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Puntos diana como localizaciones para la realización de encuestas: Índice de Potencialidad Turística de la provincia de Burgos

Target points as survey locations: Touristic Potentiality Index of the Burgos province

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RESUMEN

Este trabajo analiza un inventario de los recursos turísticos de la provincia de Burgos (España) e identifica con dicho inventario los municipios con una mayor atracción turística, identificando también así los puntos diana que facilitan la planificación del proceso de trabajo de campo para obtener la opinión de los turistas. Para proporcionar una aproximación analítica, este estudio adopta una técnica cuantitativa para la construcción de un índice sintético ponderado siguiendo un proceso jerárquico. Los

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resultados muestran que la provincia de Burgos destaca por su elevado patrimonio natural o paisajístico, con acceso a través de carreteras secundarias y con una elevada oferta de hoteles y casas rurales, así como restaurantes y cafeterías. Ferias declaradas de interés, accesos a través de ferrocarril y oferta de albergues, apartamentos y campings ofrecen unos valores menos destacados. El trabajo propone la realización de alrededor de 383 observaciones en cada uno de los ocho puntos diana identificados. Los resultados obtenidos son los suficientemente claros como para motivar a los tomadores de decisiones a dirigir sus esfuerzos e inversiones en mejorar y ajustar sus estrategias para incrementar la calidad de la oferta y la demanda en el sector turístico.

PALABRAS CLAVE

Índice de Potencialidad Turística; Puntos Diana; Localizaciones para la Realización de Encuestas; Recursos Turísticos; Provincia de Burgos.

ABSTRACT

This work analyzes an inventory of the touristic resources of the province of Burgos (Spain) and identifies with it the municipalities with the greatest touristic attraction, thus identifying the target points that facilitate the planning of the fieldwork process to obtain the opinion of tourists. To provide an analytical approach, this study adopts a quantitative technique by constructing a weighted synthetic index following a hierarchical process. The results show that the province of Burgos stands out for its high natural or landscape heritage, with access through minor roads and with a high offer of hotels and rural houses as well as restaurants and cafeterias. Fairs declared of interest, access by rail and the offer of hostels, apartments and campsites offer fewer outstanding values. The work proposes the realization of around 383 observations in each of the eight target points identified. The results obtained are clear enough to motivate decision-makers to address their efforts and investments in improving and adjusting their strategies to increase the quality of offer and demand in the touristic sector.

KEYWORDS

Touristic Potentiality Index; Target Points; Survey Locations; Touristic Resources; Province of Burgos.

1. INTRODUCTION

Studies on tourism as a science are relatively recent. Despite this, many proposals have been put forward for its definition, with multiple implications and connotations associated with it. The World Tourism Organization (UNWTO) defines tourism as the set of activities carried out by people during their trips and stays in places other than their usual environment for a consecutive period of less than one year for leisure, business, and other reasons.

Taking this definition into account, the activities to which it refers can encompass different sectors, such as hospitality, transport, or commerce, having a clear impact on the economy of any society. Different indicators have been proposed to measure the economic impact of tourism on a society, mainly the relative contribution of tourism to the GDP of a country. Following the data offered by the Spanish Ministry of Industry, Commerce and Tourism, and those offered by the business balance at the end of the year 2022 and perspectives for 2023 of the Alliance for Tourism Excellence (Exceltur) specifically, in Spain, which in 2022 exceeded 70 million international tou-

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rists, positioning itself as the second country in the world with the most tourist received, this indicator reached a value of €159,490 million in 2022, which represents a 12.2 % of the country's GDP.

These figures high enough to pay special attention to the tourism sector in Spain and other countries with similar characteristics. This attention can be paid listening to the opinion of tourists who visit a tourist destination. Analyzing their opinions can facilitate decision making in favor of an adequate development of the sector, having a significant impact, as we have previously mentioned, on the economy of a country or region. Obviously, it is necessary to collect these opinions beforehand so that they can be analyzed and one way to capture these opinions is by conducting surveys. Regardless of the way used to carry out these surveys (Coupe, 2011), among the different considerations that must be taken into account when carrying them out, one of them is having an adequate sample size (Dolnicar, 2020). For the results obtained to be valid, it is necessary to have representative samples of the population under study, and one of the limitations that is generally related to this objective is the resource constraints, especially when the mode used to carry out the survey is face-to-face. Resource constraint justifications are based on a trade-off between the costs of data collection, and the value of having access to the information the data provides (Lakens, 2022). Thus, selecting the appropriate target points for collecting the opinions of tourists can be a key factor at the time of obtaining valuable data for subsequent analysis and transformation into information in the decision-making process, making it possible to carry out the planned observations in the field work with fewer resources, both in time and cost.

