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Analysing the relationship between tourist flows and socio-economic development. A comparative case study: Romania vs. PIGS countries

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Abstract. *The share of tourism in GDP is below 3% in Romania, while the PIGS countries are recognized for the significant impact of tourists influx on socio-economic development. Following the analysis carried out at national level, I found a stronger relationship between the dynamics of the tourist flows and that of GDP per capita / employed population in PIGS countries, compared to Romania, where the linkage is weaker. At regional level, significant divergences were found, especially in terms of the percentage change in the employed population, both between PIGS and Romania NUTS 2 regions, and between the regions of Romania.*

Keywords: tourist flows, economic development, tourism, Romania, PIGS.

JEL Classification: F64, L83, O11, Z32.

1. Introduction

Tourism is one of the most important and dynamic industries with a strong impact on the economy, society, and the environment. The development of this sector has reshaped the economies of some countries, requiring a reassessment of the relationship between tourism and sustainability. The process of developing public policies has been oriented worldwide towards maintaining a balance between the potential negative effects of tourism and the economic and social advantages that it generates.

The study aims to provide an assessment of the relationship between tourist flows and socio-economic development in Romania and PIGS countries (Portugal, Italy, Greece and Spain). Tourism often acts as a driver of social change and economic growth, while tourist flows generate significant changes in the destination areas, influencing infrastructure, local culture, and employment opportunities. Thus, tourism stimulates the local economy through the capital increase channel. At the same time, this sector supports creating new jobs, thus contributing to the reduction of unemployment, but also to the development of infrastructure at the national level (transport, hotels / restaurants / catering, supermarkets) and locally, in this case having as a benchmark the locals who offer traditional products for sale. In the same vein, tourists' spending stimulates other economic sectors (such as transport, trade, agriculture), contributing to the strengthening of the national currency through external revenue, which enhances regional economic performance.

The social and cultural impact occurs through cultural exchange, the reevaluation of traditions, the development of urban areas and the capitalisation of the tourism potential of less advantaged areas. Sustainable development is another relevant concept, emphasizing the connection between environmental protection and the economic performance of tourism. The study is also relevant for domestic citizens, helping them to better understand how the diversity of tourist flows can increase the number of foreign tourists to Romania, while also encouraging communities to support the preservation of sites and attractions with tourism potential.

The main objective of the paper is to identify the degree to which factors such as the dynamics of the number of tourist overnight stays, GDP/capita, the employed population, and the population at risk of poverty rate interact at the level of Romania, compared to the PIGS countries.

2. Literature review

According to Hughes and Scheyvens (2016), tourism’s capacity to influence sustainable development has risen to the top of the Sustainable Development Goals of the 2030 Agenda, with the tourism sector contributing to global development and promoting sustainability. Goals such as economic growth, ocean conservation, consumption and production provide a narrow perspective on the complex relationship between tourism and sustainable development (Saarinen, 2020). The concept of sustainable development, as presented in the Our Common Future report, suggests a type of development that “meets

the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Sustainable tourism has evolved over time, initially focusing exclusively on environmental issues, to now integrating the social and economic dimensions of development (Torres-Delgado and López Palomeque, 2012). At the same time, tourism studies reveal significant gaps regarding the feasibility of implementing and maintaining an authentic sustainable tourism trajectory (Marsiglio, 2015; Sharpley, 2020).

The economic literature has extensively analysed the role of international tourism in the process of national economic development (Ghali, 1976; Sinclair, 1998; Lanza and Pigliaru, 1994; Hazari and Sgro, 1995). The so-called Tourism-Led Growth (TLG) hypothesis has been investigated in numerous comparative empirical studies at the international level (Lee and Chang, 2008; Sequeira and Maçãs Nunes, 2008; Figini and Vici, 2010), as well as in time series analyses conducted for individual countries in Latin America, Asia and Europe.

The efficiency of tourism as a factor of stimulating economic growth has proven to be particularly pronounced in the case of small economies specialised in tourism, such as many island states (Brau et al., 2007).

As for European countries, the contribution of tourism to economic dynamics has been highlighted by Balaguer and Cantavella - Jordà (2002) and Capó Parrilla et al. (2007) for Spain, by Dritsakis (2004) for Greece, and by Proença and Soukiazis (2005) for Portugal. These mechanisms include significant foreign exchange inflows, the stimulation of intersectoral linkages, increased public investment in infrastructure, and multiplier effects on employment.

