an appropriate highway connecting the County to the neighbouring regions in Croatia and abroad represents the most serious issue. It would be rather beneficial to resume the construction of the motorway that has already connected the northern and southern counties towards the City of Dubrovnik.

Certain sections of the county road network are in poor state so it would be necessary to build, reconstruct and modernise local and county roads (renewal of asphalt being the most urgent priority), and build adequate parking lots, walking and cycling tracks. The construction of alternative routes should be foreseen in order to cope with natural disasters and other emergencies. The City of Dubrovnik often experiences traffic jams, therefore the city's traffic issues should be systematically addressed. It is also necessary to

carry out an urgent reconstruction of the county road between the City of Dubrovnik and the Dubrovnik Airport at Čilipi.

Furthermore, traffic infrastructure is not sufficiently adapted to the disabled and therefore requires redesigning and adjustment.

There are no programs for the development of services and economic activities related to the further growth of the railway traffic from the Port of Ploče to the state border. The railway traffic system in this area requires development plans, investments and modernisation.

The activities regarding the construction of the airports and emergency helipads, as anticipated and specified by the County Spatial Plan, should be started. The reconstruction of Dubrovnik Airport at Čilipi will significantly improve the transfer of tourists, e.g. the ones using cruising services.

Current passenger vessels and ferries are potential threats to the marine environment due to their age. Coastal shipping is strategically essential for the future of the islands but has not been sufficiently developed. Inter-island connections are particularly insufficient. Maritime infrastructure (quays and piers at islands and Pelješac peninsula) is not adequate, i.e. it is not adjusted to adverse weather conditions. Investment should be encouraged in the maritime infrastructure in order to facilitate safe berthing in all weathers and raise the quality of the overall maritime traffic system. The state and local governments should foster further development of the coastal passenger traffic and significantly improve the connections between the islands and the mainland as well as inter-island links. It is necessary to introduce the system of intermodal traffic towards Gruž passenger terminal in Dubrovnik.

Potential traffic difficulties, arising from the implementation of the Schengen Regime at the border with Bosnia and Herzegovina, have not been taken seriously by the persons in charge. [9]

Table 1 shows continuous increase in tourist arrivals over the period 2011-2014. The growth ranges from 7.3% to 8.46%. [10]

Table 1 Tourist arrivals to Dubrovnik-Neretva County
Tablica 1. Dolasci turista u Dubrovačko-Neretvansku Županiju

Year	2011	2012	Index 12/11	2013	2014	Index 14/13
Arrivals	1047000	1123000	107,3	1241254	1346281	108,46

Source: Authors

4. TOURISM IN DUBROVNIK-NERETVA COUNTY / *Turizam u Dubrovačko-neretvanskoj županiji*

Tourism services have been under-developed in certain municipalities and towns; therefore the growth of these destinations requires more attention and investment. Tourism activities are concentrated on a limited area over a limited period of time, creating a huge pressure on the infrastructure and environment. It is necessary to design programs and facilities that would extend the relatively short tourist season. The tourist service is uniform and monotonous. Selective forms of tourism have not been sufficiently developed, e.g. nautical tourism and rural tourism. There is a lack of high-quality facilities in tourist resorts so that further investment in this sector of tourism industry is needed. Former military facilities stand abandoned and unused at attractive locations – they should be redesigned and brought into use for the benefit of tourism development.

There is a shortage of skilled and educated staff who might provide high-quality services and it is necessary to foster continuous education and training of the personnel employed in tourism industry. This also implies the changes in conducting corporate business through supplementary education and counselling of entrepreneurs, introduction of modern processes, investment in development and creation of value-added products and services.

As the quality of business environment is rather low and the institutions supporting the entrepreneurship and its financing are insufficiently developed, it is necessary to design and implement the programs aiming to strengthen the competitiveness of the economy, particularly in small and medium entrepreneurship. The county should design and implement the investment attracting strategy, systematically enhance the business environment, financing support and subsidies, and develop the entrepreneurship infrastructure.

The number of overnights in the town of Dubrovnik, as the most important tourist destination in Dubrovnik-Neretva County, amounted to 2,693,000 in 2013., while the year of 2014. saw 2,820,000, i.e. a 4.7% increase. [11]

Local tourist agencies have managed to establish close cooperation with the general doctors and specialists in Dubrovnik's health institutions and private polyclinics providing multi-week wellness treatments to the guests staying at several exquisite hotels. So far the agencies have been focused on potential tourists from Germany, Austria, Russia, USA and Canada. Upon their arrival, the tourists will be able to undergo a systematic or specialist medical examination and join the previously booked preventive health programs.