In this way, the main objective of the work is to provide a tool for tourism providers in the province of Burgos that facilitates the selection of the appropriate target points for collecting the opinions of tourists. The province of Burgos is located in the north of Spain, has the largest number of municipalities in the country (371), is one of the largest (14,292 km^2) and offers an outstanding historical and natural heritage as well as an important demand, about a million visitors (864,613) in 2022 (data obtained from the National Statistics Institute (INE)). This contribution is important because the decision-makers of the tourist destinations will have a tool that will allow them to plan the fieldwork (surveying) efficiently and effectively, allowing them to obtain the opinions of the tourists in the ideal target points of survey, that is, the locations with the greatest touristic attraction power. For this, the work develops a synthetic index of touristic potential of the different municipalities of the province. Obtaining this synthetic index makes it possible to detect the municipalities with the greatest flow of tourists, turning them into optimal survey points and, as a consequence, makes it possible to carry out the planned observations in the fieldwork with fewer resources, both in time and cost.

To reach this goal, the remainder of this paper is structured as follows. The next section presents a literature review related to touristic potentiality indices. The methodology used in the study is shown below. That is to say, an identification and categorization of the touristic resources of the province of Burgos is carried out, thus obtaining an inventory of touristic resources used for the construction of a touristic potentiality index of the different municipalities of the province. In the results section, a practical validation of the defined methodology is conducted, which allows selecting the target points that indicate the preferred locations for the planning of the fieldwork process. Finally, the last section offers concluding remarks, a short discussion, highlights the limitations of the study and proposes some future lines of research in favor of scientific progress.

2. LITERATURE REVIEW

As far as the authors know, there are no specific works that propose the detection of appropriate target points for conducting tourist surveys. Although it is true that works that define touristic routes (Barahoma et al., 2021; Duarte Duarte, 2021) and an enormous amount of works that define potentiality indices of touristic destinations can be found. These indices use different methods to obtain the tourist attractiveness of the tourist destinations, but they do not manage to relate it to the appropriate target points for conducting surveys.

Analytical evaluation methods are the most numerous. They consider the intrinsic value of each touristic resource in a certain area based on its main characteristics. From these assessments, a

weighted touristic potentiality index is obtained, comparable to that calculated for other areas with similar characteristics (Leno-Cerro, 1991). To perform the calculations, different evaluation techniques are used, such as multi-criteria analysis (Laguna Marín-Yaseli and Nogués Bravo, 2001; Reyes Pérez and Sánchez Crispín, 2005; Cebrián Abellán and García González, 2010; Al Mamun and Mitra, 2012; Neupane et al., 2013; Camara and Morcate Labrada, 2014; Leyva, 2014; Landorf, 2016; Martín Martín et al., 2017; Rodriguez Torres et al., 2017; Yan et al., 2017; Lopes et al., 2018; Flores Rodriguez et al., 2019; García Romero et al., 2019; Martelo Gómez et al., 2019; Calderón Puerta et al., 2020; Puska et al., 2020; Salinas Fernández et al., 2020; Ramírez-Guerrero et al., 2021), hierarchical analytical process (Ramiro et al., 2016; Vanegas et al., 2017; Shijin et al., 2020), multivariate statistical analysis (Chu, 2008; Akin, 2015), factorial analysis (Pérez et al., 2009; Li et al., 2017), geographic information systems (GIS) (Cerezo Medina and Galacho Jiménez, 2011; Ruda, 2016), etc. Despite this diversity, and even though they all seek simplicity and ease of use to address the study of the available touristic potential in a synthetic and relatively objective way, the techniques used for their calculation are increasingly complex, including in some cases the use of spatial representation.