For destination countries, tourism represents an important source of income, contributing both to the standard of living in certain regions, and to employment opportunities, new investments and infrastructure development (Haralambopoulos and Pizam, 1996; Dwyer et al., 2004; Galani-Moutafi, 2004; Oh, 2005; Kim et al., 2006; Lee and Chang, 2008; Po and Huang, 2008; Polyzos, 2011; Schubert et al., 2011). In addition, tourism also strengthens the balance of payments, while supporting regional economic growth (Lee and Chang, 2008; Meade, 1951; Song et al. 2012; Oh, 2005; Kim et al., 2006; Polyzos, 2011; Panahi et al., 2014; Po and Huang, 2008; Schubert et al., 2011).

Regarding poverty reduction through tourism, empirical studies conducted across different countries reached mixed results, with evidence varying in most cases. Balaguer and Cantavella-Jordá (2002) carried out such a study for Spain, showing that tourism can promote economic growth on the long-term, enabling people to escape poverty as a consequence of per capita income increase. Meanwhile, another study conducted for South Africa by Saayman et al. (2012) suggested that tourism can contribute to poverty reduction only if disadvantaged population could benefit from tourism spending in the region.

Tourism is particularly sensitive to external shocks, from volatile geopolitical events that reshape travel flows to to the escalation of climate risks that disrupt operations and change consumer preferences (Gössling and Scott, 2024).

Inflation in this sector is reflected in increasing operational costs and the broader consequences of economic interdependence, as well as vulnerabilities to climate and geopolitical factors. At the same time, the challenges arising from the economic, geopolitical and climate sectors are significant for tourism, even as the sector returns to pre-pandemic levels (World Tourism Organization, 2024). Due to climate disruptions, tourism infrastructure costs have increased, according to Scott et al. (2019) and Tanriserver et al. (2024), these events having the capacity to disrupt supply chains, intensify resource shortages, while contributing to inflationary pressures in the tourism sector.

3. Methodology

This research analyses a series of statistical data published by Eurostat for the period 2007-2024 related to tourist flows (percentage change in the number of overnight stays), economic development (percentage change in GDP/capita) and social development (population at risk of poverty rate), the percentage change in the employed population being reflected in both types of development. The year 2007 marks Romania's accession to the European Union (January 1, 2007), but also the starting point of the global economic crisis (December 2007), followed in 2009 by the spread of the crisis at European level. The outbreak of the COVID-19 pandemic in 2020 and the escalation of the geopolitical tensions in 2022 represented additional challenges that strongly impacted the economy during the examined period.

Regarding the analysis, the graphical method has been used to assess the main trends in Member States from the perspective of tourist flows and their influence on socio-economic development. At the same time, in order to capture the statistical association between the indicators, the Pearson statistical correlation has been used.

The present research focuses on the comparison between Romania and the PIGS countries in order to assess Romania's positioning relative to the most popular mass tourism destinations. The PIGS countries faced severe economic challenges during the EA sovereign debt crisis (2009-2014) which began in Greece, recording high debts and excessive deficits that revealed significant economic vulnerabilities and high default risks.

The analysis includes a national component, where comparisons were made at the national level, and a regional one, for which comparisons between the analysed NUTS 2 regions have been carried out. However, Portugal was not included in the regional analysis, as the territorial reorganization affected the availability of data for some regions and indicators.