By developing health and wellness programs and by bringing the third-age guests to the existing tourism facilities before and after the peak periods, Dubrovnik-Neretva County might better use tourist capacities, extend the season and double the income. [8]

5. QUANTIFICATION OF THE INFORMATION MODEL VARIABLES / *Kvantifikacija varijabli informacijskog modela*

Prior to quantifying the variables of the information model for traffic at the service of the sustainable development of tourism in Dubrovnik-Neretva County, the most relevant model variables should be determined for 2014.: road traffic, railway traffic, air traffic, sea traffic, environment protection, hotel industry, private sector, nautical tourism, cruise travels and health tourism.

The quantification of the above mentioned variables will be performed on the basis of their values for the year of 2014. The current value of each variable for Dubrovnik- Neretva County is determined on the index scale from zero to 100. It is assumed that the value of the variables is zero in the non-developed countries, whereas their value amounts to 100 in the most developed countries in the world [4].

Here is the quantification of the variables of the information model for traffic at the service of the sustainable development of tourism in Dubrovnik-Neretva County for the period 2014.-2020.:

1. Road traffic: 30,
2. Railway traffic: 25,
3. Air traffic: 70,
4. Sea traffic: 40,
5. Environment protection: 70,
6. Hotel industry: 70,
7. Private sector: 60,
8. Nautical tourism: 65,
9. Cruise travels: 85 and
10. Health tourism: 20.

6. DESIGNING THE DIRECT GROWTH RATES OF THE INFORMATION MODEL FOR TRAFFIC AT THE SERVICE OF SUSTAINABLE DEVELOPMENT OF TOURISM IN DUBROVNIK-NERETVA COUNTY FROM 2014. TO 2020. / *Izvedba izravnih stopa rasta informacijskog modela prometa u funkciji održivog razvoja turizma u Dubrovačko-neretvanskoj županiji od 2014. do 2020. godine*

The evaluation of the variables of the model will take into consideration synergec effects of the following scientific aspects: scientific theoretical aspects of the individual model variables, values and importance of variables of the model in the period which was analysed in Sections 2, 3 and 4 of this paper, i. e. until 2014., expected values of the model variables in the year of 2017., and the values in 2020.; by that time it can be expected that the Republic of Croatia develops all elements of the suggested model up to 70-80% of the traffic standard at the service of sustainable development of tourism in highly developed countries of the European Union.

Based on the previously elaborated basic research and the anticipated evaluation of the growth of the variables of the model for traffic at the service of sustainable development of tourism in Dubrovnik-Neretva County for the period 2014.-2020. (on the scale from 1 to 100), the variable values have been quantified (Table 2).

Table 2 Growth rates of the information model for traffic at the service of sustainable development of tourism in Dubrovnik-neretva County 2014-2020
Tablica 2. Stopa rasta informacijskog modela u službi održivog razvoja turizma u Dubrovačko-Neretvanskoj županiji 2014.-2020.

Values of the variables of the information model		Inputs y_{it}			Growth
		2014	2017	2020	2020/14
1.	Road traffic	30	45	60	30
2.	Railway traffic	25	30	40	15
3.	Air traffic	70	80	85	15
4.	Sea traffic	40	50	65	25
5.	Environment protection	70	82	85	15
6.	Hotel industry	80	85	90	10
7.	Private sector	60	70	75	15
8.	Nautical tourism	65	73	80	15
9.	Cruise travels	85	87	90	5
10.	Health tourism	20	30	50	30

Source: Authors

The design of the model for traffic at the service of sustainable development of tourism in Dubrovnik-Neretva County 2014.-2020. is based on the previously set variables of the model. We start with the assertion that the traffic at the service of sustainable development of tourism consists of "n" inter-reliant elements. The value of an individual model variable is expressed as y_{if} and y_{it-1} of the i variable in the period t and t-1.

