TOURISM AND GROWTH:
EMPIRICAL EVIDENCE FROM THE EUROPEAN UNION

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Abstract

The goal of this research is to estimate the effects of domestic and foreign tourist arrivals on economic growth in the European Union (EU). An autoregression with distributed lags (ARDL) is applied on annual data for the twenty-seven member states of the Union (EU-27) over the period 2014 – 2023. The results from the empirical analysis indicate that in the long term, a rise in income inequality, domestic tourist arrivals and foreign tourist arrivals will result in an accelerated economic growth but in the short run, only an increase in domestic tourism arrivals will encourage economic growth in the EU.

Keywords: *economic growth; domestic tourist arrivals; foreign tourist arrivals; European Union*

JEL Codes: *Z32; F43*

Introduction

Economic growth is a central theme in macroeconomics because it is the main source of a nation's wealth and should be encouraged. Tourism (domestic and international) is a sizeable industry globally and in many countries and has the potential to stimulate economic growth. It can be expected that the influence of internal and international tourism on the economies of the EU member states is significant since the top tourist destinations in the world (Spain, Italy, France, and Greece) are located in the European Union. The objective of this paper is to explore the impact of tourism (domestic and international) on economic growth in the EU during 2014 – 2023. An ARDL and annual data are employed to estimate the effects of the number of domestic tourist arrivals and foreign tourist arrivals

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on nominal GDP in the EU-27 during 2014 - 2023. The results from the empirical analysis show that in the long term both domestic and international tourism encourage economic growth in the EU-27 as a group and in individual member-states. In the short term, domestic tourism facilitates economic growth, whereas international tourism does not affect it for the EU-27 as a group.

In order to achieve the objective of the article, it is structured into literature review (section one), empirical analysis (section two) and conclusion section.

1. Literature review

The relationship between tourism — both domestic and international — and economic growth has attracted significant academic interest, revealing complex dynamics influenced by various factors. A considerable body of literature supports the notion that tourism acts as a catalyst for economic growth, although the mechanisms and outcomes can differ based on specific regional contexts, types of tourism, and economic conditions.

Empirical studies demonstrate a positive correlation between international tourism revenues and economic growth indicators. For instance, research by Gavurová et al. (2020) indicated that a 1% increase in international tourism expenditure could lead to a long-run GDP elasticity estimated at 0.4, showing that higher spending in this sector positively affects overall economic productivity in OECD countries. Further corroboration comes from Jelušić and Mikulić (2021), who affirm that international tourism fosters economic growth through various pathways, including enhancing global economic competitiveness and generating stronger revenue streams for nations.

Moreover, Lee's investigation into the tourism-led growth hypothesis highlights a nuanced interaction between international tourism and domestic economic performance in China (Lee, 2021). The findings suggest that international tourism often leads economic growth — indicating a uni-directional causality that aligns with broader trends observed in several developing economies, which often rely heavily on tourism as a revenue stream (Jelušić, 2017).

On the domestic front, indications suggest that local tourism can also bolster economic growth, albeit possible in a different manner than international tourism. Cortés-Jiménez (2008) highlights the significance of domestic tourism in Rwanda, detailing how homegrown tourism strategies can be vital during periods of international economic downturn. This reflects a broader trend wherein countries facing global financial challenges still leverage internal tourist activities to sustain economic stability.

Research conducted in Spain and Italy also supports the incremental role of domestic tourism in regional economic growth, finding that both international and domestic tourism contribute substantially to GDP, although with different regional impacts (Cortés-Jiménez,

2008). Furthermore, Dritsakis' analysis provides evidence that domestic tourism receipts contribute meaningfully to long-run economic growth, specifically within the context of Greece (Dritsakis, 2004).

The complexity of the tourism-economic growth relationship is underscored in studies that apply causal analysis techniques. For instance, the work of Antonakakis et al. (2015) employed spillover index techniques, revealing that the tourism-economic growth relationship is not static over time; growth in tourism does not always lead directly to economic gains and vice versa. This aligns with findings from Lin et al. (2018), who provide insight into the specific conditions under which tourism-led growth or economy-driven tourism can occur, indicating that certain regions are more predisposed to benefit from tourism growth than others do. Such findings emphasize that policy frameworks must consider local economic structures and tourism dynamics to foster effective growth strategies.