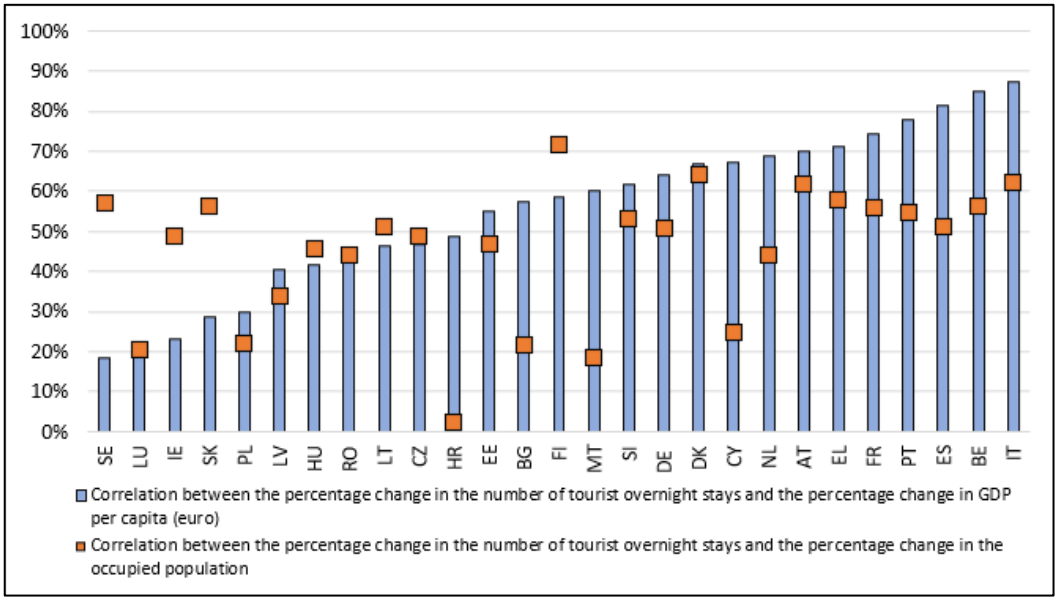
4. Results and interpretations

In this section, several data series on tourist flows and their influence on representative socio-economic indicators were analysed and interpreted.

The main socio-economic indicator analysed is GDP (Gross Domestic Product) per capita (expressed in euros). The correlation between this indicator and the tourist flow, expressed by the number of tourist overnight stays in the partner country (*Figure 1*), is positive for all countries, highlighting the fact that tourism development has positive effects on economic development. The PIGS countries record some of the highest values (Greece - 71%, Portugal - 78%, Spain - 81%, Italy - 87%), with the high correlation underlining the importance of tourism for their economies. On the other hand, in the case of Romania, the correlation is more modest (42%), suggesting a weaker relationship between the two indicators.

Investments in tourism create new jobs both through the development of infrastructure and the maintenance of accommodation capacities. The results also show positive correlations between the tourist flows and the percentage change in the employed population at EU level (*Figure*) in all Member States cases. The PIGS countries record moderate values (above 50%), while Romania shows a correlation of 42%, lower than the ones specific to this country-group. In this respect, the data obtained highlight a stronger relationship between tourist flows and socio-economic development in the PIGS countries compared to Romania.

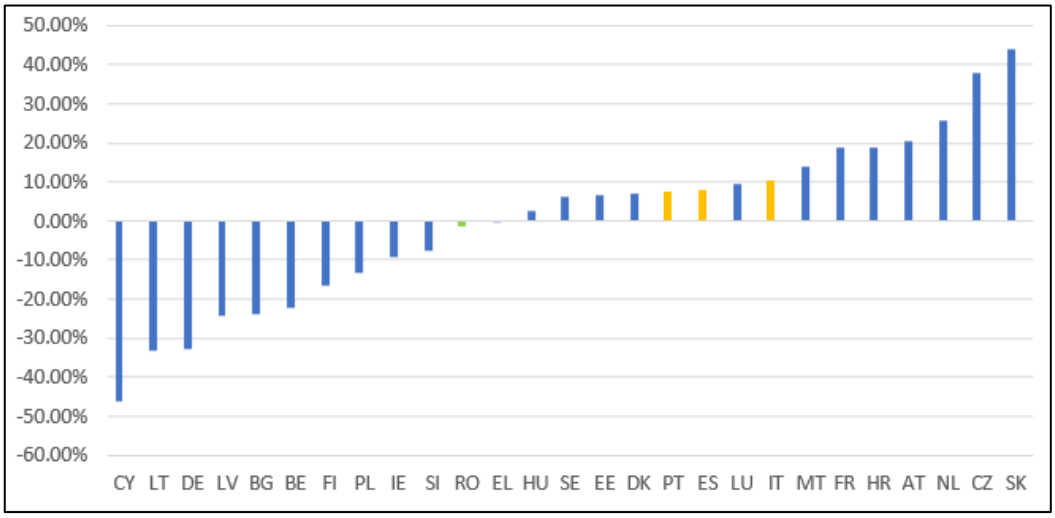
Figure 1. *Correlation between the percentage change in the number of tourist overnight stays and the percentage change in GDP per capita (euro) / percentage change in the employed population*



Source: own processing in Microsoft Office Excel, based on Eurostat data

Another effect explored in the literature is the impact of tourist flows on poverty rate. According to *Figure 2*, more than half of the countries show a positive correlation (maximum 44% - Slovakia) between tourist flows and poverty rate, while the PIGS countries record weak correlations (maximum 10% - Italy, minimum 0% - Greece).

