Impacts of tourism associated with residents' well-being: an analysis in 197 European OECD regions

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Abstract

Purpose – *The purpose of this paper is to analyze the extent to which tourism development is related to the well-being of residents.*

Design/methodology/approach – *The authors analyze how tourism development is associated with 11 subjective and objective measures of well-being, as defined by the OECD, across 197 European regions from 21 countries.*

Findings – *Tourism development is associated with higher well-being, especially in industrial regions, as well as in primary- and service-based regions. In contrast, the association of tourism development with indicators of well-being is lower in quinary-based regions. Only one negative association was found, namely, that of the well-being indicator representing civic engagement.*

Research limitations/implications – *Panel data for well-being indicators was not available for the regions analyzed.*

Practical implications – *Economic diversification is positive in primary- and secondary-based regions, as reflected by improvements in well-being indicators. In service-based regions, tourism development is also associated with increases in important well-being indicators.*

Social implications – *Despite what has been extensively debated, no negative associations were found between tourism development and well-being variables.*

Originality/value – *To the best of the authors' knowledge, this is the first study to analyze the relationship between tourism development and well-being of residents based on multiple indicators and across such a range of NUTS1 and NUTS2 regions, with different levels of tourism development. Previous studies have analyzed cases of countries, which are usually heterogeneous in terms of tourism development, or a very limited number of regions. In addition, this study is one of the first to have used overnight stays rather than tourism arrivals as a key measure, thus considering the length of stay.*

Keywords *GDP, Well-being, OECD, QOL, Happiness*

Paper type *Research paper*

旅游业对居民福祉的影响：对 197 个欧洲 oecd 地区的分析

摘要

目的: 分析旅游业发展与居民福祉的关系程度。

设计/方法/方法: 我们分析了旅游业发展与 21 个国家 197 个欧洲地区经合组织定义的 11 个主观和客观福祉指标之间的关系。

结果: 旅游业发展与更高的福祉相关, 尤其是在工业区以及初级和服务业地区。相比之下, 旅游业发展与福祉指标的关联在五元地区较低。仅发现一种负相关, 即代表公民参与的福祉指标。

原创性: 这是第一项基于多项指标、在如此广泛的 NUTS1 和 NUTS2 地区（旅游业发展水平不同）分析旅游业发展与居民福祉之间关系的研究。先前的研究分析了旅游业发展状况参差不齐的国家或数量非常有限的地区的案例。此外， 这项研究是首批使用过夜住宿而不是旅游人数作为关键衡量指标的研究之一, 因此考虑了逗留时间。

研究的局限性/影响: 所分析地区没有福祉指标的面板数据。

实际影响: 经济多样化在初级和二级地区是积极的, 这反映在福祉指标的改善上。在服务业地区, 旅游业的发展也与重要福祉指标的提高有关。

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社会影响: 尽管对此进行了广泛的争论, 但并未发现旅游业发展与福祉变量之间存在负相关性。
关键词 *GDP, 福祉, OECD, QOL, 幸福*
文章类型 研究型论文

Impactos del turismo en el bienestar de los residentes: un análisis en 197 regiones europeas de la OCDE

Resumen

Objetivo: *Analizar en qué medida el desarrollo turístico está relacionado con el bienestar de los residentes.*

Diseño/metodología/enfoque: *Analizamos cómo el desarrollo turístico está asociado con 11 medidas subjetivas y objetivas de bienestar, según la definición de la OCDE, en 197 regiones europeas de 21 países.*

Resultados: *El desarrollo turístico está asociado con un mayor bienestar, especialmente en las regiones industriales, así como en las regiones basadas en la industria primaria y los servicios. Por el contrario, la asociación del desarrollo turístico con los indicadores de bienestar es menor en las regiones basadas en el sector quinario. Solo se encontró una asociación negativa, concretamente la del indicador de bienestar que representa el compromiso cívico.*

Originalidad/valor: *Este es el primer estudio que analiza la relación entre el desarrollo turístico y el bienestar de los residentes basándose en múltiples indicadores y en un conjunto tan amplio de regiones NUTS1 y NUTS2, con diferentes niveles de desarrollo turístico. Estudios anteriores han analizado casos de países, que suelen ser heterogéneos en términos de desarrollo turístico, o un número muy limitado de regiones. Además, este estudio es uno de los primeros en utilizar las pernoctaciones en lugar de las llegadas turísticas como medida clave, teniendo así en cuenta la duración de la estancia.*

Limitaciones/implicaciones de la investigación: *No había datos de panel disponibles para los indicadores de bienestar de las regiones analizadas.*

Implicaciones prácticas: *La diversificación económica es positiva en las regiones primarias y secundarias, como reflejan las mejoras en los indicadores de bienestar. En las regiones basadas en los servicios, el desarrollo turístico también se asocia con aumentos en importantes indicadores de bienestar.*

Implicaciones sociales: *A pesar de lo que se ha debatido ampliamente, no se encontraron asociaciones negativas entre el desarrollo turístico y las variables de bienestar.*

Palabras clave *PIB, Bienestar, OCDE, Calidad de vida, Felicidad*

Tipo de papel *Trabajo de investigación*

1. Introduction

The debate regarding economic activities that regions should promote is ongoing and timely. To improve lifestyle factors for residents, policymakers have sought to foster economic activities with potential positive consequences in different community aspects, including employment, household income, health care, education and safety. Many countries and regions have viewed tourism as an opportunity to improve such factors. In this process, the narrative has generally been connected to economic outcomes, with GDP being the reference.