The literature presents a comprehensive picture of the interrelatedness between tourism and economic growth, emphasizing that both domestic and international tourism can affect economic trajectories significantly. While there is strong support for the tourism-led growth hypothesis, further granularity is required to understand the nuances of this relationship fully. Aggregated findings illustrate that both international and domestic tourism serve as fundamental engines of economic development, particularly in contexts marked by strategic national investments in tourism infrastructure and marketing.

With advancements in research surrounding the relationship between tourism and economic growth, the literature continues to expand, illustrating the multifaceted effects of both domestic and international tourism. This extended review incorporates several additional studies that complement the existing body of knowledge on this subject.

International tourism retains a significant influence on economic growth across various regions. A study by Carrera et al. (2008) emphasizes the validation of the Tourism-Led Growth Hypothesis (TLGH) in the context of Mexico, indicating a strong correlation between tourism and long-term economic growth. Their findings align with similar investigations in other countries, reinforcing the assertion that tourism can act as a vital driver of economic growth through foreign exchange earnings, employment generation, and infrastructural development. Similarly, Schubert et al. (2011) provide evidence that, particularly in small economies heavily reliant on tourism, international tourism demand can have pronounced positive impacts on economic growth, further solidifying the importance of this sector in such contexts.

Further extending this argument, Stanišić et al. (2022) discuss the interdependence between tourism competitiveness and overall economic development in Southern European countries. Their analysis highlights the necessity of embedding sustainable practices within

tourism strategies to enhance competitive positioning, which subsequently bolsters economic growth. This hints that sustainable tourism not only enhances tourism-related revenues but also supports broader economic objectives by fostering long-term viability.

Shifting the focus to domestic tourism, several studies argue for its capacity to stimulate local economies, especially during periods of global economic instability. As Cortés-Jiménez (2008) illustrated in their examination of Rwanda, promoting domestic tourism can serve as a counterbalance when international tourist numbers decline due to various external factors. Andereck et al. (2007), who argue that perceptions of tourism and its impact on quality of life can create positive feedback loops, driving further domestic tourism engagement and economic benefits among residents, echo this sentiment in research. The study found that a positive perception of tourism could foster greater community support and engagement with tourism initiatives.

Additionally, Jelušić (2017) elaborates on the importance of modeling domestic tourist consumption to unveil its potential impacts on achieving economic growth and an improved external balance, especially within the Croatian context. Such models can provide critical insights for policymakers aiming to maximize the economic contributions of domestic tourism through strategic investments and initiatives.

The causal dynamics between tourism and economic growth have been further investigated in several studies, providing more nuanced understandings of this complex relationship. Dritsakis (2012) explores the long-run causality between tourism and economic growth across Mediterranean countries, using panel data to ascertain the nature of these interrelations. His findings reinforce that while short-term benefits can arise swiftly, establishing a stable, long-term economic contribution depends on continuous tourism development and strategic facilitation.

In a similar vein, Pulido-Fernández and Cárdenas-García (2020) have conducted a thorough analysis to evaluate the bidirectional relationship between tourism growth and economic development. By employing advanced confirmatory factor analysis techniques, they posited that not only does tourism spur economic development, but economic growth also enhances tourism's capacity to attract visitors, highlighting the intricate interplay between these variables.

The literature on the effects of tourism on economic growth demonstrates a well-established but intricate relationship characterized by both domestic and international components. Significant evidence supports the notion that tourism serves as a critical engine for economic growth, though its effectiveness can vary based on regional characteristics, competitive strategies, and the integration of sustainable practices. Future research should continue to dissect these dynamics, especially in light of changing global economic climates and the increasing importance of sustainable tourism practices (.

Among the key focuses of tourism education and of the training of personnel in the field of tourism is the assimilation of the opportunities for evaluation and analysis of the contribution of the tourism industry to the economy. Traditionally, tourism development is a government priority for many countries, precisely because of the sector's contribution to GDP. The provision of data on the impacts exerted by tourism, which are sought in its interconnections and influences on GDP, is in direct relation with identifying the possibilities available for formulating adequate policies for development, which preferably is sustainable.