Figure 2. *Correlation between the percentage change in the number of tourist overnight stays and the people at risk of poverty rate*



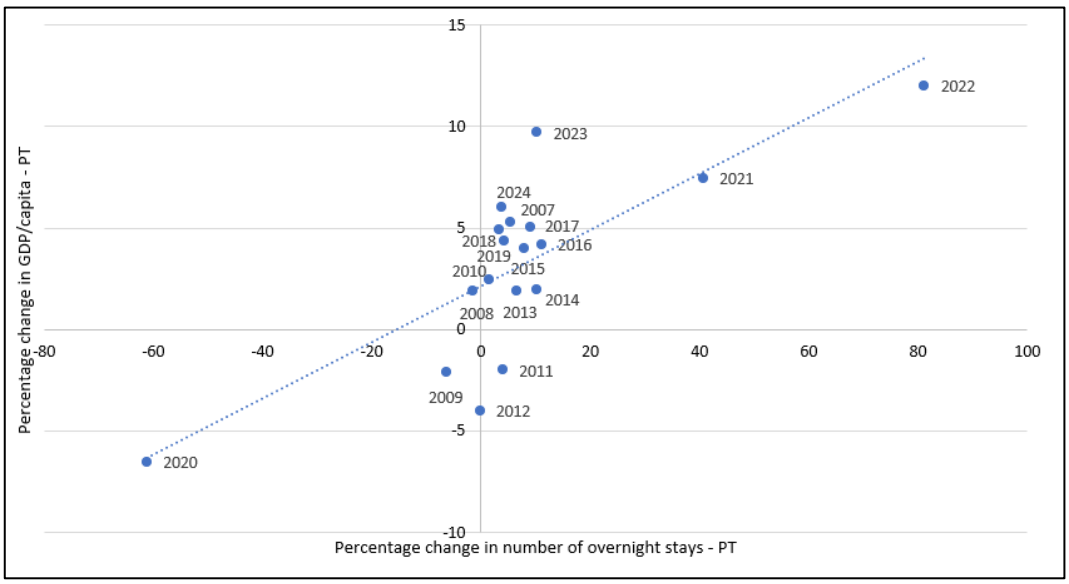
Source: own processing in Microsoft Office Excel, based on Eurostat data

On the other hand, Romania shows a negative correlation, close to 0%, which highlights the absence of a significant short-term impact of tourism on poverty. The poverty rate is influenced by factors such as the increase in the standard of living, unemployment, migration, education, health status and demography, all of these factors manifesting differently in the analysed countries. Tourism generates effects over time on poverty both in terms of size and duration of the impact, depending on the national specifications. It is also worth mentioning that poverty has an autoregressive influence, which makes poverty alleviation process particularly complex and long-term.

By comparatively analysing the percentage change in GDP per capita and the percentage change in the number of overnight stays for each country in the PIGS group, it was observed that, during the 2007-2024 period, the two indicators followed a similar path. The 2007-2019 interval was characterised by limited variations in both indicators, the percentage change in GDP per capita presenting more significant differences, while the tourist flows remained relatively constant. The economic crisis that affected the period 2009-2014 generated negative percentage changes in GDP, while the COVID-19 crisis produced similar effects in 2020. The period 2020-2022 was marked by significant reductions in tourism due to the impact of the pandemic and the geopolitical tensions. In particular, the trend indicates that increases in one indicator are generally accompanied by increases in the other, a relationship confirmed by the high correlation values previously calculated.

Portugal (*Figure 3*) and Italy (*Figure 4*) follow the general trend, with the negative changes in GDP and tourist flows recorded during the crisis years (2009) and the pandemic period (2020) being recovered in the immediately following years.

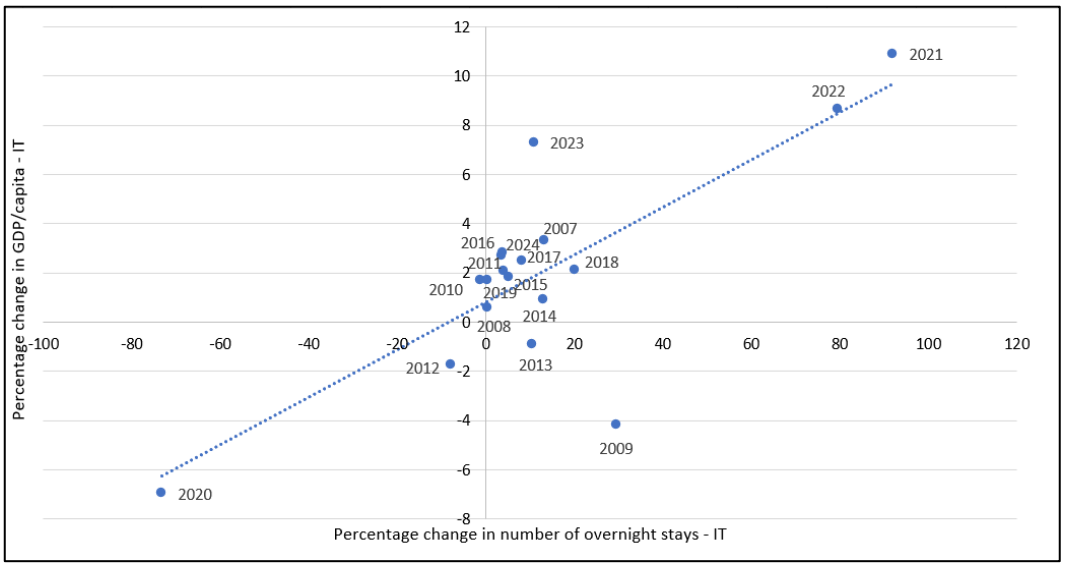
Figure 3. *Percentage change in GDP per capita vs. percentage change in overnight stays for Portugal*



