THE IMPACT OF INTERNATIONAL TOURISM ON ENERGY CONSUMPTION: A PANEL STUDY OF THE WESTERN BALKANS AND THE EUROPEAN UNION

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Abstract. During the 21st century, international tourism has recorded a steady increase and a growing importance for the economic growth and development of many countries. Yet, tourism in general and international tourism in particular require a vast amount of energy for products and services that are needed to satisfy tourists’ needs and wants. The purpose of this paper is to analyze the impact of international tourism on the final energy consumption in the Western Balkans and the European Union (EU) countries in the period from 2007 to 2017. The results of regression analysis indicate that the impact of the number of foreign tourists on final energy consumption depends on the level of international tourism development. Concurrently, the results indicate that population and GDP per capita have an important impact on the final energy consumption in the EU and the Western Balkans countries..

Key words: international tourism, energy consumption, foreign tourists, population, GDP per capita

1. INTRODUCTION

The European Union (EU) records an increase of final energy consumption in the period from 2014 to 2018. In 2018, the transport sector accounted for 30.95%, households for 27.2% and commercial and public services for 14.28% of the final energy consumption in the EU (European Commission, 2018).

Tourism requires vast amounts of energy for manufacturing products and providing services aimed at satisfying tourist expectations and needs (Kelly & Williams, 2007: 67-
Energy provides amenities and facilities in the tourism destination and facilitates the transportation of tourists (Becken, 2002: 127-129; Becken & Simmons, 2002: 352-353; Katircioglu, 2014: 186; Yorucu & Mehmet, 2015: 1197). In 2018 alone, the EU welcomed about 440 million foreign tourists. In the period from 2005 to 2018, the number of overnight stays by non-residents grew by 59% while the number of overnight stays by residents during domestic trips grew by 26% (European Commission, 2020). In the EU, the number of foreign tourists is expected to increase by 1.9% per year, or about 9 million per year by 2030 (UNWTO, 2018: 9).

In relevant literature, special attention has been given to the relationship between energy consumption and economic growth, as well as between tourism and economic growth. But, the literature on the relationship between energy consumption and tourism is rather limited. In the energy economics literature, the central issue has been whether economic growth causes energy consumption or vice versa. According to this central issue, several ideas can be distinguished: 1) there is no causality between economic growth and economic consumption (Cheng, 1995: 82; Jobert & Karanfil, 2007: 5454-5455; Payne, 2009: 577); 2) there is bidirectional causality between economic growth and economic consumption (Tang, 2008: 3083-3084; Glasure, 2002: 363; Lee, Chang & Chen, 2008: 2370-2371; Chandran & Tang, 2013: 317; Vidyarthi, 2013: 278; Tang & Tan, 2013: 303-304; Mudarissov & Lee, 2014: 63); 3) energy consumption causes economic growth (Apergis & Payne, 2009: 211; Lean & Smyth, 2010: 1862-1863; Soares, Kim & Heo, 2014: 58); and 4) economic growth causes energy consumption (Ghosh, 2009: 2929; Paul & Uddin, 2011: 486; Shahbaz & Feridun, 2012: 1583; Chandran & Tang, 2013: 310).

Tourism generates national income and employment in tourism and entire economy. On the one hand, tourism contributes to economic growth and economic development but, on the other hand, the rapid economic growth in the developed countries attracts foreign tourists. International tourism is “a prime source of foreign exchange earnings and generates export revenues” (Lee & Brahmasrene, 2013: 70). Some previous studies reported that tourism has a positive impact on economic growth in Spain (Balaguer & Cantavella-Jorda, 2002: 882), Singapore (Katircioglu, 2010: 1095; Lee & Hung, 2010: 355), Malaysia (Tang, 2011: 98-100), Pakistan (Jalil, Mahmood, & Idrees, 2013: 188-190), while other studies reported that economic growth has a positive impact on tourism development (Oh, 2005: 43; Tiwari, Ozturk & Aruna, 2013: 258).

Although lodging facilities and transport for tourists are major sources for final energy consumption, “the role of energy consumption in tourism is nearly ignored” in relevant literature (Tiwari et al, 2013: 249). Katircioglu (2014:186-187), as well as Yorucu and Mehmet (2015: 1202-1204) reported that tourism causes energy consumption while Tiwari and his associates (2013:258) reported that energy consumption has an impact on tourism.