Studies have shown that tourism generally leads to economic growth. This and other positive effects have been highlighted by important tourism bodies such as the World Tourism Organization (UNWTO). However, in recent years, a growing body of literature has reported negative effects of tourism, such as impacts on environmental sustainability (Sharpley, 2020), price increases (Kim *et al.*, 2013) and gentrification (Gotham, 2005).

Several authors (e.g. Semple, 2021; Stiglitz *et al.*, 2009; Uysal, 2020) have been critical of only using measures such as GDP to assess the impact of an economic activity. These authors consider that GDP is not able to capture individuals' well-being. In this regard, the Easterlin Paradox (Easterlin and O'Connor, 2020) warns that increasing tourism may not automatically lead to improved well-being for residents of an area. Research has found that policy makers should adopt broader measurements, such as various aspects related to quality of life (QOL), a term that is frequently used interchangeably with well-being

(Uysal *et al.*, 2016). In this sense, the literature has insisted on the need for assessing the impact of tourism on QOL (e.g. Hartwell *et al.*, 2018; Uysal *et al.*, 2016).

Livability theory proposes that living conditions affect citizens' well-being. According to this theory, tourism activity can influence contextual factors such as employment opportunities and overcrowding (Lindberg *et al.*, 2022), which are important for well-being (Veenhoven, 2015). Research connecting the development of tourism and QOL has mostly relied on subjective measures of well-being. Also, it has been developed based on a limited number of geographical territories. Due to these shortcomings, several authors (Hu *et al.*, 2024; Uysal *et al.*, 2016) have recommended conducting research that includes objective measures and compares results across territories. The limited evidence based on objective well-being has relied on the Human Development Index (HDI) as a proxy for QOL. The HDI includes three dimensions that are aggregated into a composite index. Thus far, studies in this area have considered only the global index and not the three dimensions (e.g. Chattopadhyay *et al.*, 2022; Sarpong *et al.*, 2020). Such use of a composite index can affect the results of research (Fu *et al.*, 2020) and make it difficult to obtain evidence concerning the specific impacts of tourism on the well-being of community residents. Policymakers require this information to formulate and implement economic policies in their communities.

In the present research, we used data from the well-being project of the OECD, which includes 10 objective indicators and one subjective one. These indicators were analyzed to determine those that have been influenced by the development of tourism. Our sample comprised 197 EU NUTS1 and NUTS2 regions. This makes this research the largest study of the connection between tourism and well-being based on objective and subjective indicators and performed at the regional level rather than a national level.

2. Literature review

2.1 Tourism development

Governments and institutions (e.g. UNWTO) often view tourism as a means to improve the living conditions of local residents. Consequently, many governments are investing heavily in the development, promotion and management of tourism destinations (Uysal and Sirgy, 2023). One primary goal of these efforts is to attract visitors. An influx of tourists inevitably transforms the character of a destination permanently (Uysal *et al.*, 2023). In this context, most studies have considered the number of tourists to reflect the extent of tourism development in a given area (Stylidis *et al.*, 2014). Nonetheless, tourism development also involves other stakeholders, such as tourism suppliers (Ridderstaat, 2023).

Tourism development has traditionally been justified by its economic benefits (Uysal *et al.*, 2016). The anticipated outcomes of high levels of tourism development typically include economic gains such as job creation and increased income for businesses. However, increased tourism activity also has potential implications in non-economic domains, such as environmental degradation and crowding of public facilities.

2.2 Resident well-being

Livability theory proposes that living conditions affect individuals' well-being. According to this theory, tourism activity can influence contextual factors such as employment opportunities and overcrowding (Lindberg *et al.*, 2022), which are important for citizens' well-being (Veenhoven, 2015).

The concept of resident well-being in the context of the tourism industry is multifaceted. It encompasses both objective conditions of a destination and residents' subjective perceptions of QOL across various life domains that are influenced by tourism activities (Uysal *et al.*, 2016). Kim *et al.* (2013, 2021) assessed residents' well-being in tourism destinations using four life domains: economic well-being, community, emotional well-being

and health/safety. Stylidis *et al.* (2014) considered three life domains affected by tourism that contribute to residents' well-being: economic, socio-cultural and environmental. Similarly, Uysal and Sirgy (2019) highlighted additional domains, including economic, consumer, social, health and environmental.

The literature has generally considered two perspectives, objective and subjective, from which to measure the impact of tourism development on resident well-being (Uysal and Sirgy, 2019). Objective well-being refers to people's needs, which can be listed *a priori* (Chen *et al.*, 2020; Hu *et al.*, 2024), in economic, material, housing, leisure, environmental, social and health terms (Godovykh *et al.*, 2023; Hartwell *et al.*, 2018). Subjective well-being considers individuals' affects and evaluations (Diener, 2000), which can be global (Chen *et al.*, 2020; Rapley, 2003) or based on the different domains of life (Uysal and Sirgy, 2019).

The OECD (2018) identified 11 community-based dimensions of well-being. Ten of these dimensions are objective measures: income and wealth, jobs and earnings, housing, health, education and training skills, work–life balance, social connections, civic engagement and governance, environmental quality and personal security. The last one is a subjective measure of well-being based on life satisfaction. These dimensions extend the domains of well-being considered in previous studies.