An increase of the input value of the i variable of the model for the sustainable development of tourism in Dubrovnik-Neretva County 2014-2020 is expressed by the relation 1:

$$\Delta y_{it} = y_{it} - y_{it-1} \qquad (1)$$

An indirect growth rate of the i variable in relation with i, is defined as the relation among the input growth of the i variable of the information model for traffic at the service of the sustainable development of tourism in Dubrovnik-Neretva County 2014-2020, $\Delta y_{it'}$ and the input value of the j variable of the model in the period t, that is, the indirect growth rate is expressed by the equation 2:

$$r_{ijt} = \frac{\Delta y_{it}}{y_{it}} \qquad (2)$$

where: i, j=1, …, n, whereas $y_{it-1} \neq 0$.

The indirect rates can be expressed in a form of the growth matrix of the model variables 3.

$$r_t = \begin{bmatrix} r_{11} & r_{12} & \cdots & r_{1nt} \\ r_{21} & r_{22} & \cdots & r_{2nt} \\ \cdots & \cdots & \cdots & \cdots \\ r_{n1t} & r_{n2t} & \cdots & r_{nnt} \end{bmatrix} \qquad (3)$$

$$R_{2020} \begin{bmatrix} \frac{30}{60} & \frac{30}{40} & \frac{30}{85} & \frac{30}{65} & \frac{30}{85} & \frac{30}{90} & \frac{30}{75} & \frac{30}{80} & \frac{30}{90} & \frac{30}{50} \\ \frac{15}{60} & \frac{15}{40} & \frac{15}{85} & \frac{15}{65} & \frac{15}{85} & \frac{15}{90} & \frac{15}{75} & \frac{15}{80} & \frac{15}{90} & \frac{15}{50} \\ \frac{15}{60} & \frac{15}{40} & \frac{15}{85} & \frac{15}{65} & \frac{15}{85} & \frac{15}{90} & \frac{15}{75} & \frac{15}{80} & \frac{15}{90} & \frac{15}{50} \\ \frac{25}{60} & \frac{25}{40} & \frac{25}{85} & \frac{25}{65} & \frac{25}{85} & \frac{25}{90} & \frac{25}{75} & \frac{25}{80} & \frac{25}{90} & \frac{25}{50} \\ \frac{15}{60} & \frac{15}{40} & \frac{15}{85} & \frac{15}{65} & \frac{15}{85} & \frac{15}{90} & \frac{15}{75} & \frac{15}{80} & \frac{15}{90} & \frac{15}{50} \\ \frac{10}{60} & \frac{10}{40} & \frac{10}{85} & \frac{10}{65} & \frac{10}{85} & \frac{10}{90} & \frac{10}{75} & \frac{10}{80} & \frac{10}{90} & \frac{10}{50} \\ \frac{15}{60} & \frac{15}{40} & \frac{15}{85} & \frac{15}{65} & \frac{15}{85} & \frac{15}{90} & \frac{15}{75} & \frac{15}{80} & \frac{15}{90} & \frac{15}{50} \\ \frac{15}{60} & \frac{15}{40} & \frac{15}{85} & \frac{15}{65} & \frac{15}{85} & \frac{15}{90} & \frac{15}{75} & \frac{15}{80} & \frac{15}{90} & \frac{15}{50} \\ \frac{5}{60} & \frac{5}{40} & \frac{5}{85} & \frac{5}{65} & \frac{5}{85} & \frac{5}{90} & \frac{5}{75} & \frac{5}{80} & \frac{5}{90} & \frac{5}{50} \\ \frac{30}{60} & \frac{30}{40} & \frac{30}{85} & \frac{30}{65} & \frac{30}{85} & \frac{30}{90} & \frac{30}{75} & \frac{30}{80} & \frac{30}{90} & \frac{30}{50} \end{bmatrix}$$