Source: own processing in Microsoft Office Excel, based on Eurostat data

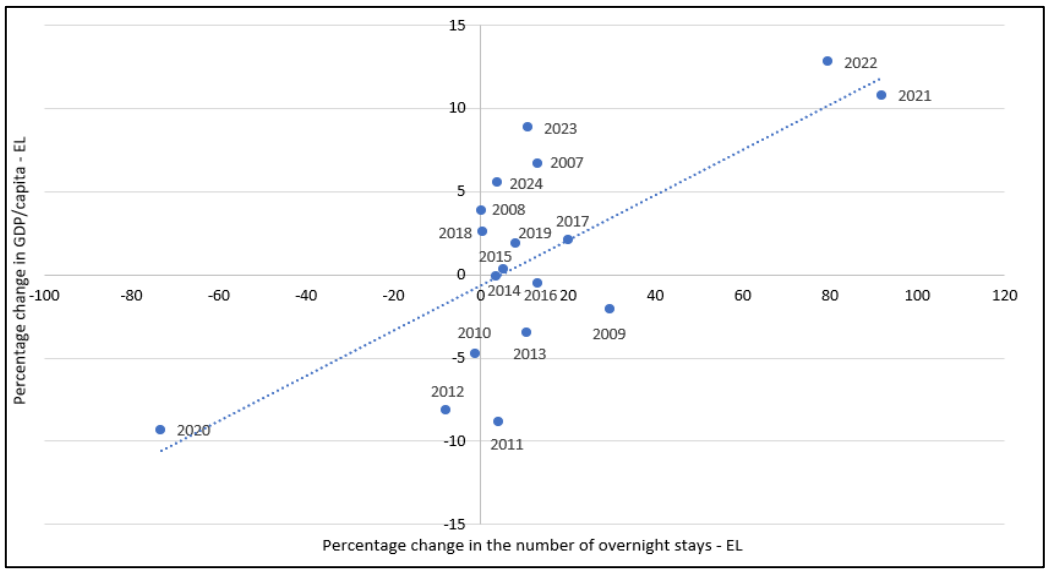
Greece (*Figure 5*) and Spain (*Figure 6*) experienced a more difficult period between 2009 and 2016, when the global crisis overlapped with the economic shock affecting the euro area. Nevertheless, the relationship between the analysed indicators remained strong and positive. However, to regain competitiveness, these countries reduced their generous social benefits, while stimulating youth employment.

Figure 4. *Percentage change in GDP per capita vs. percentage change in number of overnight stays for Italy*