2.3 Tourism and resident well-being

Tourism can have both positive and negative effects on a destination (Uysal and Sirgy, 2023). In both academic and policy domains, an intense and unresolved controversy has existed regarding how and to what extent tourism contributes to a region. Four literature reviews regarding tourism and well-being have been performed by Uysal *et al.* (2016), Hartwell *et al.* (2018), Hu *et al.* (2024) and Ridderstaat (2023). According to Ridderstaat (2023), research seems to suggest mainly a unilateral effect of tourism development on resident well-being, although reciprocal or reverse causalities have also been found.

The findings of these studies have indicated in general that tourism has positive and negative effects on the well-being of a community's residents. Uysal *et al.* (2016) grouped the impacts of tourism on a community into three major categories: economic, socio-cultural and physical and environmental. In all of these categories positive and negative effects exist.

2.3.1 The good. In general, most of the positive consequences of tourism have been connected to economic perspectives (Uysal *et al.*, 2016), such as increased employment and household or company income (Dwyer, 2023; Hartwell *et al.*, 2018; Jia *et al.*, 2023; Moscardo, 2012), improved standard of living and increased investment and business activity (Kim *et al.*, 2013). In this sense, the tourism-led growth hypothesis poses that tourism activity drives economic growth (Brida *et al.*, 2016), which has been confirmed by several studies (Brida *et al.*, 2016; Castro-Nuño *et al.*, 2013; Duarte Alonso and Nyanjom, 2016; Harb *et al.*, 2024; Pablo-Romero and Molina, 2013). Other studies have confirmed specific positive economic impacts, such as regional economic convergence (Li *et al.*, 2016) and poverty reduction (Llorca-Rodríguez *et al.*, 2021).

Tourism's contribution can also be positive in other areas beyond the economic perspective. In this regard, the literature has mentioned tourist events that residents can enjoy (Kim *et al.*, 2013), better transport infrastructures (Kim *et al.*, 2013), improved physical and mental health (Pyke *et al.*, 2016), increased opportunities for recreation (Andereck and Nyaupane, 2011; Duarte Alonso and Nyanjom, 2016), development of community services (Andereck *et al.*, 2007; Biagi *et al.*, 2020), more commercial offers and special events (Andereck and Nyaupane, 2011), heritage preservation (Gonzalez *et al.*, 2018) and the saving of traditional cultures due to revitalization (Hartwell *et al.*, 2018; Kim *et al.*, 2013; Moscardo, 2012). Even in the environmental sphere, in which the effects associated with tourism have usually been negative, some authors have hypothesized that the opposite may

be true, that is, that residents become more aware of the need to protect the environment (Kim *et al.*, 2013) and support increased investment in environmental infrastructures (Ivlevs, 2017) as a result of tourism.

Several authors have found that the impact of tourism on the well-being of residents relates to the stages of tourism development (Kim *et al.*, 2013; Uysal *et al.*, 2016), namely, introduction, growth, early maturity, late maturity and decline. Positive effects have been shown as moderate in the early stages, higher in the maturity phases, and decreasing in the final stage. Tokarchuk *et al.* (2018) found that tourism generates an increase in the well-being of residents up to a threshold. After that point, additional increases in tourist arrivals have a negative effect on the well-being of locals. In the same sense, Haini and Loon (2023) found a positive effect of tourism in cases of economies with a lower dependence on tourism. Several authors (Agyeiwaah and McKercher, 2025; Harb *et al.*, 2024) have found that the positive relationship between tourism and well-being is related to domestic arrivals. Instead, international arrivals are not related to well-being and sometimes even cause negative effects. Other studies have found that the well-being of residents is highly dependent on the benefits that these residents obtain through their association with the tourism sector (Chen *et al.*, 2020; Hartwell *et al.*, 2018; Hu *et al.*, 2024; Jia *et al.*, 2023; Uysal *et al.*, 2016).

2.3.2 The bad and the ugly. In general, the negative aspects of tourism development have been connected to socio-cultural and environmental aspects (Uysal *et al.*, 2016). In the socio-cultural area, the most frequently cited negative effects have been crime (Andereck and Nyaupane, 2011; Hartwell *et al.*, 2018), traffic and accidents (Andereck and Nyaupane, 2011; Hartwell *et al.*, 2018; Ivlevs, 2017; Psarras *et al.*, 2023), overcrowding (Gonzalez *et al.*, 2018; Ivlevs, 2017; Mihalic and Kuščer, 2021), overtourism (Milano *et al.*, 2022), gentrification and housing affordability issues (Mikulić *et al.*, 2021), begging (Andereck *et al.*, 2007; Ivlevs, 2017; Kim *et al.*, 2013) and the abandonment of traditional activities, culture and societal forms (Andereck *et al.*, 2007; Ivlevs, 2017; Kim *et al.*, 2013).

In the environmental domain, the negative effects that have been outlined are pollution (Archer *et al.*, 2005; Godovykh *et al.*, 2023; Ivlevs, 2017), noise (Godovykh *et al.*, 2023; Ivlevs, 2017), waste (Archer *et al.*, 2005; Godovykh *et al.*, 2023), energy and resource consumption (Elkhwesky *et al.*, 2022) and destruction of wildlife and natural resources (Godovykh *et al.*, 2023; Kim *et al.*, 2013).

Some negative effects have also been identified in the economic area, in which the most cited have been inflation (Gonzalez *et al.*, 2018; Ivlevs, 2017), overdependence on tourism (Buhalis, 1999) and low wages (Hartwell *et al.*, 2018).

