

EXTENDED ABSTRACT

TOURIST PLANNING IN EXTREMADURA. ANALYSIS OF ITS TOURIST TERRITORIES

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Extremadura is an Autonomous Community located in the interior of Spain in which the tourism phenomenon has undergone a significant expansion in recent decades, especially since the 1990s. This phenomenon has been supported by the emergence of new trends and models of tourism consumption such as the search for other offers related to cultural or natural heritage, short stays (weekend) of urban people in rural areas and not very degraded spaces looking for rest and nature. In addition, in Extremadura, the administrations and businessmen of the tourism sector are taking advantage of the high historical, cultural, patrimonial and natural value of the region, betting on its development as a new tourist destination whose main characteristics are: a scarce transformation of the territory, a rich gastronomic offer, a wide range of natural landscapes, traditional crafts and folklore.

In 2006, the European Economic and Social Committee (EESC), in its publication “The contribution of tourism to the socio-economic recovery of declining areas”, established the importance of transforming areas, such as rural Extremadura, that are economically stagnant or whose traditional agricultural productive model is disappearing. For this, rural tourism is promoted as a complementary activity to the agricultural income of rural areas affected by depopulation and the growing crisis of their production model in order to achieve economic growth and the maintenance of their population.

Given the above, the research hypothesis of this work is that there are Tourist Territories in Extremadura that have achieved an optimal design of their tourist structure and, therefore, are receiving a considerable number of tourists who may be contributing to the growth of the income and maintenance of the rural population. To test this hypothesis, the objective of this research is to analyze the tourism sector in Extremadura and its relationship with other context variables, such as population and GDP. To specify, the approach is to check, using Geographic Information Systems and statistical techniques (Multiple

Linear Regression model and Principal Component Analysis), if the commitment to the tourism sector in Extremadura and the current design of the supply and demand of its resources are contributing to the maintenance of the population in some spaces. The Tourist Territories established by the General Directorate of Tourism of the Government of Extremadura are the territorial basis for analysis, as they are the spatial scope of action in the design of the various tourism policies in the region.

Tourism supply and demand are analyzed in this work. In this way, firstly, the supply has been divided into two areas, the first in terms of infrastructure, defining the types of accommodation and catering in the region, and the second one in relation to the heritage resources that are offered, dividing them into cultural and natural heritage. Regarding tourist accommodation, these have been categorized into hotel accommodation (hotels, hostels and pensions), non-hotel accommodation (tourist apartments, hostels and campsites) and rural accommodation (rural apartments, rural hotels and rural houses). The non-hotel installations have been classified into restaurants, caterers and banquet halls. The heritage offer has been analyzed distinguishing between cultural and natural heritage offer. Secondly, tourist demand is analyzed based on travelers and overnight stays.

As a methodological basis, a cartographic database was built taking the polygonal layer of municipalities in Extremadura as a reference. In this layer, the 15 Tourist Territories delimited by the Extremadura Tourism Observatory were introduced with tabular information. These territories are formed by the 4 municipalities considered urban (Badajoz, Cáceres, Mérida and Plasencia) and 11 “regions” that unify the 384 remaining municipalities in the region.

Sites of Cultural Interest (SCI), UNESCO World Heritage Sites, Museums, Historical Archives and Interpretation Centers, and Festivals of Tourist Interest were georeferenced. As for the natural heritage, Protected Areas and Places of Geological-Geomorphological Interest were added. Thus, the cartographic Database was joined to the base layer with the Tourist Territories for the subsequent analysis.

Additionally, an alphanumeric database was created with data on the supply of tourist infrastructure and demand with the number of travelers and overnight stays.

Regarding the context variables, total population (2018), the population growth from 2013 to 2018 and the Gross Domestic Product (GDP) for the year 2017 have been added, in order to know the demographic and socioeconomic characteristics of Extremadura. Finally, through the GIS, the alphanumeric database has been connected to the polygonal base layer of the Tourist Territories, with a total of 120 variables.