These analytical methods are based exclusively on the objective assessment of the intrinsic characteristics of the tourism resources of a given area or tourist destination, but generally do not consider the preferences and opinions of tourists. The methods of evaluation of tourists' preferences, have as a basic criterion of evaluation the analysis of the demand, taking into account the preferences of the tourists, whether they are obtained by direct or indirect methods, which allows evaluating the touristic interest of a resource regardless of its characteristics, which in certain circumstances, can lead to obtaining a potential lower than its real potential for reasons beyond the resource itself (Leno Cerro, 1991). As in analytical methods, in this case, different evaluation techniques are also used to perform the calculations. For example, multiple response models (Kuo and Wu, 2013; Pariente et al., 2016; Sánchez Rivero et al., 2016), SWOT analysis (Collins-Kreiner and Wall, 2007), etc. In addition, it is usual to incorporate criteria related to the characteristics of the resources as a complement to the tourists' preferences and as a weighting factor for determining the final touristic potential, which would be defined in this case as a synthesis between preferences and intrinsic characteristics of the resources (Kresic and Prebezac, 2011; Castillo Coy, 2015; Darabseh et al., 2017; Jiménez Meseguer and Morales Yago, 2018).

So, it can be considered that the main advantage of the methods for evaluating tourists' preferences consists in the fact of maximizing the information obtained by considering data on the resources and opinions of tourists, thus minimizing the possible bias caused by either of the two data sources. On the other hand, the inclusion of the opinions of tourists diminishes to a certain degree the objectivity provided by the analytical methods. It should also be noted the difficulty sometimes encountered in obtaining this data from tourists. Although less frequent, other authors also add the economic aspect in the definition of potentiality indices of touristic destinations. The methods of economic evaluation of resources consist of carrying out an economic evaluation of those resources that are not of a commercial nature and, therefore, do not have a market price, applying techniques and concepts from economic theory. This is an estimate of the benefits generated by a given touristic resource (Leno Cerro, 1991). Examples of the application of these methods can be reviewed in Athanaspoulos and Hyndman (2008) and Yang et al. (2017). The main advantage of these methods is they use solid economic theories, providing greater objectivity to the results obtained, with the main drawback being the use of estimates for the different parameters used in the economic models.

Despite the extant literature concerning to the potentiality indices of touristic destinations, we believe that this topic has not yet received all the necessary attention. In these studies, certain differences are also detected depending on the country, region or municipality in which they have been carried out. This is due to differences in the geographical, socio-cultural, legislative, and regulatory environments, and therefore, their conclusions may not be easily extrapolated to other locations. For this reason, we think that developing an index of tourist potential of the province of Burgos and link it to the selection of appropriate survey target points can be a novel job that fills the existing gap in this particular province. Moreover, to our knowledge, no notable research or other initiatives had been started in Burgos until the commencement of this scoping

study, which enhances the importance of this work and reduces the existing deficiencies in this type of studies. Additionally, the findings found can also help decision-makers to keep monitoring performance and improving touristic sector.

3. METHODOLOGY

To provide an analytical approach, this study adopts a quantitative technique by constructing a weighted synthetic index following a hierarchical process. For this construction, three stages have been defined: (1) Categorization of touristic resources in the province of Burgos, (2) construction of partial indices and the touristic potential index and, (3) selection of the weights of each category and synthetic indices.

3.1 Categorization of touristic resources in the province of Burgos

Touristic resources are the basis on which the offer of a touristic destination is grounded. We can consider a touristic resource as all the goods and services that, through the human activity and the means available to it, make touristic activity possible and satisfy the needs of the demand (Martínez and Alfaro, 2018). There are many ways to classify these resources. For example, the Organization of American States (OAS) proposes five categories: (1) natural places, (2) museums and historical cultural manifestations, (3) folklore, (4) technical, scientific, and contemporary achievements and, (5) scheduled events. For their part, Martínez and Alfaro (2018) themselves point out that touristic resources can be classified into eight categories: (1) natural resources: resources related to nature (climate, beaches, mountains, flora, fauna, protected natural spaces, etc.), (2) architectural resources: historic buildings or cultural, industrial, and contemporary interest goods (cathedrals, mosques, castles, archaeological remains, typical neighborhoods, etc.), (3) museums (fine arts, science, exhibition galleries, etc.), (4) touristic, urban, cultural, natural, between municipalities or thematic routes, (5) festivals and folklore: cultural traditions (popular festivals, fairs, traditional markets, etc.), (6) gastronomy and oenology (traditional food and drinks, differentiated quality food, wineries, etc.), (7) events (cultural, artistic, sports, gastronomic, etc.) and, (8) leisure: resources related to free time, whether linked to night or daytime leisure (shopping, theaters, parks, nightclubs, etc.). These classifications have some drawbacks since classifying a touristic resource based on the type of demand it attracts is generally very subjective. Factors external to the resource that condition visits and stays are not taken into account either. For these reasons, some authors such as Leno Cerro (1991), Dwyer and Kim (2003), Navarro (2015), or Puska et al. (2020) expand the initial categorizations (internal factors) adding new categories such as connectivity (physical accessibility), concentration of resources, environmental aspects, complementary industry support and the offer of accommodation and restaurants (external factors).