Some studies have reported an overall negative effect of the development of tourism on residents' well-being, for example, Biagi *et al.* (2020) in two Mediterranean cities, Bimonte and D'Agostino (2021) in two Italian seaside destinations, and Pratt *et al.* (2016) in Fiji. This negative relationship has been shown to be dependent on several variables. For example, Ivlevs (2017) found that the negative link was stronger in rural areas and areas with greater tourism development. Haini and Loon (2023) found that negative effects began to appear as economies became more dependent on tourism. Along the same line, Chen *et al.* (2025) noted an effect of tourism development on residents' mental health, which would also be dependent on the stage of tourism development. By contrast, other authors found that a negative association between tourism development and residents' well-being was not evident (Jia *et al.*, 2023).

2.4 Research gap and research objective

The theoretical reasoning regarding the contribution of tourism to the well-being of residents has produced contradictory and inconclusive results. According to the tourism-led growth hypothesis, the contribution should be positive because tourism generates economic

growth and this economic growth triggers greater well-being in residents. However, the Easterlin Paradox warns that this linear relationship between economic growth and well-being does not always occur. According to the livability theory, living conditions affect individuals' well-being. Evidence has shown that tourism affects various living conditions of residents both positively and negatively.

Studies that have analyzed the relationship between tourism development and residents' well-being have exhibited one or more of the following gaps: They only considered subjective well-being; if objective well-being measures were used, it was as an aggregated measure (i.e. HDI); they included a low number of territories (i.e. a few countries, cities or regions); when the number of territories has been high, the analysis has been performed at a national level, but countries (e.g. Spain, France, Italy) show a high level of variability in their tourism development and in well-being indicators by regions inside the country; or they considered only destinations in which tourism was already relevant, thereby rendering it difficult to analyze the effect of the development of tourism on well-being (Bimonte and D'Agostino, 2021; Pratt *et al.*, 2016). Consequently, literature has called for studies that consider objective and subjective measures and that include large samples with different degrees of tourism development (Hu *et al.*, 2024; Uysal *et al.*, 2016).

An additional weakness of the available studies is that they have been based mostly on the number of tourist arrivals. Thus, a tourist who stays one night at a destination counts equally to one who stays a week or more. In this research, we used the number of overnight stays, thus accounting for length of stay within the analysis.

The main objective of this research was to examine the extent to which tourism development is associated with residents' well-being by overcoming most of the shortcomings of available research in this area. We used objective and subjective well-being indicators based on a broad sample of 197 regions from 21 countries that included a wide range of tourism densities.

3. Methodology

3.1 Data set

Our data set included different variables of European regions and well-being indicators for OECD European regions for 2018. We included information gathered from the "OECD Regional Well-being" project (www.oecdregionalwellbeing.org/). This project provides 10 objective well-being indicators and one subjective well-being indicator for each region of countries in the OECD. We selected regions in Europe and included a total of 21 countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Luxembourg, The Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and Türkiye.

In the OECD well-being project, the regions are analyzed at the NUTS2 level for all countries other than Germany and France. For these last two countries, the regions are at the NUTS1 level. For example, in Germany, the OECD analyzes regions at the NUTS1 level (the 16 Länder or states) rather than the NUTS2 level (the 38 government regions). The EU NUTS2 classification is defined as "basic regions for the application of regional policies", whereas the EU NUTS1 classification represents an aggregation of NUTS2 regions and are defined as "major socio-economic regions". There are approximately 300 NUTS2 administrative regions, with slight variations by year. The statistical office of the EU (Eurostat) provides data at the NUTS1 and NUTS2 levels for variables such as inhabitants, people occupied in each economic sector and total nights spent at tourism accommodations.

Our data set included 197 regions in total. For each of the 197 regions, the OECD provides a score in the range of 0–10 for 11 indicators (see Table 1). This number of indicators

Table 1 Variables related to characteristics of European regions at NUTS2 level

Variable	*Definition*	*Source*
Region code	Code of the region	Eurostat
Overnight stays	Nights spent at tourist accommodations	
Inhabitants	Number of inhabitants	
Primary sector employed	People employed in agriculture, forestry and fishing	
Industry sector employed	People employed in industry (except construction)	
Construction employed	People employed in construction	
Service sector employed	People employed in wholesale and retail trade, transport, accommodation and food service activities	
Tech industry employed	People employed in information and communication activities	
Finance sector employed	People employed in financial and insurance activities	
Real estate employed	People employed in real estate activities	
Professionals employed	People employed in professional, scientific and technical activities or administrative and support service activities	
Public administration employed	People employed in public administration, defense, education, human health and social work activities	
Other sectors employed	People employed in art, entertainment, recreation, other service activities, household activities and extra-territorial organizations	
Unemployment rate	Number of unemployed persons as a percentage of the active population (labor force – total number of people employed and unemployed)	
Employed per sector (10 indicators)	People employed in each sector divided by the total employed in the region	Calculated
Tourism development	Overnight stays divided by the inhabitants of the region	
Education	OECD well-being indicators, scored from 0–10 (OECD, 2018)	OECD
Jobs		
Income		
Safety		
Health		
Environment		
Civic engagement		
Access to services		
Housing		
Community		
Life satisfaction		

Source(s): Authors' own work

exceeds those of other studies that have sought to relate tourism development to resident well-being.