Over time, tourism and the effects of its development on the economies of countries, as well as on a global scale, have been the subject of numerous studies. They highlight the perception of tourism as one of the fastest growing areas of trade (Dritsakis, 2012). The economic importance of tourism is realized through offering of tourist related and other services, and in some cases of goods (Bachvarov & Tonchev, 1996). Being a sector of global importance (Dwyer et al., 2020), tourism presupposes the development of the general economy, as Dwyer and Forsyth (2006) specified back in 2006, while at the same time there is also a reverse impact of the economy on global tourism, which in the long term would be significant if investments and development take place in an open and sustainable environment (Sofronov, 2017). Even though he talks about the direct economic impact of the tourism industry, he also mentions the significant indirect and induced impacts, which the industry contributes to Sofronov (2017), which could be found aimed at the environment, culture and society. Maintaining functional interrelationships with other sectors, tourism evoke a multiplier effect (TME) on the economy, mainly through the impact of the initiated tourist demand on other businesses in the tourist destination (Sastri, et al., 2024).

Widely discussed are the factors and conditions under which the tourism industry influences the economy and vice versa (Frankel & Rose, 2002; Dwyer, Forsyth & Spurr, R., 2004), including both negative and positive ones (Carole, 2017).

2. Empirical analysis
2.1. Methodology
The effects of domestic tourism, international tourism and income disparity on economic growth in the EU-27 are explored via a pooled mean group (PMG) ARDL, which includes the following variables:

$NGDP_{ij}$ – the nominal GDP of country i in year j (in million euro);

DTA_{ij} – the number of domestic tourist arrivals in country i in year j;

FTA_{ij} – the number of foreign tourist arrivals in country i in year j;

Gini$_{ij}$ – the Gini coefficient of country **i** in year **j** with values from zero (absolute equality) to one (absolute inequality) in income distribution.

The target (dependent) variable is **NGDP**, **DTA**, **FTA** and **Gini** are independent (explanatory) variables, which reflect the influence of domestic tourism, international tourism and income disparity on economic growth.

The Hausman tests indicate probabilities above 5 percent (0.83 and 0.17), which means that the pooled mean group (PMG) estimator should be preferred to the mean group (MG) or dynamic fixed effects (DFE) estimators. EViews based on the Akaike Information Criterion select the optimum number of lags for each variable in the PMG ARDL automatically.

2.2. Data

Annual Eurostat data on the nominal GDP (in million euro), the Gini coefficients, domestic tourist arrivals and foreign tourist arrivals in the EU member states during 2014 – 2023 are used in the study.

2.3. Results

The unit root tests (see Table 1) indicate that **DTA**, **FTA** and **Gini** are integrated of order zero, while **NGDP** is integrated of order one. The different order of integration of the variables - I(0) and I(1) – demands the application of an ARDL. A PMG ARDL is selected to model the variables since it presumes that the long-term conditions (coefficients) are the same for all countries in the sample but the short-run conditions (coefficients) vary across the sample. Indeed, the common regulations and policies of the EU are the long-term conditions, while the country-specific factors are the short-run conditions.

The results from the econometric estimation of the ARDL for the group of the EU-27 are shown in Table 2. In the long run, all explanatory variables – **DTA**, **FTA** and **Gini**, have statistically significant positive impacts on the explained variable **NGDP**. The relationships between **NGDP**, on the one hand, and **DTA**, **FTA** and **Gini**, on the other hand, are positive, which means that ceteris paribus a change in **DTA, FTA** and **Gini** will lead to a change in **NGDP** in the same direction. The absolute value of the regression coefficient before **DTA** is higher than the absolute value of the regression coefficient before **FTA**, which suggest that the **DTA** has a stronger influence on **NDDP** than **FTA**. It may be inferred that in the long-term economic growth at the country and the EU level can be accelerated by a rise in domestic and international tourism.

Table 1. Stationarity tests

Variable	Probability
DTA	0.0006
FTA	0.0000
Gini	0.0000
NGDP	1.0000
D(NGDP)	0.0000

Source: Own processing

Table 2. Results from the econometric estimation of the ARDL

Variable	Coefficient	Standard Error	t-Statistic	Probability
Long Run Equation				
GINI	1337.329	370.4291	3.610215	0.0004
DTA	0.005473	0.001082	5.056931	0.0000
FTA	0.000439	8.97E-05	4.895255	0.0000
Short Run Equation				
COINTEQ01	0.179680	0.030879	5.818832	0.0000
D(GINI)	-1099.447	2244.900	-0.489753	0.6251
D(DTA)	0.007660	0.002198	3.484180	0.0007
D(FTA)	0.000401	0.001663	0.240869	0.8100
C	-53089.07	23389.04	-2.269827	0.0249

Source: Own processing

The only significant short-run variable is **DTA**, which means that domestic tourism has not only long-term but also short-run positive effects on economic growth at the EU-27 level.