In order to achieve the stated objective, two statistical analyzes have been carried out. The first analysis is the OLS-type Multiple Linear Regression model, which allows to understand the functional relationship between the dependent variable and the explanatory or predictor variables, and which is based on the adjustment of an equation to a set of data using least squares. The purpose of this analysis is to determine the degree of explanation or relationship of the variables that have been estimated as explanatory (GDP, population concentration, supply of infrastructure and resources), after measuring their intensity of association, and that can affect the number of travelers that each Tourist Territory receives, which is the dependent variable. In this way, the variables finally analyzed, because they are potentially useful for the regression model, were grouped into three groups (Socio-

demographic variables, Tourism variables and Patrimonial variables), each constituting a group of independent variables that affect the dependent variable.

Secondly, a Principal Component Analysis (PCA) was carried out in order to find out the relationship between the collected variables and their explanatory factor in the different territories. The PCA is a statistical method that aims to study a set of observed variables, in such a way as to reduce the data by creating a new set of dummy variables called components, which are the result of the combination of the original variables. Therefore, the resulting principal components are classified by the amount of original variance that they represent, so this method is effective in synthesizing the dimensionality of the data set.

The first results, descriptive but no less important, show that the average number of municipalities per territory is 25, highlighting, with more than 40, the territories of *La Siberia-La Serena-Campiña Sur*, *Sierra de Gata-Las Hurdes-Valle del Alagón* and *Trujillo-Miajadas-Montánchez*, and on the contrary, with the smallest number of municipalities, the territories of *Geoparque Villuercas-Ibores-Jara* (19), *Valle del Ambroz-Tierras de Granadilla* (23) and *Tajo Internacional -Sierra de San Pedro* (23).

Regarding the demographic characteristics, two trends are identified: on the one hand, there are Tourist Territories with a greater volume and density of population and a lower population decline as a consequence of the existence of important county towns. *Vegas Altas del Guadiana* and *Tierra de Barros-Zafra* stand out, which are areas dedicated to irrigation and productive agriculture of vineyards and olive groves, to which is added an adequate territorial accessibility due to the proximity of the two main communication routes (*A-5* and *Ruta de la Plata* main roads). On the other hand, there are Tourist Territories with less than 50,000 inhabitants and, in some cases, 25,000 inhabitants, that are located in mountain areas and on the outer limits of the two provinces of the region.

Regarding the tourist offer, which is analyzed in this work from the cultural and natural heritage and the tourist infrastructure (accommodation and restaurants), it should be noted that Extremadura has an interesting historical past as a result of civilizations and their settlements in various parts of the region, and, consequently, a valuable historical, artistic, archaeological and architectural heritage. Therefore, there are a total of 277 SCI, 135 ethnographic, artistic, historical and / or cultural resources, and 70 Festivals of Tourist Interest. Regarding the natural heritage, there are a total of 308 protected areas. By Tourist Territory, the case of *La Siberia-La Serena-Campiña Sur* (43) stands out, followed by *Tajo Internacional-Sierra de San Pedro* and *Sierra de Gata-Las Hurdes-Valle del Alagón*, both with a total of 35 areas. On the other hand, there are territories close to urban centers, as the case of Plasencia, which only has 4 protected areas.

Concerning the tourist infrastructure of Extremadura, the hotel accommodation projects over the rest of the typologies, especially in the cities of Badajoz, Mérida and Cáceres. Regarding rural accommodation, the largest number of beds is in the northern territories of Extremadura, highlighting *Valle del Jerte-La Vera*, with 2,567, and *Sierra de Gata-Las Hurdes-Valle del Alagón*, with 1,410. The number of accommodations is linked to the data of places, so that the previous territories are the ones that also have the largest number of rural establishments, with 187 and 137, respectively.