Source: own processing in Microsoft Office Excel, based on Eurostat data

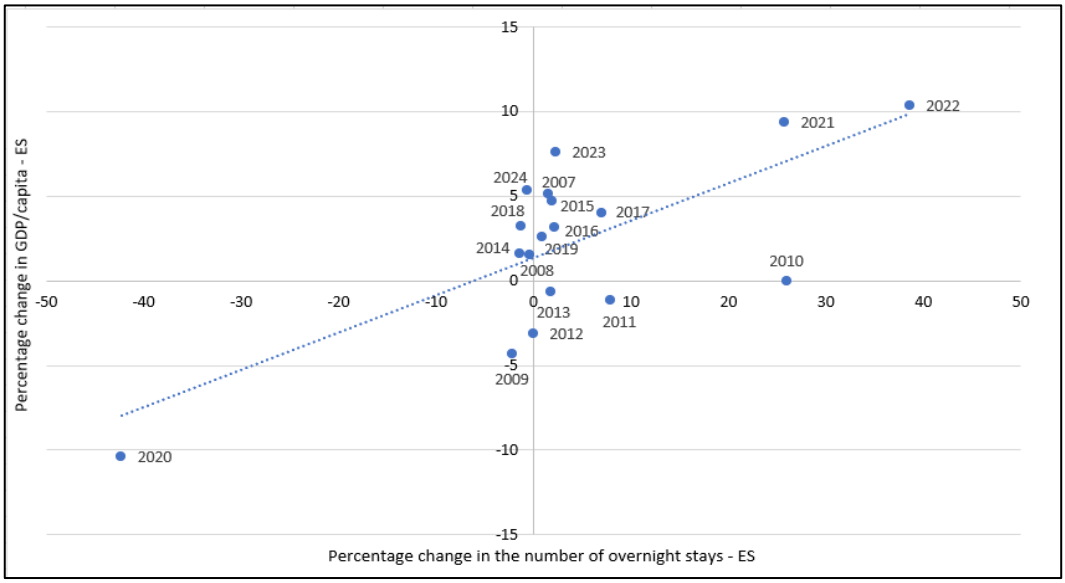
Figure 5. *Percentage change in GDP per capita vs. percentage change in overnight stays for Greece*



Source: own processing in Microsoft Office Excel, based on Eurostat data

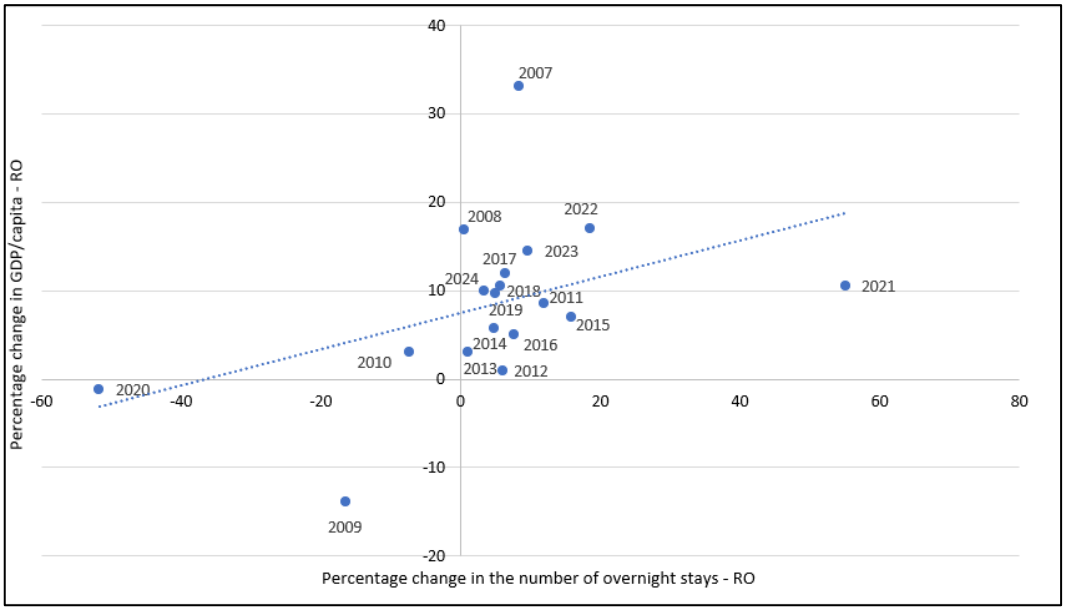
In Romania (*Figure 7*), the trend of the analysed indicators is lower even though economic growth was positive throughout the period, except for 2009 and 2020. The data show that the slope of the graph is slightly more inclined to the right, which is also reflected in the lower correlation between the percentage change in the number of overnight stays and that of GDP per capita compared to that obtained in the case of PIGS countries.

Figure 6. *Percentage change in GDP per capita vs. percentage change in number of overnight stays for Spain*



Source: own processing in Microsoft Office Excel, based on Eurostat data

Figure 7. *Percentage change in GDP per capita vs. percentage change in number of overnight stays for Romania*



Source: own processing in Microsoft Office Excel, based on Eurostat data

The detailed analysis at the level of the regions of the PIGS countries and Romania reveals a positive correlation between GDP per capita growth and the increase in the number of overnight stays in all cases. The regions of the PIGS countries present correlations above 70% between GDP per capita growth and the increase in the number of overnight stays, while in Romania, correlation coefficients above 70% are found only in the Bucharest-Ilfov region (73%) and the West region (71%), areas with the highest economic development in Romania, while the lowest correlation coefficient has been found in the North-East region (22%).