Bearing in mind that the inflow of foreign tourists “can be seen as a temporary increase in the local population” (Leon, Arana & Aleman, 2014: 1172), this paper will focus on analyzing the impact of foreign tourists, population and GDP (Gross domestic product) per capita on final energy consumption. The paper aims to identify whether the number of foreign tourists contributes to the increase in final energy consumption in the Western Balkan countries (Albania, Montenegro, North Macedonia, and Serbia1), the transition countries in EU (Bulgaria, Czech Republic, Estonia, Croatia, Latvia, Lithuania, Poland, Romania, Slovenia, Slovak Republic, and Hungary) and the developed EU countries

1 Bosnia and Herzegovina is not observed because the data is missing for this country.
(Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Cyprus, Luxemburg, Hungary, Malta, the Netherlands, Austria, Portugal, Finland, and the United Kingdom) in the period from 2007 to 2017.

2. METHODS AND HYPOTHESES

The research database has included the data about foreign tourists, residents and GDP per capita from the World Development Indicators (World Bank, 2007-2017) and the data about final energy consumption from the Eurostat Database (European Commission, 2007-2017).

This paper relies on the description statistics and regression analysis. In SPSS software, description statistics has determined minimal, maximum and mean values of final energy consumption, GDP per capita, and the number of foreign tourists and residents for each observed country in the period from 2007 to 2017. In STATA software, using panel data of the Western Balkans and the EU countries from 2007 to 2017, regression analysis has examined the impact of the number of foreign tourists, the number of residents, and GDP per capita on final energy consumption.

The hypotheses to be tested in this study are the following:

▪ **H1:** The number of foreign tourists has a statistically significant positive impact on final energy consumption in the Western Balkans countries, transition and developed EU countries.

▪ **H2:** The number of residents has a statistically significant positive impact on final energy consumption in the Western Balkans countries, transition and developed EU countries.

▪ **H3:** GDP per capita has a statistically significant positive impact on final energy consumption in the Western Balkans countries, transition and developed EU countries.

3. RESEARCH RESULTS AND DISCUSSION

3.1. Analysis of the number of foreign tourists and residents and economic growth in the Western Balkan countries

Table 1 shows the mean, minimal and maximum values of the final energy consumption, the number of foreign tourists, the number of residents, and GDP per capita in the Western Balkan countries in the period from 2007 to 2017.

In the period from 2007 to 2017, Albania recorded an increase in the final energy consumption, the number of foreign tourists and GDP per capita. The highest number of foreign tourists was recorded in 2017 but, in the observed period, there was a decrease in the number of residents. Montenegro and North Macedonia recorded a decrease in the final energy consumption and an increase of GDP per capita, the number of foreign tourists and the number of residents. The Republic of Serbia recorded a decrease in the final energy consumption and the number of residents, and an increase in the number of foreign tourists and GDP per capita; the highest number of foreign tourists was recorded in 2017.
Table 1 Analysis of tourism turnover, population, and GDP per capita in the Western Balkan countries in the period from 2007 to 2017

|                | Final energy consumption (millions tones of oil equivalent) | Number of foreign tourists (in thousands) | Number of residents (in thousands) | GDP per capita (current US$) |
|----------------|-------------------------------------------------------------|------------------------------------------|-----------------------------------|-----------------------------|
| **Albania**    | Mean 1894.0553                                             | 2775.5455                                | 2907.0840                         | 4223.6772                   |
|                | Std. Deviation 125.69636                                    | 1161.58120                               | 30.55135                          | 288.51516                   |
| **Montenegro** | Mean 718.0094                                              | 1250.8000                                | 619.8725                          | 6876.6983                   |
|                | Std. Deviation 77.28443                                     | 228.83949                                | 2.21969                           | 458.67761                   |
| **North Macedonia** | Mean 1729.1166                                         | 501.0833                                 | 1953.1307                         | 5127.3983                   |
|                | Std. Deviation 322.20877                                    | 450.14916                                | 419.11382                         | 930.31571                   |
| **Serbia**    | Mean 8546.9777                                             | 918.6364                                 | 7204.2265                         | 6241.8164                   |
|                | Std. Deviation 662.53814                                    | 285.22632                                | 121.93235                         | 508.73012                   |

Source: Prepared by the authors (SPSS 13)

3.2. Analysis of the number of foreign tourists and residents and economic growth in EU

All transition countries in the EU, except Poland and Hungary, recorded a decline in the final energy consumption in the period from 2007 to 2017. Croatia achieved the highest mean value of foreign tourists while Slovenia achieved the highest mean value of GDP per capita in relation to other transition countries in EU. Hungary recorded the highest mean value of final energy consumption while Poland had the highest mean value of the number of residents.