The short-run impacts of domestic and international tourism on economic growth in the separate EU member states are shown in Table 3. The EU member countries can be grouped according to the short-run influences of tourism on economic growth as follows:

1) Countries where economic growth is facilitated by an expansion in domestic and international tourism – Bulgaria, Czechia, Estonia, Croatia, Cyprus, Luxembourg, Malta, Netherlands, Austria, Slovenia and Finland;

2) States where economic growth is favored by a rise in domestic tourism and a decline in international tourism – Belgium, Denmark, Ireland, Spain, France, Italy, Latvia, Lithuania, Romania and Sweden;

3) Countries where economic growth is stimulated by a downturn in domestic tourism and an upturn in international tourism – Germany, Greece, Hungary, Poland, Portugal and Slovakia.

Table 3. Short-term effects of domestic and international tourism on economic growth in the different EU member countries

	A rise in domestic tourism	**A rise in international tourism**
Belgium	Encourages economic growth	Hampers economic growth
Bulgaria	Encourages economic growth	Encourages economic growth
Czechia	Encourages economic growth	Encourages economic growth
Denmark	Encourages economic growth	Hampers economic growth
Germany	Hampers economic growth	Encourages economic growth
Estonia	Encourages economic growth	Encourages economic growth
Ireland	Encourages economic growth	Hampers economic growth
Greece	Hampers economic growth	Encourages economic growth
Spain	Encourages economic growth	Hampers economic growth
France	Encourages economic growth	Hampers economic growth
Croatia	Encourages economic growth	Encourages economic growth
Italy	Encourages economic growth	Hampers economic growth
Cyprus	Encourages economic growth	Encourages economic growth
Latvia	Encourages economic growth	Hampers economic growth
Lithuania	Encourages economic growth	Hampers economic growth
Luxembourg	Encourages economic growth	Encourages economic growth
Hungary	Hampers economic growth	Encourages economic growth
Malta	Encourages economic growth	Encourages economic growth
Netherlands	Encourages economic growth	Encourages economic growth
Austria	Encourages economic growth	Encourages economic growth
Poland	Hampers economic growth	Encourages economic growth
Portugal	Hampers economic growth	Encourages economic growth
Romania	Encourages economic growth	Hampers economic growth
Slovenia	Encourages economic growth	Encourages economic growth
Slovakia	Hampers economic growth	Encourages economic growth
Finland	Encourages economic growth	Encourages economic growth
Sweden	Encourages economic growth	Hampers economic growth

Source: Own processing

Conclusion and Recommendations

The observed global crises go beyond the ordinary and become an important economic, political and social priority for many countries in which tourism is a leading industry. Therefore, regarding the issue under consideration and the analysis of the impact of domestic and international tourist arrivals in EU countries and the Union as a whole, the interpretation in the context of tourism theory is of particular interest. The results from the empirical analysis indicate that in the long run, both domestic and international tourism facilitate economic growth in the separate EU member states and in the EU as a whole but the impact of domestic tourism on growth is stronger than the one of international tourism.

In the short term at the EU-27 level, domestic tourism favors growth but international tourism does not affect it. It may be inferred that at the EU-27 level domestic tourism is a greater contributor to growth than international one both in the short and in the long run. At the national level, the short-term potential of both types of tourism (domestic and international) to stimulate economic growth is utilized in Bulgaria, Czechia, Estonia, Croatia, Cyprus, Luxembourg, Malta, Netherlands, Austria, Slovenia and Finland. In the remaining EU member states, the short-run effects of tourism on economic growth vary by the type of tourism.

Undoubtedly, these results allow setting the direction of the efforts of the tourism industry towards achieving a positive economic effect within the EU. Despite all of that, stepping on the solid basis of knowledge, it should be borne in mind that in the current conditions of economic and political turmoil, active terrorist organizations, biological threats and significant climate change, national and international tourism is not "insured" against the risk of disasters or crises. This, in turn, implies a pro-active behavior and constant efforts to maintain actions in the direction of strengthening the positives and counteracting the negatives in tourism development.

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