A different situation can be observed in the case of the correlation between the percentage change in the number of overnight stays and the percentage change in the employed population (*Annex 1*). In the PIGS countries, most of the correlation coefficients are positive (excepting Ciudad de Melilla in Spain which presents a negative correlation of 47% and Peloponnisos in Greece which records a negative correlation of 16%), the highest value being reported for the Valle d'Aosta region in Italy (88%). By contrast, in Romania, the correlations are predominantly negative (the lowest being recorded in the North-East region, -57%), with the exception of the Bucharest-Ilfov region (+26%). These results highlight the fact that, although tourism contributes to economic development in Romania, its impact on job creation at regional level remains limited, the only positive relationship being identified for the Bucharest-Ilfov region, where business tourism is more promoted.

Annex 2 presents a relevant indicator for tourism activity, namely the occupancy rate of accommodation units in 2024. It can be observed that the average for European countries

is approximately 60%, while among the PIGS countries, only Portugal (62.46%) and Spain (69.59%) exceed this threshold. Italy (58.3%) and Greece (50.4%) exceed only half of the accommodation capacity, while Romania has the lowest occupancy rate of accommodation units (28.12%), its tourism potential not being appropriately exploited.

5. Conclusions

This paper revealed a close relationship between tourism and socio-economic development in EU countries, highlighting the countries belonging to the southern European submodel through stronger correlation coefficients than those calculated for Romania, against the background of the high share of the tourism sector in GDP in the PIGS countries.

According to the results, in PIGS countries, the increase in tourist flows generates a dynamic of the economy that also leads to an increase in the employment rate. In all four analysed countries, tourism is very developed, with a long tradition, the tourism potential having a high degree of capitalisation. In these conditions, it is worth noting that there is a continuous trend of development of mass tourism, especially international tourism, which has a major contribution to GDP growth. This is noticeable both at the national and regional levels.

In southern European countries, the increase in the number of overnight stays is synchronised to a lesser extent with the employment rate, since, in many cases, the increase in the influx of tourists can be managed without a significant increase in the number of workers in this sector, the results of tourism being reflected in GDP, both through the production and expenditure methods.

In Romania, the percentage change in GDP per capita is lower (as the country has not yet adopted the euro and is currently facing a difficult period from an economic point of view) and is influenced by the percentage change in tourist flows to approximately the same extent as the dynamics of the employment rate. It is worth noting that in Romania, tourism is poorly promoted compared to the other countries analysed, and the deficient infrastructure affects the exploitation of the tourism potential.

Maintaining and developing tourist flows requires the creation and maintenance of infrastructure and accommodation capacities, which also involves the creation of new jobs. In the PIGS countries, it can be observed that the percentage change in the number of overnight stays is positively associated with percentage change in the employed population, while, in Romania, positive correlations are observed only in highly developed urban areas (Bucharest, Cluj, Iași), where both the accommodation capacity and the occupancy rate of accommodation units are higher.

The assessment shows that the effects of tourism on the poverty rate are not immediate, but, over time, depending on the national specificities and the intensity of tourism, this sector contributes to reducing poverty, developing opportunities for rural and disadvantaged areas. Involvement in tourism can increase respect for the environment and

local culture, encouraging education and professional training of communities. However, if tourism is not properly managed through sustainable policies, several negative effects can result, such as cultural degradation, urban congestion, price increases and increased economic dependence on tourists.

Another challenge is the impact of tourism on the environment. In countries such as Spain and Italy, citizens have taken a stand against the tourism congestion in cities (which causes the degradation of monuments, a decrease in the quality of life, pollution, etc.) and have called for a reduction in the tourist flows. In order to respond to all the challenges generated by the tourism sector, there is a need to develop and promote strategies and policies that take into account economic, social and environmental sustainability with the aim of achieving the medium and long-term objectives of harmonious development while respecting the principles of sustainable development.

This paper is subject to certain limitations regarding the number of indicators used and the typology of tourism analysed. However, the research could be further expanded by developing panel econometric models and conducting in-depth comparative analyses based on the results obtained.