As illustrated in Table 3 and Table 4, all developed EU countries, except Belgium, Germany, Malta, Sweden and Austria, recorded a decline in the final energy consumption in the period from 2007 to 2017. Germany recorded the highest mean value of final energy consumption and the number of residents, while Malta recorded the lowest mean value of final energy consumption, the number of residents, and the number of foreign tourists. Italy recorded the highest mean value of number of foreign tourists while Luxemburg recorded the highest mean value of GDP per capita in the observed period.
| Country          | Final energy consumption (millions tones of oil equivalent) | Number of foreign tourists (in thousands) | Number of residents (in thousands) | GDP per capita (current US$) |
|------------------|-------------------------------------------------------------|------------------------------------------|------------------------------------|-----------------------------|
| Bulgaria         | 9187.0121                                                   | 6729.9091                                | 7309.3609                          | 7305.0193                   |
| Std. Deviation   | 465.14918                                                  | 1117.83160                               | 151.79374                          | 633.36788                   |
| Czech Republic   | Mean 23689.4145                                            | 7653.9091                                | 10486.8271                         | 19844.4525                  |
| Std. Deviation   | 701.80652                                                  | 1327.25495                               | 84.90793                           | 1434.75212                  |
| Croatia          | Mean 6780.2538                                             | 10907.3636                               | 4251.3884                          | 13759.5261                  |
| Std. Deviation   | 375.28831                                                  | 2322.95520                               | 61.08144                           | 1189.62591                  |
| Latvia           | Mean 3880.9555                                             | 1646.0000                                | 2054.2400                          | 14160.6264                  |
| Std. Deviation   | 181.05843                                                  | 235.68878                                | 89.00431                           | 1489.58636                  |
| Lithuania        | Mean 4878.6964                                             | 1871.3636                                | 3017.9283                          | 14368.4168                  |
| Std. Deviation   | 201.13203                                                  | 366.29913                                | 137.26518                          | 1728.61925                  |
| Poland           | Mean 62880.2915                                            | 14976.5455                               | 38050.0355                         | 13037.5365                  |
| Std. Deviation   | 3009.65021                                                 | 2105.31857                               | 62.51655                           | 1041.44957                  |
| Romania          | Mean 22325.2652                                            | 8558.7273                                | 20112.6140                         | 9284.3445                   |
| Std. Deviation   | 778.22277                                                  | 1159.51715                               | 381.04569                          | 871.07970                   |
| Slovenia         | Mean 4868.7693                                             | 2326.3636                                | 2050.4169                          | 23715.5970                  |
| Std. Deviation   | 179.50674                                                  | 572.90772                                | 17.10449                           | 1761.75114                  |
| Slovakia         | Mean 9626.4703                                             | 1647.2727                                | 5405.7750                          | 17368.4860                  |
| Std. Deviation   | 584.49154                                                  | 270.99597                                | 21.46647                           | 987.73034                   |
| Hungary          | Mean 16748.7015                                            | 4230.0000                                | 9928.4815                          | 13721.5058                  |
| Std. Deviation   | 597.26301                                                  | 819.20559                                | 94.55626                           | 912.00143                   |

Source: Prepared by the authors (SPSS 13)
Table 3 Analysis of tourism turnover, population, and GDP per capita in developed EU countries (Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Cyprus, Luxemburg and Malta) in the period from 2007 to 2017