Using the data available, we calculated two sets of indicators. First, we calculated the percentage of those employed in each sector of the economy, as these percentages would allow a characterization of each region based on its economic configuration (Kellerman, 1985). Second, we calculated an indicator that would reflect tourism development in a region. Most available studies have used tourist arrivals as a proxy for tourism development in a region (e.g. Godovykh and Ridderstaat, 2020) or tourism arrivals per capita (e.g. Harb *et al.*, 2024). In our study, we used overnight stays divided by the number of residents, an indicator that has been used previously (Chica *et al.*, 2021; Melián-González and Bulchand-Gidumal, 2024). This indicator better reflects the extent of tourism activity in an area and its potential impact. For example, more overnight stays imply more tourism revenue and activity (e.g. many tourism taxes are based on length of stay, and longer stays typically involve more spending on accommodation, food and experiences).

3.2 Methods

Previous findings have shown that the impact of tourism development on well-being indicators depends on the economic configuration of the region (Haini and Loon, 2023). Our

data set included a large number of regions (197) with very different economic characteristics. Therefore, we believed that it would be appropriate to analyze them separately depending on their economic configuration. Therefore, we began by performing an exploratory clustering method within unsupervised learning procedures (Hastie *et al.*, 2009). This clustering was done to group regions according to economic characteristics based on the percentage of those used in each economic industry, following Aumayr (2007) and Marelli (2004).

In the exploratory clustering method, several solutions are computed using different numbers of groups (1, 2, 3, … K) and compared. The optimum number of clusters is obtained by identifying the kink in the curve generated from the within sum of squares, a common approach for cluster selection (Makles, 2012). In our case, the number of clusters allowed us to determine the types of regions among the 197 cases examined based on their economic configurations. These clusters served as the analytical foundation to assess how the relationship between tourism development and residents' well-being varied across regional types.

To further verify the stability of the four-cluster solution, we replicated the analysis using a hierarchical clustering approach based on Ward's linkage. We then compared the results to those obtained from k-means clustering through a cross-tabulation of group assignments. The results showed a high degree of consistency, particularly for Clusters 2 and 3, which were identically reproduced across both methods. This methodological triangulation confirms the robustness of the identified clusters and strengthens the validity of the segmentation.

In addition to testing the stability of the clusters, we also checked for potential boundary condition violations. Specifically, tourism development was deliberately excluded from the clustering process to avoid endogeneity. To validate this choice, we analyzed the distribution of these variables across the resulting clusters.

Although not used to define the clusters, tourism development showed statistically significant differences across the four groups. This indicates that the clusters, formed solely based on economic structure, inherently capture variation in tourism development levels. This finding supports the methodological soundness of our clustering criteria while confirming their substantive relevance to the study.

After the number of clusters available in the data set was determined, we analyzed the relationship between tourism development and residents' well-being in the resulting clusters. To do so, we compared each cluster with a reference cluster regarding the value of each of the 11 well-being indicators.

We also analyzed the relationship between tourism development and the well-being indicators using a lin–log regression model. This model allowed us to estimate proportional (elastic) relationships in which the regression coefficients represented the change in the well-being indicators resulting from a 1% change in tourism development (Williams, 2012). This functional form is particularly suitable for capturing diminishing returns or nonlinear effects, which have been well documented in the tourism development literature. To facilitate interpretation, we calculated average marginal effects (AMEs), which translate estimated elasticities into tangible measures of change, adjusted for the characteristics of each cluster. This approach ensured that our results would be not only statistically robust but also meaningful in the real world, providing practical insights into how tourism development affects well-being in different regional economic configurations. By combining clustering techniques with lin–log regression and AMEs, we were able to identify and compare the differentiated effects of tourism development on well-being indicators, thereby enhancing our understanding of how economic structures influence these relationships.

To ensure the robustness of our findings, we re-estimated all models using fixed effects for countries to control for unobserved heterogeneity. Although the number of statistically

significant coefficients decreased, the overall direction and relative magnitude of the effects remained consistent. This suggests that the observed relationships between tourism development and well-being are qualitatively robust to more demanding model specifications.

4. Results

Based on Makles (2012) and the tests conducted to determine the stability of clusters, the optimal number of clusters in our data set was four. As can be seen in Table 2, the four clusters had significantly different configurations. These differences were relevant for all variables analyzed, including those that allowed definition of the clusters (employment per sector) as well as unemployment rates, household income and tourism development. The sector with the highest percentage of employment in each cluster (shown in bold in the table) allowed us to label that cluster as a primary-, secondary-, service- or quinary-based economic region, in accordance with Kellerman (1985). Primary-based regions have a percentage of employment in the primary sector that is much higher than in any of the other regions. They also exhibit a significant unemployment rate, low household income and very low tourism development. Secondary-based regions are industrial, with low unemployment and low tourism development. In service regions, we found very high tourism development and a very high unemployment rate. Finally, quinary regions have a high level of public-sector employment and usually include the capital of each country, with significant economic development. They are characterized by low unemployment, the highest household income and average tourism development.