The majority of places in extra-hotel accommodation is distributed throughout the north of the region, although Cáceres should be highlighted as the city with the most

places in extra-hotel accommodation, with 1,191 beds, which are, to a large extent, tourist apartments.

Finally, in terms of tourist demand, in 2018 Extremadura received 1,866,168 travelers, of which 83.1% were of national origin and 16.8% foreign, with a homogeneous distribution throughout the year with spikes in Easter and in the summer months. Most of the travelers (33%) arrive in summer, especially in August, but it is also distributed evenly in spring and autumn, with 27% and 23%, respectively. Tourists practice rural, gastronomic and cultural tourism and on weekends. As for overnight stays, there were 3,438,641, of which 2,930,766 were for national tourists and 507,905 for foreigners. These overnight stays follow practically the same distribution pattern as that of travelers. By Tourist Territory, Cáceres and Mérida are the ones that attract the most travelers, with 18.3% and 15.3%, respectively.

OLS-type Multiple Linear Regression model variables correlated with the number of travelers with a positive factor have been obtained, those related to population growth, hotel accommodation places, non-hotel accommodation and, to a lesser extent, the size of the population. In this way, positive demographic variables and the presence of hotel rooms and, to a lesser extent, non-hotel rooms (apartments and campsites) cause a greater number of travelers. On the contrary, the relationship between rural accommodation places (mainly rural houses), a high number of protected areas and, to a lesser extent, GDP, shows a negative trend. Thus, it can be established that a greater supply of rural places and the presence of a large number of protected natural areas does not influence more travelers and overnight stays. In addition, GDP has a negative direction, although with a relatively low value, because there are territories in the province of Cáceres that are highly rural and do not show great economic dynamism but, because hydroelectric power plants or a nuclear power plant are located in them, their GDP is high.

As a corollary, the PCA has obtained a first Component that accounts for 46.89% of the sample and is considered the defining component of this work. Its positive substructure is formed, with the highest significance, by hotel accommodation beds, population growth, travelers and total overnight stays, and restaurant seats, also correlated, although with a lower value, with GDP and the total population. The highest scores of these variables are located in the tourist territories of the cities of Cáceres, Mérida and Badajoz and, to a lesser extent, in two more rural territories in the northeast of the province of Cáceres, these are *Valle del Jerte-La Vera* and *Valle del Ambroz-Tierras de Granadilla*. Oppositely, in the negative substructure of Component 1, the variables referring to the total of protected areas, rural accommodation beds and, with a lower value, non-hotel accommodation beds appear correlated. These appear in the territories located in peripheral areas of both provinces (Cáceres and Badajoz) and of the peneplain, such as *La Siberia-La Serena* in Badajoz and *Tajo Internacional* in the province of Cáceres, or in the mountains (*Las Villuercas- Hurdes-Gata*, or *San Pedro* in Cáceres, and *Tentudía* in Badajoz). These territories combine the largest number of protected areas in the region, in which their offer is defined by rural accommodation and in which these two variables are not yet capable of attracting a significant volume of travelers and overnight stays, or of developing a positive demographic trend. The other territories present little significant values in both substructure.

tures, since they are intermediate and ambiguous territories with shared characteristics of both positive and negative variables.

With the results of the analyzes carried out, it has been possible to extract which Tourist Territories can still improve their data regarding the sector. The profile of tourists who visit the region basically shifts to cultural and gastronomic heritage tourism located in the three main cities and to practice nature tourism located mainly in two territories in the northeast of the province of Cáceres (*La Vera, Valle del Jerte* and *Valle del Ambroz*). Finally, it should be noted that there is a greater development of the tourism sector due to the spatial location of some territories with respect to the communication system and the majority origin of tourists visiting the region.

Due to the foregoing, this research calls for a greater analysis of the situation in order to create a framework for common action in the tourist field of Extremadura that encourages the study of negative externalities that affect the improvement of the development of certain territories . With this, it will be more likely to achieve quality tourism that is sustainable with the environment and lasting over time.