| Country     | Final energy consumption (millions tones of oil equivalent) | Number of foreign tourists (in thousands) | Number of residents (in thousands) | GDP per capita (current US$) |
|-------------|-------------------------------------------------------------|------------------------------------------|-----------------------------------|-----------------------------|
| Belgium     | Mean 33155.4031, Std. Deviation 925.25152                   | 7550.6364, 506.03740                     | 11047.4716, 256.81237            | 44980.5023, 2294.84538      |
| Denmark     | Mean 14026.6229, Std. Deviation 633.91455                   | 9706.5455, 1043.32702                    | 5602.0783, 96.3085               | 58915.9129, 3325.86394      |
| Germany     | Mean 202759.4210, Std. Deviation 4600.01551                 | 30155.0909, 4748.61231                   | 81552.4454, 831.49661            | 43841.7824, 2444.79196      |
| Ireland     | Mean 10911.3209, Std. Deviation 856.43423                  | 8445.4545, 1123.15835                    | 4609.9881, 117.9506              | 56921.3216, 6902.69125      |
| Greece      | Mean 17384.0887, Std. Deviation 2272.07194                 | 19046.9091, 4483.80413                   | 10973.9763, 139.78729            | 24037.8005, 4893.58993      |
| Spain       | Mean 81646.4010, Std. Deviation 6208.82801                 | 62294.9091, 9425.74859                   | 46387.1880, 443.16807            | 29934.7176, 2834.95334      |
| France      | Mean 142938.4833, Std. Deviation 3309.44428                | 81571.9091, 3178.56988                   | 65614.6736, 1002.37894           | 41052.5494, 2734.65082      |
| Italy       | Mean 117938.8344, Std. Deviation 6945.62933                | 47579.0000, 4741.48909                   | 59770.4424, 840.60934            | 35445.0417, 3231.76995      |
| Cyprus      | Mean 1538.8055, Std. Deviation 113.45891                   | 2575.9091, 451.49163                     | 1129.3503, 37.20312             | 29011.4311, 3764.15515      |
| Luxemburg   | Mean 3739.1064, Std. Deviation 156.81498                   | 949.0909, 95.61742                      | 533.6641, 39.13337              | 108768.3462, 5814.08304     |
| Malta       | Mean 419.4915, Std. Deviation 37.39968                     | 1564.4545, 337.66592                    | 428.0288, 20.27266              | 23111.1487, 2412.92374     |

Source: Prepared by the authors (SPSS 13)
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Table 4 Analysis of tourism turnover, population, and GDP per capita in developed EU countries (the Netherland, Austria, Portugal, Finland, the United Kingdom and Sweden) in the period from 2007 to 2017

|                  | Final energy consumption (millions tones of oil equivalent) | Number of foreign tourists (in thousands) | Number of residents (in thousands) | GDP per capita (current US$) |
|------------------|-------------------------------------------------------------|-----------------------------------------|-----------------------------------|------------------------------|
| Netherland       | Mean 46518.2083                                            | 12760.2727                              | 16744.7345                        | 51075.1499                   |
|                  | Std. Deviation 2311.71769                                    | 2597.90631                              | 239.55018                         | 3568.46679                   |
| Austria          | Mean 25460.9040                                            | 24331.1818                              | 8486.2233                         | 48419.1001                   |
|                  | Std. Deviation 562.96522                                     | 2863.81074                              | 172.89487                         | 2644.05974                   |
| Portugal         | Mean 16284.6617                                            | 9263.6364                               | 10468.8252                        | 21938.1263                   |
|                  | Std. Deviation 1088.60047                                   | 3085.27757                              | 104.96506                         | 1601.75912                   |
| Finland          | Mean 23995.5209                                            | 2638.6364                               | 5408.1925                         | 47948.5968                   |
|                  | Std. Deviation 785.51707                                     | 263.69462                               | 75.48371                          | 3163.88207                   |
| United Kingdom   | Mean 124083.8805                                           | 31606.4545                              | 63695.9984                        | 43433.4458                   |
|                  | Std. Deviation 5594.54389                                    | 3154.57482                              | 1566.69952                        | 3743.15136                   |
| Sweden           | Mean 31689.8515                                            | 5585.0909                               | 9553.5832                         | 55018.2403                   |
|                  | Std. Deviation 657.60082                                     | 817.04657                               | 292.80358                         | 4442.78793                   |

3.3. Regression analysis of the impact of foreign tourists, population and economic growth on the final energy consumption in the Western Balkan countries, transition and developed countries in EU

The results of regression analysis of the impact of foreign tourists, population and economic growth in the Western Balkan countries are given in Table 5. The results of regression analysis indicate that the number of foreign tourists, the number of residents and GDP per capita had a significant impact on the final energy consumption in the period from 2007 to 2017 because the probability value (P>|t|) is less than 0.005. While the number of foreign tourists has the negative impact on the final energy consumption, the GDP per capita and the number of residents have a positive impact on the final energy consumption in the Western Balkan countries. The coefficient value indicates that the number of residents has a higher impact on the final energy consumption in relation to the GDP per capita.
Table 5: The regression model – the impact of the number of foreign tourists, the number of residents, and GDP per capita in the Western Balkan countries