Table 3 shows the average and standard deviation for each of the OECD's well-being indicators and comparisons between these indicators in Cluster #3 and the other clusters. We only compared with Cluster #3 for reasons related to space and because Cluster #3 was the key reference in this research. Cluster #3 corresponds to regions with service-based economies in which tourism development was the highest. Residents' well-being was found to be significantly different across the regions examined. Regions in which the public administration sector size was prominent (Cluster #4) had well-being indicators presenting the highest values. Secondary-based regions (Cluster #2) also performed well in economic dimensions (e.g. education and jobs), but not as well in others (e.g. health and environment). Regions based on services (Cluster #3), in which regions with higher tourism

Table 2 Definition of clusters

Cluster tag	*Cluster #1 Primary-based*	*Cluster #2 Secondary-based*	*Cluster #3 Service-based*	*Cluster #4 Quinary-based*	*Total* –
Number of regions	19	54	35	89	197
Primary sector empl. (%)	***0.32*** (0.09)	0.05 (0.04)	0.10 (0.06)	0.02 (0.02)	0.07 (0.09)
Industry sector empl. (%)	0.13 (0.06)	***0.27*** (0.05)	0.11 (0.05)	0.14 (0.04)	0.17 (0.08)
Construction empl. (%)	0.06 (0.02)	0.07 (0.02)	0.06 (0.02)	0.07 (0.02)	0.07 (0.02)
Service sector empl. (%)	0.21 (0.05)	0.23 (0.02)	***0.32*** (0.07)	0.23 (0.03)	0.24 (0.05)
Tech industry empl. (%)	0.00 (0.00)	0.02 (0.01)	0.01 (0.01)	0.03 (0.02)	0.02 (0.02)
Finance sector empl. (%)	0.01 (0.00)	0.02 (0.01)	0.01 (0.01)	0.03 (0.02)	0.02 (0.02)
Real estate empl. (%)	0.00 (0.00)	0.01 (0.00)	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)
Professional empl. (%)	0.03 (0.01)	0.07 (0.02)	0.08 (0.02)	0.11 (0.03)	0.04 (0.04)
Public admin. empl. (%)	0.21 (0.03)	0.21 (0.03)	0.24 (0.04)	***0.30*** (0.05)	0.06 (0.06)
Other-sector empl. (%)	0.03 (0.01)	0.04 (0.02)	0.06 (0.02)	0.05 (0.02)	0.02 (0.02)
Unemployment rate (%)	10.75 (7.15)	6.71 (3.50)	16.98 (6.82)	6.93 (3.12)	9.02 (5.96)
Household income	6,049.53 (2,819.63)	14,863.44 (5,578.10)	14,156.65 (4,931.23)	20,599.52 (3,132.54)	16,527.36 (6,153.73)
Tourism development	1.99 (2.35)	4.70 (3.54)	22.09 (27.64)	7.35 (5.60)	8.73 (13.86)
Examples of regions	Central Greece, Western Macedonia	Aragon, Lombardy, Veneto	Algarve, Balearic I., Canary I., Sardinia	Madrid, Vienna, Zurich	

Note(s): Each cell shows average, with the standard deviation in parentheses
Source(s): Authors' own work

Table 3 Average and standard deviation of each well-being indicator for each cluster and inter-cluster

Well-being indicator	*Cluster #1*	*Cluster #2*	*Cluster #3*	*Cluster #4*	*Total*	*Cluster comparisons*		
						#3 vs #1	*#3 vs #2*	*#3 vs #4*
Education	0.98 (1.90)	7.24 (2.96)	4.11 (2.20)	7.61 (1.25)	6.25 (2.98)	3.13****	−3.13****	−3.50****
Jobs	3.47 (1.69)	6.74 (1.96)	2.99 (2.85)	7.58 (1.87)	6.14 (2.79)	−0.48	−3.75****	−4.59****
Income	0.77 (0.72)	3.05 (1.44)	2.87 (1.27)	4.53 (0.81)	3.48 (1.59)	2.10****	−0.18	1.66****
Safety	7.70 (1.08)	9.11 (0.80)	9.10 (1.77)	9.49 (0.50)	9.14 (1.09)	1.40****	−0.01	0.39
Health	4.36 (1.69)	5.22 (3.13)	7.57 (1.93)	7.68 (1.32)	6.67 (2.46)	3.20****	2.34****	0.11
Environment	2.01 (1.61)	3.10 (2.08)	4.78 (2.76)	6.01 (1.91)	4.61 (2.56)	2.76****	1.680***	−1.23**
Civic engagement	8.10 (2.35)	4.91 (2.76)	4.90 (2.20)	7.05 (2.14)	6.18 (2.63)	−3.19****	−0.01	−2.14****
Accessibility to services	1.17 (1.68)	6.72 (1.63)	5.68 (2.16)	8.45 (1.28)	6.78 (2.66)	4.51****	−1.04**	−2.77****
Housing	2.40 (1.31)	3.14 (2.06)	4.32 (1.40)	5.37 (1.08)	4.28 (1.85)	1.92****	1.18***	−1.05***
Community	2.80 (2.12)	6.51 (2.28)	5.83 (3.08)	8.35 (1.23)	6.86 (2.64)	3.04****	−0.68	−2.52****
Life satisfaction	1.29 (1.07)	3.55 (2.23)	3.05 (2.56)	7.23 (2.01)	4.90 (3.04)	1.76**	−0.50	−4.18****

Note(s): *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$; ****$p < 0.001$
Source(s): Authors' own work

development were included, performed poorly in dimensions such as education and jobs but well in dimensions such as health and housing. Finally, primary-based economies (Cluster #1) exhibited the poorest values for most well-being indicators. These regions presented a high well-being only in the civic engagement indicator. The subjective dimension results for well-being were consistent with those of the objective dimensions. Cluster #4 exhibited the highest life satisfaction by far and Cluster #1 the worst, whereas Clusters #2 and #3 demonstrated similar levels of life satisfaction.

Table 4 shows the impact of tourism development on the well-being indicators for each cluster. The impact shown is the AME estimate, in percentage, of tourism development. Secondary-based regions were benefited most by tourism development: Eight well-being indicators were positively influenced. Primary-based and service-based regions benefited in seven and six well-being indicators, respectively. Quinary-based regions benefited the least: three indicators of well-being were positively affected.