The methodology followed begins by classifying the touristic resources of the province of Burgos. To assure consistency with the aim of the study, the previous proposals have been considered, classifying them into ten categories (Figure 1). Three of them refer to the internal factors of the touristic resource: natural or landscape heritage, cultural or monumental heritage and festivals declared of interest. The remaining seven categories refer to the external factors of the touristic resources: motorway access, main road access, minor road access, rail access, availability of hotels and rural houses, availability of hostels, apartments and campsites, and availability of restaurants and cafeterias.

3.2 Construction of partial indices and the touristic potential index

With the categories defined in the previous section, three partial indices are constructed below for each of the municipalities of the province of Burgos (Figure 1): (1) touristic resources index (TRI), which is obtained through the weighted sum of the categories related to internal factors: $TRI = \alpha NL + \beta CM + FI + \xi$, where NL represents the number of natural or landscape heritage, CM represents the number of cultural or monumental heritage and, FI represents the number of festival declared of interest. For their part, α, β, and y represent the weighting factors assigned to each of these categories, while ξ represents the random factor, (2) destination accessibility

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index (DAI), which is obtained through the weighted sum of the categories related to the external factors of accessibility to the destination: $DAI = \alpha RA + \beta MO + \gamma MA + \delta MI + \xi$, where RA represents the availability of access to the destination by rail (binary), MO represents the availability of access to the destination by motorway (binary), MA represents the availability of access to destination by main road (binary) and, MI represents the availability of access to destination by minor road (binary). For their part, α, β, γ, represent the weighting factors assigned to each of these categories, while ξ represents the random factor and, (3) touristic equipment index (TEI), which is obtained through the weighted sum of the categories related to the external factors of touristic equipment: $TEI = \alpha HR + \beta HA + \gamma RC + \xi$, where HR represents the number of hotels and rural houses, HA represents the number of hostels, apartments, and campsites and, RC represents the number of restaurants and cafeterias. For their part, , $\alpha, \beta,$ and γ represent the weighting factors assigned to each of these categories, while ξ represents the random factor. The use of weighting factors in the partial indices instead of the absolute number of resources in each category, allows quality to be assessed over the quantity of resources of a destination (Leno Cerro, 1991).

Finally, the touristic potential index (TPI) of a destination is constructed by means of the weighted sum of the three partial indices (Figure 1): $TPI = \alpha TRI + \beta DAI + \gamma TEI + \xi$, where TRI represents the partial index related to touristic resources, DAI represents the partial index related to destination accessibility and, TEI represents the partial index related to touristic equipment. For their part, $\alpha, \beta,$ and γ represent the weighting factors assigned to each of the partial indices, while ξ represents the random factor. The purpose of the TPI is to group all the information obtained and represented by the different categories initially defined, thus measuring the attractive potential of a touristic destination.

Figure 1. Touristic resource categories, partial indices and touristic potential index
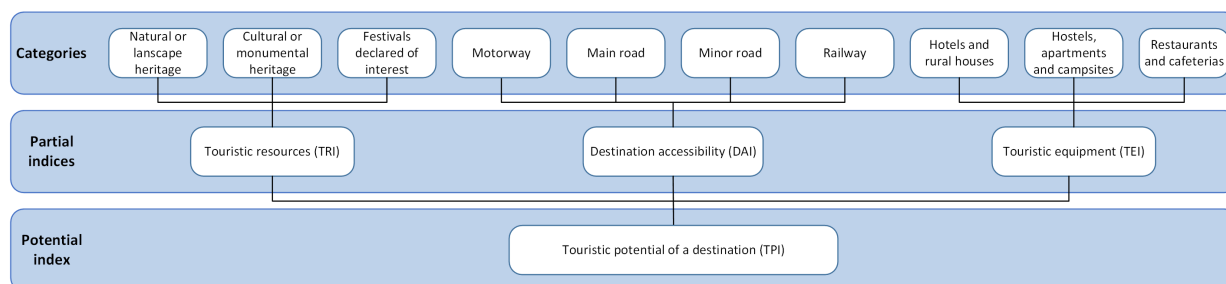
Source: Own elaboration