| Random-effects GLS regression | Number of obs = 44 |
|-------------------------------|--------------------|
| Group variable: countrynum    | Number of groups = 4 |
| R-sq: within = 0.0744         | Obs per group: min = 11 |
| between = 0.9994              | avg = 11.0          |
| overall = 0.9873              | max = 11            |
| corr(u_i, X) = 0 (assumed)    | Wald chi2(3) = 3108.28 |
|                               | Prob > chi2 = 0.0000 |

| Final energy consumption | Coef.  | Std. Err. | z     | P>|z| | [95% Conf. Interval] |
|--------------------------|--------|-----------|------|-----|---------------------|
| Foreign tourists         | -0.1974127 | 0.0544246 | -3.63 | 0.000 | -0.3040829 - 0.097424 |
| Residents                | 1.225532 | 0.0227285 | 53.92 | 0.000 | 1.180985 - 1.270079 |
| GDP per capita           | 0.422747 | 0.0498969 | 8.47  | 0.000 | 0.3249508 - 0.5205432 |
| _cons                    | -2770.888 | 322.1391 | -8.60 | 0.000 | -3402.269 - 2139.506 |

| sigma_u                  | 0      |           |      |     |                     |
| sigma_e                  | 249.47436 |         |      |     |                     |
| rho                      | 0 (fraction of variance due to u_i) |     |     |     |                     |

Source: Prepared by the authors (STATA 13)

Table 6: The regression model – the impact of the number of foreign tourists, the number of residents, and GDP per capita in transition countries in the EU

| Random-effects GLS regression | Number of obs = 121 |
|-------------------------------|--------------------|
| Group variable: countrynum    | Number of groups = 11 |
| R-sq: within = 0.0502         | Obs per group: min = 11 |
| between = 0.9589              | avg = 11.0          |
| overall = 0.9558              | max = 11            |
| corr(u_i, X) = 0 (assumed)    | Wald chi2(3) = 245.42 |
|                               | Prob > chi2 = 0.0000 |

| Final energy consumption | Coef.  | Std. Err. | z     | P>|z| | [95% Conf. Interval] |
|--------------------------|--------|-----------|------|-----|---------------------|
| Foreign tourists         | 0.2099759 | 0.0779536 | 2.69 | 0.007 | 0.0571896 - 0.3627622 |
| Residents                | 1.49538 | 0.1019684 | 14.67 | 0.000 | 1.295526 - 1.6952355 |
| GDP per capita           | 0.1602413 | 0.0699482 | 2.29 | 0.022 | 0.231453 - 0.2973372 |
| _cons                    | -2492.319 | 1849.712 | -1.35 | 0.178 | -6117.687 - 1133.049 |

| sigma_u                  | 3442.7823 |         |      |     |                     |
| sigma_e                  | 1001.3999 |         |      |     |                     |
| rho                      | 92199465 (fraction of variance due to u_i) |     |     |     |                     |

Source: Prepared by the authors (STATA 13)
Table 7 shows the results of regression analysis of the impact of number of foreign tourists, the number of residents, and GDP per capita on the final energy consumption in developed EU countries. The results of regression analysis indicate that the number of foreign tourists, the number of residents, and GDP per capita had a significant impact on the final energy consumption in the period from 2007 to 2017 because the probability value (P>|t|) is less than 0.005. While the number of foreign tourists has the negative impact on the final energy consumption, GDP per capita and the number of residents have a positive impact on the final energy consumption in developed EU countries. The value of the coefficients indicates that the number of residents has a higher impact on the final energy consumption in relation to the GDP per capita.

Table 7 The regression MODEL – the impact of number of foreign tourists, number of residents and GDP per capita in developed EU countries

|                          | Coef.     | Std. Err. | z     | P>|z|    | [95% Conf. Interval] |
|--------------------------|-----------|-----------|-------|--------|----------------------|
| Final energy consumption |           |           |       |        |                      |
| Foreign tourists         | -.3483285 | .076995   | -4.52 | 0.000  | -.499236 -.197421    |
| Residents                | 2.104512  | .1341664  | 15.69 | 0.000  | 1.84155 2.367473     |
| GDP per capita           | .1955801  | .0670169  | 2.92  | 0.004  | .0642294 .3269309    |
| _cons                    | 1390.55   | 5599.739  | 0.25  | 0.804  | -9584.736 12365.84   |

sigma_u 10273.178
sigma_e 2553.1534
rho .94182777 (fraction of variance due to u_i)

Source: Prepared by the authors (STATA 13)

According to the regression analysis results, we can conclude that hypothesis H1 has not been confirmed because the number of foreign tourists has a statistically significant negative impact on the final energy consumption in the Western Balkan countries and in developed EU countries. Hypothesis H2 has been confirmed because the number of residents has a statistically significant positive impact on the final energy consumption in the Western Balkan countries, in developed and transition countries in the EU. Hypothesis H3 has been confirmed because GDP per capita has a statistically significant positive impact on the final energy consumption in the Western Balkan countries, in developed and transition countries in the EU.