$$R_{2020} \begin{bmatrix} 0{,}500 & 0{,}750 & 0{,}352 & 0{,}461 & 0{,}352 & 0{,}333 & 0{,}400 & 0{,}375 & 0{,}333 & 0{,}600 \\ 0{,}250 & 0{,}375 & 0{,}176 & 0{,}230 & 0{,}176 & 0{,}166 & 0{,}200 & 0{,}187 & 0{,}166 & 0{,}300 \\ 0{,}250 & 0{,}375 & 0{,}176 & 0{,}230 & 0{,}176 & 0{,}166 & 0{,}200 & 0{,}187 & 0{,}166 & 0{,}300 \\ 0{,}416 & 0{,}625 & 0{,}294 & 0{,}384 & 0{,}294 & 0{,}277 & 0{,}333 & 0{,}312 & 0{,}272 & 0{,}500 \\ 0{,}250 & 0{,}375 & 0{,}176 & 0{,}230 & 0{,}176 & 0{,}166 & 0{,}200 & 0{,}187 & 0{,}166 & 0{,}300 \\ 0{,}166 & 0{,}250 & 0{,}117 & 0{,}153 & 0{,}117 & 0{,}111 & 0{,}133 & 0{,}125 & 0{,}111 & 0{,}200 \\ 0{,}250 & 0{,}375 & 0{,}176 & 0{,}230 & 0{,}176 & 0{,}166 & 0{,}200 & 0{,}187 & 0{,}166 & 0{,}300 \\ 0{,}250 & 0{,}375 & 0{,}176 & 0{,}230 & 0{,}176 & 0{,}166 & 0{,}200 & 0{,}187 & 0{,}166 & 0{,}300 \\ 0{,}083 & 0{,}125 & 0{,}058 & 0{,}076 & 0{,}058 & 0{,}055 & 0{,}066 & 0{,}062 & 0{,}055 & 0{,}100 \\ 0{,}500 & 0{,}750 & 0{,}352 & 0{,}461 & 0{,}352 & 0{,}333 & 0{,}400 & 0{,}375 & 0{,}333 & 0{,}600 \end{bmatrix}$$

where t=1, …t [4].

Here is the growth matrix of the information model for traffic at the service of sustainable development of tourism in Dubrovnik-Neretva County 2014-2020 by variables, in relation to the current and future values for the period of 2014 – 2020:

The vector of the model growth is:

$$\Delta Y_{2020} \begin{bmatrix} 30 \\ 15 \\ 15 \\ 25 \\ 15 \\ 10 \\ 15 \\ 15 \\ 5 \\ 30 \end{bmatrix}$$

The vector of the reciprocal values of the model is:

$$\frac{1}{Y_{2020}} = \left[\frac{1}{60}, \frac{1}{40}, \frac{1}{85}, \frac{1}{65}, \frac{1}{85}, \frac{1}{90}, \frac{1}{75}, \frac{1}{80}, \frac{1}{90}, \frac{1}{50} \right]$$

Table 3 Growth rates of the information model for traffic at the service of sustainable development of tourism in Dubrovačko-Neretvanska County for the period 2014-2020.

Tablica 3. Stope rasta informacijskog modela prometa u cilju održivog razvoja Dubrovačko-Neretvanske županije za razdoblje od 2014. do 2020.

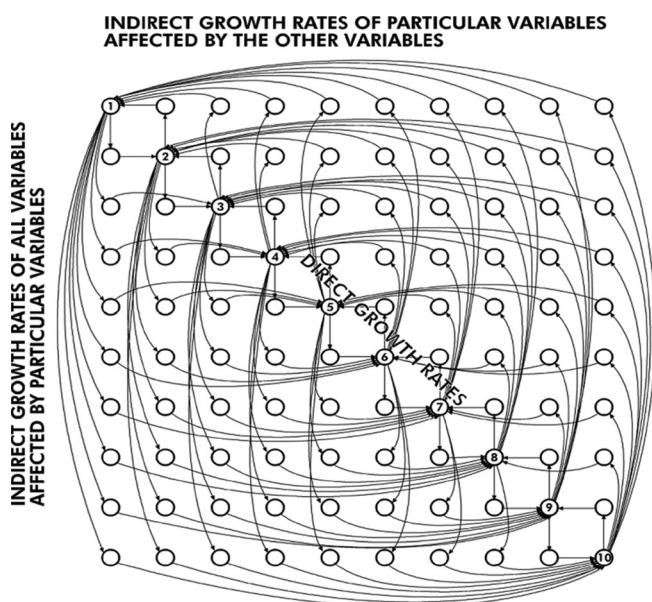| Variables (%)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1.	**50,0**	75,0	35,2	46,1	35,2	33,3	40,0	37,5	33,3	60,0
2.	25,0	**37,5**	17,6	23,0	17,6	16,6	20,0	18,7	16,6	30,0
3.	25,0	37,5	**17,6**	23,0	17,6	16,6	20,0	18,7	16,6	30,0
4.	41,6	62,5	29,4	**38,4**	29,4	27,7	33,3	31,2	27,2	50,0
5.	25,0	37,5	17,6	23,0	**17,6**	16,6	20,0	18,7	16,6	30,0
6.	16,6	25,0	11,7	15,3	11,7	**11,1**	13,3	12,5	11,1	20,0
7.	25,0	37,5	17,6	23,0	17,6	16,6	**20,0**	18,7	16,6	30,0
8.	25,0	37,5	17,6	23,0	17,6	16,6	20,0	**18,7**	16,6	30,0
9.	8,3	12,5	5,8	7,6	5,8	5,5	6,6	6,2	**5,5**	10,0
10.	50,0	75,0	35,2	46,1	32,2	33,3	40,0	37,5	33,3	**60,0**