Overall, tourism development and well-being were positively associated. It was negatively associated with only one of the 11 well-being indicators (civic engagement), in two of the four clusters. It seems clear that tourism development is associated with an improvement in income, as all regions showed this benefit. Other common improvements in well-being were indicated through the dimensions of education, jobs, accessibility to services, and

Table 4 Relationships between tourism development and well-being indicators in each cluster

OECD well-being indicators	*Cluster #1: Primary-based*	*Cluster #2: Secondary-based*	*Cluster #3: Service-based*	*Cluster #4: Quinary-based*
Education	1.19**	0.80**	0.57**	0.08
Jobs	−0.16	1.07***	1.11****	0.85**
Income	0.51**	1.36****	0.61****	0.28*
Safety	0.44*	0.59***	0.42***	0.09
Health	0.98*	2.60****	0.25	0.43
Environment	0.91	0.50	0.14	−0.01
Civic engagement	−1.22*	0.25	−0.52*	−0.19
Accessibility to services	1.15***	1.48	0.59***	0.33
Housing	0.84**	1.51****	0.14	−0.06
Community	1.04*	1.63****	0.07***	0.15
Life satisfaction	0.31	1.58****	0.43	0.66*

Note(s): *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$; ****$p < 0.001$
Source(s): Authors' own work

community. These improvements occurred in all regions except those of the quinary-based cluster. Health and housing dimensions improved with tourism development in those regions belonging to the primary- and secondary-based clusters. The subjective well-being indicator was only associated with tourism development in regions of Clusters #2 and #4; in both cases, the association was positive.

The positive relationship between tourism development and well-being showed clear variance among the four clusters of regions (Table 4). The well-being of regions that stood out for their public administration sector size (Cluster #4) did not show a strong positive association with tourism development (only three significant values, with marginal effects always below 1). The strongest effects were observed in secondary-based regions, in which some of these relationships (e.g. jobs, health, housing, community, life satisfaction) had the highest intensity of all clusters (e.g., 1.63 for community, 1.58 for life satisfaction). In primary-based regions, positive associations were found in a similar number of indicators (7) but with lower intensity. Tourism development was the lowest in these primary-based regions. This condition could explain why a living condition important for well-being, such as employment, was not affected, as increases in overnight stays may not require additional service workers. However, in these regions, the education dimension was the well-being indicator that was most positively associated with tourism development. Although the tourism industry has been associated with occupations that require limited qualifications, tourism was related to better education in these regions. As in secondary-based regions, income, safety, environment, accessibility to services, housing and community were also positively associated. Therefore, tourism was related to positive economic and noneconomic impacts. In a similar vein, in those regions with higher tourism development (service-based regions), positive associations were found between tourism activity and six well-being indicators.

5. Discussion

Previous research has found both positive and negative effects caused by tourism development. Our results indicate that tourism development is positively associated with well-being indicators. We did not observe any of the negative effects that have been mentioned previously in the literature. Especially significant is the case of environmental effects, which have been extensively reported (Uysal *et al.*, 2016; Godovykh *et al.*, 2023; Ivlevs, 2017). No significant relationships were found between tourism development and the environment well-being indicator used by the OECD (Table 4). However, the OECD indicator suffers from a major limitation: it is based on air pollution, whereas the negative environmental impacts reported in the literature include other aspects such as noise, waste and destruction of wildlife. These other elements should be included in future research.

Our results support the view of moderating effects in the relationship between tourism development and residents' well-being (Ridderstaat, 2023). The four clusters in this study were characterized by different levels of tourism development. In contrast to previous studies (Tokarchuk *et al.*, 2018; Haini and Loon, 2023), we did not find that the highest levels of tourism development had negatively affected residents' well-being. However, our results are also consistent with those of Haini and Loon (2023): When regions are less dependent on tourism, the relationship between tourism development and residents' well-being is higher. Regions in Clusters #1 and #2 had the highest marginal effects of tourism development. In general, the positive association between tourism development and well-being indicators was different in each type of region. In the case of primary-based regions, and in line with Sharma (2024), benefits were seen in basic indicators of well-being, such as education, income, safety, health, accessibility to services, housing and community. The only indicator in this group that had not been positively affected was jobs. We believe that this effect could be explained by the fact that in these regions, tourism productivity was very low (Harb *et al.*, 2024); therefore, resources were available to be used in the context of increased tourism development without generating more jobs. Because these regions had

lower household income, increasing tourism development could help them to improve in both the economic and the social domains. As suggested by other studies, tourism would be a valuable activity for regional economic convergence (Li *et al.*, 2016) and poverty reduction (Llorca-Rodríguez *et al.*, 2021).

Secondary-based economies benefited more from tourism development. Six well-being indicators showed the highest marginal effects; thus, tourism may represent an opportunity for economic diversification in these regions. Service-based economies demonstrated the highest unemployment rates, and the marginal effect of tourism development on the employment indicator was the highest in these regions. Tourism could therefore contribute to improving the unemployment problems in these regions. In the case of quinary-based regions, well-being indicators were already quite high, including the highest household income. However, tourism development in these regions could also produce some positive economic effects.

Tourism development was associated with economic development (represented by the income indicator) in all the clusters, in line with the literature (Dwyer, 2023; Harb *et al.*, 2024; Jia *et al.*, 2023). A positive relationship was also observed with the jobs indicator (except in primary-based regions). These results support the tourism-led growth hypothesis that poses that tourism activity drives economic growth (Brida *et al.*, 2016).