3.3 Selection of the weights of each category and synthetic indices

Once the resources have been categorized, and the synthetic indices have been defined, it is necessary to assess, prioritize or determine the importance of each one of them to obtain the touristic potential of a destination or its capacity to attract, since this will allow adapting the demands of the tourists to the possibilities of the sector and the regulatory frameworks of its activity (González de Souza et al., 2015). In this sense, the estimation of the weighting factors reducing the random factor could be obtained through (1) an in-depth study of the behavior of the demand of each destination, the attractions of each destination, the time and cost that the tourist is willing to sacrifice to visit that destination, its preferences, or motivations regarding the touristic offer or even, the way to obtain information about the destination and, (2) the subsequent application of mathematical theory, for example through a suitable regression model (Rodríguez Díaz y Tineo Esteban, 2011). However, this mathematical analysis is not possible given the lack of previous experiences and information (demand behavior) on the particular case of the different destinations in the province of Burgos.

For this reason, to obtain the touristic potential index, the method of immutability of the factors proposed by Antón Clavé et al. (2005) is used. This method has also been used to obtain the weighting of the defined categories. This method is based on the possibility of human intervention on each of the different factors to be weighed. In this way, the highest coefficients fall on those where human intervention is most difficult (Table 1). Together with this method, to carry out the distribution and quantify each of the coefficient values, the practical reason and the objectives of the study are used based on the reality of the province of Burgos and its touristic sustainability, maintaining the consistency of the potential index generated (Pena Trapero, 2009) and starting from the assumptions of completeness, goodness, and objectivity in the assessment of the factors used (Escobar Jaramillo, 2008).

Table 1. Determination of weighting coefficients

Partial index	Weight	Justification
Touristic resources (TRI)	0.5	We assign the most weight since they are very difficult to create when they don't exist. The aspect of the impossibility of human intervention takes on greater importance.
Destination accessibility (DAI)	0.3	We assign an intermediate weight since, even though it is impossible to reduce the distances between touristic destinations, human intervention can improve the quality of access.
Touristic equipment (TEI)	0.2	We assign the least weight given the possibility of human intervention in improving this aspect.
	TPI = 0.5TRI + 0.3DAI + 0.2TEI	

Where (following the same criteria):
TRI = 0.4NL + 0.4CM + 0.2FI
DAI = 0.4RA + 0.3MO + 0.2MA + 0.1MI
TEI = 0.5HR + 0.4HA + 0.1RC

Source: Own elaboration

In this same line, other authors have also used these weights. Thus, Cerezo Medina and Galacho Jiménez (2011), apply a weighting of 0.5 to touristic resources, 0.3 to destination accessibility and 0.2 to touristic equipment. In any case, although the diverse and frequently intangible nature of touristic resources, in addition to the load of subjectivity that the evaluation of a touristic attraction implies, has prevented, as far as is known, the elaboration of a methodology of general application, we think that this work considers a series of widely accepted factors on which to base said evaluation, so that the proposed methodology can be extrapolated to the planning process of other touristic destinations. So, although it is important to know which factors have a greater impact on the touristic potential of a destination, since they are the ones that contribute to the generation of a competitive advantage over other destinations, we must not forget that the fact that a destination has of a good set of available resources does not in itself guarantee the success of the destination over time, but it also requires a competitive advantage in terms of the use made of these resources (Leno Cerro, 1991).

4. RESULTS

To obtain the results of the study, data extracted from the INE, from the General Direction of Traffic (DGT), from the Statistical Information System of the Junta de Castilla y León (SIE), from the Proyecta Foundation of Burgos (FPB) through the City Council and from the Development Society of Burgos (SODEBUR) through the Provincial Council of Burgos have been used.