Source: Authors

The Table 3 presents the derived growth rates of variables of the model. It shows that the highest direct growth rates of the model, for the period of 2014 – 2020, may be expected in the following variables: Health tourism (60.0%), Railway traffic (50.0%) and Sea traffic (38.4%).

The lowest direct growth rates of the model for traffic at the service of sustainable development of tourism in Dubrovnik-Neretva County through the period 2014-2020 will be in the variables: Cruise travels (5.5%), Hotel industry (11.1%) and Environment protection (17.6 %).

Due to synergetic interrelation, one variable will affect the growth rate of another, e.g. the growth rate of the variable Road traffic for the period 2014-2020 is not 30% (Table 1) but 50% (Table 3), etc.

Source: Authors

Graph 1 shows a graphical representation of the correlation between the variables of the model.

Graph 1. Direct and indirect growth rates of the model for the sustainable development of tourism in Dubrovnik-Neretva County for the period 2014-2020.

7. CONCLUSION / *Zaključak*

IN this way we have proved, through the direct growth rates, the basic hypothesis of this paper: through scientific insights into sustainable development of traffic at the service of sustainable development of tourism in Dubrovnik-Neretva County, it is possible to suggest a new information model for sustainable development of tourism in Dubrovnik-Neretva County through the period 2014 – 2020. The design of the model has been based on 10 model variables.

The research has produced the direct growth rates of the model for traffic at the service of sustainable development of tourism in Dubrovnik-Neretva County for the period 2014-2020: Road traffic (50.0%), Railway traffic (37.5%), Air traffic (17.6%), Sea traffic (38.4%), Environment protection (17.6%), Hotel industry (11.1%), Private sector (20.0%), Nautical tourism (18.7%), Cruise travels (5.5%) and Health tourism (60.0%).

It is obvious that the strongest individual elements of the synergetic relationship between traffic and tourism in Dubrovnik-Neretva County are cruise travels, hotel industry and environment protection. On the other hand, health tourism, railway traffic and sea traffic stand in the way of sustainable development of tourism in Croatia's southernmost county.

The analysis and the assessment of the model's individual variables and the obtained growth rates have been aimed to scientifically formulate the results of the research, in line with the most relevant theoretical laws of traffic at the service of sustainable development of tourism in Dubrovnik-Neretva County.

Various methods, including research, modelling, simulation and optimisation through system-dynamics modelling, can be used to verify the herein obtained growth rates for the purpose of further scientific research.

REFERENCES / *Literatura*

[1]   Dulčić, A., Petrić, L., 2002. *Upravljanje razvitkom turizma*, Zagreb, Mate.
[2]   Državni zavod za statistiku / Croatian Bureau of Statistics, 2014. Zagreb.
[3]   Hrvatska turistička zajednica / Croatian Tourist Board, 2014. Zagreb.
[4]   Vidučić, V. 2007. *Pomorski turizam*, Split, Faculty of Maritime Studies – University of Split.
[5]   Vidučić, V. 2008. *Sustainable Development of Maritime Tourism in Croatia 2007-2015*, Vienna, Springer, ISSN 1614-4007.
[6]   Vidučić, V. 2009. *Development of Maritime Passenger Shipping: The Case of Croatia*, Kyiv, Business Development and Markets, ISBN 978-966-8034-06-0.
[7]   Zelenika, R., Pupovac, D., Ogorelc, A. 2001. Model međusektorske analize - čimbenik strukturalnog usklađivanja transportnih i turističkih usluga, *Suvremeni promet*, 1 / 2, Zagreb.
[8]   Strategija razvoja turizma Republike hrvatske do 2020. Godine / Strategy and Master plan of Croatian tourism till 2020.
[9]   Strategija prometnog razvoja RH za razdoblje od 2014 do 2030. Godine / Transport Development Strategy of the Republic of Croatia 2014 – 2030.
[10] www.mmmpi.hr (access: 2016-02-13).
[11] www.mint.hr (access: 2016-02-13).