3.4. Adopted energy development strategies of the observed countries in relation to the proven hypotheses

Although the attempt to prove the first hypotheses did not lead to the expected results in the theoretical model, practice proves that the influence of the tourism sector plays a significant role in designing the energy sector strategies in some countries.

Of all the observed Western Balkan countries, the greatest impact of tourism on the Energy Development Strategy can be observed in Montenegro (Ministry of Labor and
Entrepreneurship, 2014: 33). In this strategy, the Montenegrin government has envisaged significant investments to cover the projected natural gas needs that would reach 26% total needs for this energy source in the coastal region. Albania also observes the tourism sector from energy aspects and endeavours to increase energy potentials by installing solar panels (Ministry of Industry and Energy, National Energy Agency, 2003: 18). As for the Republic of North Macedonia, there are no available data on this matter in the 2019 draft of the Strategy for Energy Development of the Republic of North Macedonia until 2040, Given the fact that the economy of the Republic of Serbia does not substantially rely on tourism, the Energy Sector Development Strategy of the Republic of Serbia for the period by 2025 with projections by 2030 (Ministry of Mining and Energy, 2016) does not specifically deal with tourism as a important factor for energy consumption, which ultimately confirms the considerations within the framework of proving the first hypothesis.

In the EU countries, intensive legislative work on preparing the energy sector integration was interrupted by the COVID-19 pandemic (European Commission, 14 April 2020). Within the Strategy for Sustainable and Smart Mobility, the transport sector is expected to consume a huge share of the projected increase in energy demand for mobility and exchange of tourists. However, that aspect remains unconfirmed and may be further examined in the future.

CONCLUSION

The conducted research on the World Bank and Eurostat energy consumption statistics in the period 2007-2017 shows that Poland, Hungary, Albania, Belgium, Germany, Malta, Sweden and Austria recorded an increase in the final energy consumption while other observed countries recorded a decrease in the final energy consumption. Similar to the studies conducted by Katircioğlu (2014: 186-187) and Yorucu and Mehmet (2015: 1202-1204), the results of the regression analyses conducted for the purposes of this paper have confirmed the impact of the number of foreign tourists on the final energy consumption, but this impact significantly depends on the level of tourism development. The research results indicate that the number of foreign tourists has a negative impact on the final energy consumption in the Western Balkan countries as well as in developed EU member states, including both undeveloped and highly developed countries, while the number of foreign tourists has a positive impact on the final energy consumption in transition countries in the EU or in the member states which have reached an intermediate level of tourism development. At the same time, the results of regression analyses have revealed that the number of residents and GDP per capita have a significant positive impact on the final energy consumption in the Western Balkan countries as well as in transition and developed countries in the EU.

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UTICAJ MEĐUNARODNOG TURIZMA NA POTROŠNJU ENERGIJE: PANEL STUDIJA
DRŽAVA ZAPADNOG BALKANA I EVROPSKE UNIJE

Tokom XXI veka međunarodni turizam beleži stalni porast, kao i rastući značaj za privredni rast i razvoj mnogih zemalja. Međutim, turizam, a posebno međunarodni turizam zahteva veliku količinu energije za pružanje usluga i proizvodnju proizvoda koji su neophodni za zadovoljavanje želja i potreba turista. Cilj ovog rada je da analizira uticaj međunarodnog turizma na finalnu potrošnju energije u državama Zapadnog Balkana i državama-članicama Europske unije (EU) u periodu od 2007. do 2017. godine. Rezultati regresijske analize pokazuju da uticaj broja stranih turista na finalnu potrošnju energije zavisi od nivoa razvoja turizma. Istovremeno, rezultati pokazuju da stanovništvo i BDP po glavi stanovnika imaju važan uticaj na finalnu potrošnju energije u zemljama Zapadnog Balkana kao i u transicionim i razvijenim državama-članicama Evropske unije.

Ključne reči: međunarodni turizam, potrošnja energije, strani turisti, stanovništvo, BDP po glavi stanovnika