In this sense, in the first place, data related to the geographical distribution of touristic destinations in the province of Burgos have been used. In this work, all the municipalities of the province have been considered as potential touristic destinations. The province of Burgos is divided into seven regions (Camino de Santiago (made up of Odra-Pisuerga and Páramos), Bureba (made up of Bureba itself, Montes de Oca and Ebro), Ribera del Río Arlanza, Ribera del Río Duero, Merindades, Sierra de la Demanda, and Pinares) plus the capital of the province, Burgos, and its alfoz (group of municipalities around Burgos). As a whole, in 2022, the province of Burgos had 355,045 inhabitants and 371 municipalities (Table 2).

Table 2. Characteristics of the regions of the province of Burgos

Region	Population (habitants)	Number of municipalities	Number of touristic resources	*TPI*
Camino de Santiago	16,072	61	384	37.97
Bureba	54,459	81	444	39.96
Ribera del Río Arlanza	23,398	70	306	22.56
Ribera del Río Duero	51,163	68	375	28.92
Merindades	22,584	27	423	43.29
Sierra de la Demanda	9,485	55	378	41.89
Pinares	4,401	8	89	9.6
Burgos	173,483	1	386	19.62
TOTAL	355,045	371	2,785	243.81

Source: Own elaboration

Once the municipalities and the regions to which they belong were identified, an inventory of the touristic resources available in each municipality was made. In total, the province of Burgos has 2,785 touristic resources and a touristic potentiality index (*TPI*) of 243.81 points (Table 2). In this regard, we can highlight that in general (right scale of Figure 2) the province of Burgos stands out for its high natural or landscape heritage, with access through minor roads and with a high offer of both hotels and rural houses as well as restaurants and cafeterias. In contrast, the festivals declared of interest, access by railway and the offer of hostels, apartments and campsites show the least outstanding values.

Figure 2. Touristic resources by category and region of the province of Burgos
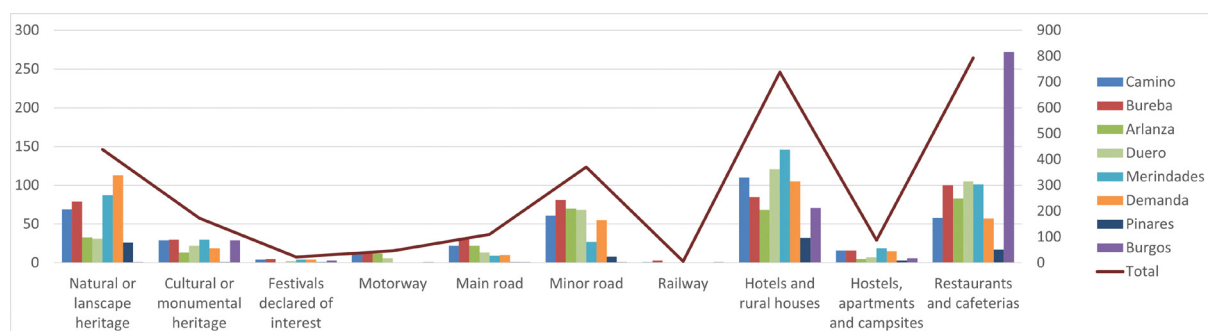
Source: Own elaboration

In a more detailed study (left scale of Figure 2), we first comment on touristic resources. Specifically, the region of Sierra de la Demanda stands out for its natural or landscape heritage, with 113 resources, while Burgos capital only has one resource of this type. Regarding cultural or monumental heritage, all the regions have a similar number of resources, between 13 and 30, except Pinares region, which only has one resource of this type. The festivals declared of interest offer very low values for all the regions, with the Ribera del Río Arlanza region standing out negatively, as it does not have any festival declared of interest.

Secondly, regarding the destination accessibility, 23 % of the municipalities have access via motorway in the Camino de Santiago region, with similar values for the Bureba and Ribera del Río Arlanza regions. This value is somewhat lower for the Ribera del Río Duero region, while the rest of the regions do not have this type of access, except Burgos capital. The availability of access by main roads rises slightly, reaching 39.5 % of the municipalities in the Bureba region that have this type of access. In contrast, only one municipality in the Pinares region has access to this type of road. Municipalities in the province of Burgos have outstanding access by minor roads, reaching 100 % accessibility. Lastly, access by railway reflects an important lack. Only Burgos, one municipality in the Camino de Santiago region and three in the Bureba region have access by railway.