Overall, our results suggest that the Easterlin Paradox (Easterlin and O'Connor, 2020) does not occur. We have shown that an increase in tourism development is associated with better well-being for residents of an area. We have proven this result across a wide variety of regions with highly different tourism development densities. The 197 regions considered are in Europe. We believe that the results are applicable to other developed regions. However, this may not be the case for regions where the economic characteristics and priorities of citizens may be different from those analyzed in this study. Therefore, policymakers in these regions should consider what are the key elements that contribute to the well-being of their residents to properly frame the applicability of this research.

5.1 Methodological and theoretical contributions

From the methodological perspective, countries are often considered as the unit of analysis in tourism. However, focusing on countries can be misleading because their regions can differ significantly in terms of tourism development. For example, regions in countries such as Spain and Italy appeared in three of the four clusters. Each of these three clusters had significantly different levels of tourism development. Thus, our study has shown that research concerning the contribution of tourism to the well-being of residents should be undertaken in small geographical regions to avoid possible errors produced by the aggregation of different territories. In addition, in this research, we used overnight stays by tourists at a destination, a more precise measurement than the more widely used measurement of number of tourist arrivals.

From the theoretical perspective, there is no unified theory regarding the effects of tourism development on residents, with research in this realm having employed different theories as support (Hadinejad *et al.*, 2019). Crouch and Ritchie (2012) propose that destination competitiveness concerns the degree to which tourism allows the improvement of the host community's QOL. According to the social exchange theory (McGehee and Andereck, 2004), residents' support of tourism depends on the existence of an equitable relationship between the tourism activity and the residents. Our results suggest a clear direction to these theoretical statements: Tourism is not associated with negative effects on well-being; instead, it is related in a mostly positive way to well-being indicators. Although the positive effects of tourism development on residents' well-being depend on the economic configuration of a region, any region can benefit from tourism to a greater or lesser extent. Our research has also contributed to the literature by contradicting the Easterlin Paradox.

5.2 Practical and managerial implications

Negative associations between tourism development and well-being indicators were not found in our results, other than a weak connection between tourism development and civic engagement in primary- and service-based economies. Instead, many types of positive relationships were found. Therefore, policymakers have robust evidence to promote tourism development in their regions. No matter the economic configuration of a region, tourism development was associated with improvements in residents' well-being. For example, these findings can be used by policymakers who believe that tourism should be promoted in regions with a low level of tourism development. Concerns regarding the negative impact that this activity could have on these types of areas can be put in perspective by these results.

Primary-based regions can find in tourism a way to improve in basic indicators. Secondary-based regions can use tourism as an economic diversification that will generate well-being among their residents. Service-based economies can rely on tourism to increase the well-being of their residents, especially through the generation of jobs, which represent the greatest problem in these regions, with an average unemployment of 17%.

The only case in which the association of tourism development with the well-being of residents seems to be more limited is that of quinary-based regions. These regions are highly developed, with both a high level of income and a high level of well-being. In this case, tourism development was only weakly associated with increases in jobs, income and life satisfaction.

In a time in which there is an intense debate regarding overtourism (Milano *et al.*, 2022), a proper communication of this research can help explain the positive associations between tourism development and well-being indicators and the nonexistence of negative associations. In this process, policymakers should highlight the well-being indicators that have been found to be more closely related to tourism development depending on the type of region.

5.3 Limitations and future research

Our research faced some limitations that could suggest directions for future studies. The main limitations resulted from the unavailability of data. Panel data regarding well-being indicators for the EU regions was not available but would significantly contribute to future studies. Panels could become possible as the OECD gathers more data of this type, thus increasing the quality of research and allowing for the use of more recent data. This study was conducted at a regional level. The regions considered included tourism destinations such as cities, mountains, villages and sun and beach locations as well as nontourism places. A more specific geographical analysis could reveal different results, as certain well-being indicators (e.g. housing and environment) can show different values in these particular places. Because of the cross-sectional data used in this research, the existence of reciprocal or reverse relationships between tourism development and resident well-being was not analyzed. There have been arguments supporting bilateral effects in this relationship (Ridderstaat, 2023). Regarding tourism development, we also believe that this research would have benefited from the inclusion of regional social and cultural indicators in parallel with the economic indicators used. However, such indicators were not available at the regional level. Finally, we considered domestic and international tourism together in this research. Future analysis could explore the influence of these two types of tourism separately to confirm the relatively better effect of domestic tourism compared to international tourism predicted by Agyeiwaah and McKercher (2025).

6. Conclusions

The positive and negative contributions of tourism to the development of a region have been a subject of intense debate for many years. This study has highlighted the association between well-being indicators and tourism development. We have found that the association is positive in general but can vary depending on the economic configuration of a region. Therefore, our results

do not support the Easterlin Paradox or previous findings of negative effects of high levels of tourism development on residents' well-being: Increased tourism was associated with improved well-being of residents. Tourism can be used to improve basic living conditions and as a diversification in primary- and secondary-based regions, can aid in further developing service-based economies and has a limited impact in quinary-based regions. Tourism development was associated with positive consequences in economic (e.g. income, jobs) and non-economic terms (e.g. community, safety). Furthermore, the negative consequences often mentioned in the literature (i.e. related to environment, housing and accessibility of services) did not appear. In an era in which intense debate exists regarding the role of tourism in the development of a region, our study has demonstrated the utility of considering the economic configuration of the region, precise indicators to measure tourism development, and a varied sample of well-being indicators.

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