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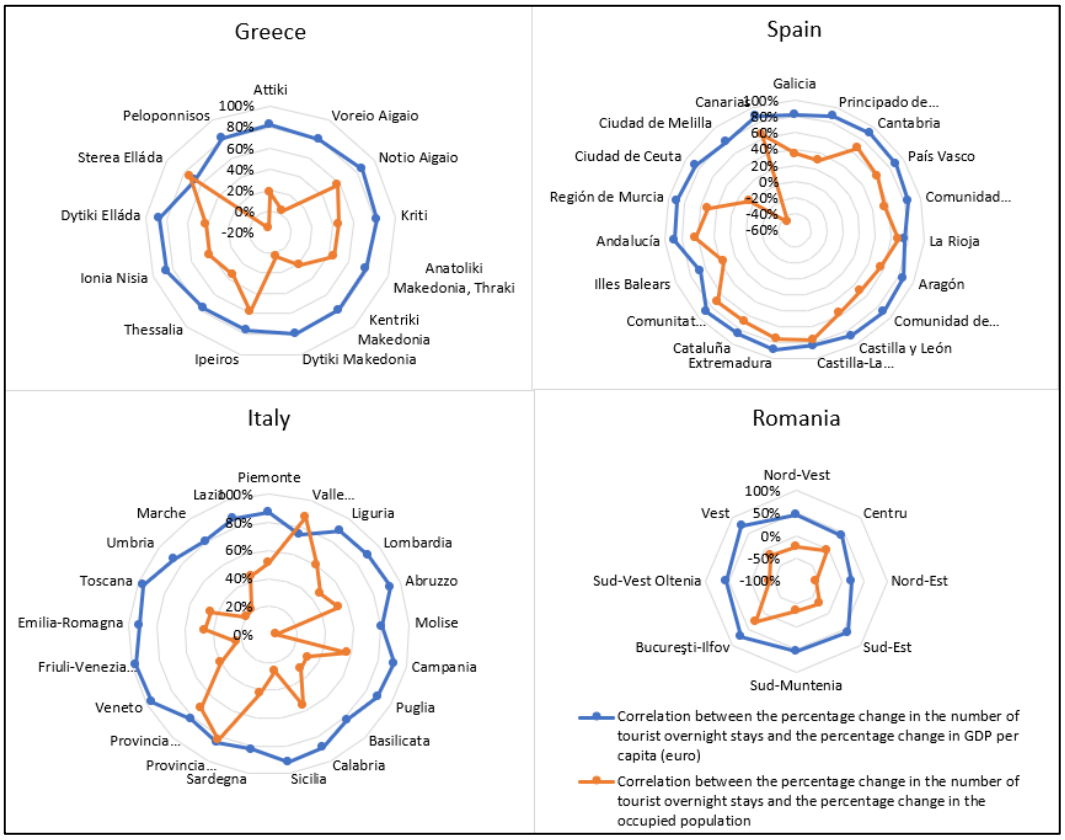
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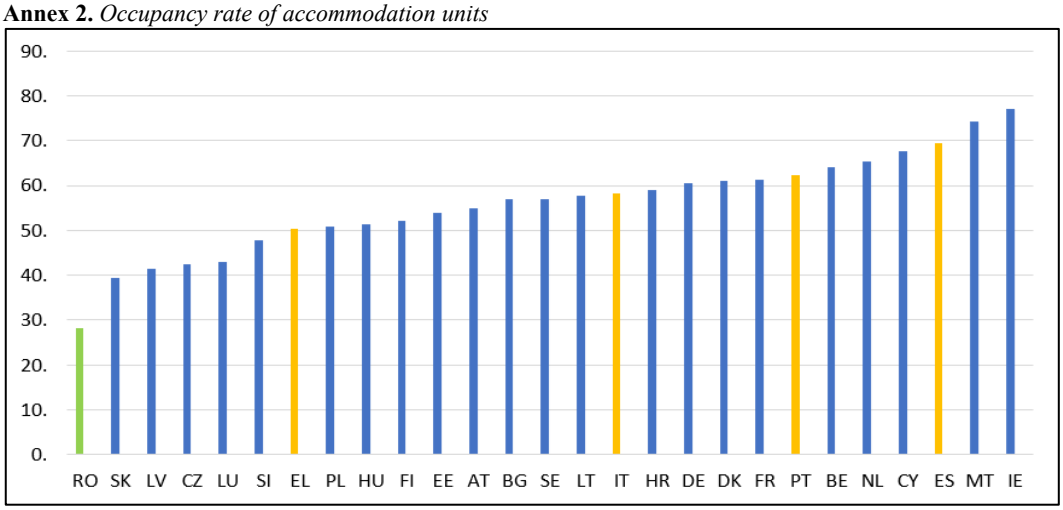
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Annex 1. *Correlation between tourist flows and the dynamics of GDP per capita / employed population at regional level*



Source: own processing in Microsoft Office Excel, based on Eurostat data

Annex 2. *Occupancy rate of accommodation units*



Source: own processing in Microsoft Office Excel, based on Eurostat data