Thirdly, in reference to touristic equipment, all the regions have adequate equipment for hotels and rural houses, as well as restaurants and cafeterias. In this case, we highlight the presence of 272 restaurants and cafeterias in Burgos capital. On the contrary, the offer of hostels, apartments and campsites do not show very high values, negatively highlighting the 3 existing resources of this type in the Pinares region.

From these statistics, touristic potential indices were obtained for the 371 municipalities in the province of Burgos. For this, the touristic potential index indicated in section 3.3 has been used: *TPI = 0.5TRI + 0.3DAI + 0.2TEI*. The value obtained has made it possible to obtain the appropriate target points in which to carry out tourists' opinion surveys. Annex I shows the municipalities with the highest *TPI* value for each region, which also practically match with the municipalities the highest *TPI* value (except for Neila), without considering the division by region, that is, the municipalities with highest *TPI* in the province of Burgos. If it were necessary to select more target points, the following municipalities with a higher value for their *TPI* could be selected, either at a provincial level, or for each region. In our case, we only selected the winning municipality, with the highest *TPI* in each region to define the target points.

Annex II represents the province of Burgos divided by regions and the target points selected in each of them. It is noteworthy that the touristic attraction of the province is centered, in addition to Burgos capital, in the north and south, while the east and west are of less interest, especially the latter, despite the presence of the region of the Camino de Santiago that could presage a high touristic interest. Specifically, the second municipality with the highest value for the *TPI* (2.83) in this region is Castrogeríz, located in the southwestern area of the region, occupying position 15 in the global municipalities of the entire province.

Once the target points have been determined, we define the number of observations that must be made in each of them. As we do not have disaggregated data on tourists for each region, municipality, or target point, we start from the total number of tourists to the province of Burgos in 2022. This data is obtained from the INE (864,613 tourists), considering occupancy of hotels, rural houses, touristic apartments, and campsites. From this data, the provincial *TPI* and the *TPI* of each region (Table 2), we make a proportion to calculate the number of tourists per region. From the result, that is, from the target population for each region, we obtain the representative sample size for each region with a heterogeneity of 50 %, a margin of error of 5 % and a confidence level of 95 % (Table 3).

Table 3. Number of observations for each target point

Region	Target point	Tourists by region (region TPI *total tourists)/provincial TPI)	Sample size by region (obervations)
Camino de Santiago	Valle de Sedano	134,651	384
Bureba	Miranda de Ebro	141,708	384
Ribera del Río Arlanza	Lerma	80,004	383
Ribera del Río Duero	Aranda de Duero	102,558	383
Merindades	Villarcayo de Merendidad de Castilla la Vieja	153,517	384
Sierra de la Demanda	Santo Domingo de Silos	148,553	384
Pinares	Neila	34,044	380
Burgos	Burgos	69,578	383
TOTAL		864,613	3,065

Source: Own elaboration

In this way, with 3,065 observations distributed almost equally among all the regions, we can obtain tourist opinion in a representative manner and with an appropriate number of survey points, target points, obtained from the touristic potential index of each of the municipalities in the province of Burgos.

5. DISCUSSION AND CONCLUSIONS

In the context of the touristic sector, the research outcomes have enriched knowledge about the touristic offer and demand in different countries, regions, and municipalities. The contribution of this study is to expand this knowledge through the construction of a tool for tourism providers in the province of Burgos that facilitates the selection of the appropriate target points for collecting the opinions of tourists. This contribution is important because the decision-makers of the tourist destinations will have a tool that will allow them to plan the fieldwork (surveying) efficiently, allowing them to obtain the opinions of the tourists in the ideal target points of survey, that is, the locations with the greatest touristic attraction power.

To do this, first, a categorized inventory of all the touristic resources of the 371 municipalities of the province was carried out. Next, a synthetic weighted touristic potential index was constructed that shows the level of attraction of each municipality. The weighting of each index factor was given based on the possibility of human intervention on the resources. Greater weighting when the human intervention for its creation or modification is more complex. And vice versa, less weighting when human intervention for its creation or modification is less complex. Finally, the target points were obtained, those municipalities with the highest value provided by the touristic potential index for each of the regions into which the province is divided, subsequently defining the number of observations to be made at each target point.

The results show that the province of Burgos stands out for its high natural or landscape heritage, with access through minor roads and with a high offer of both hotels and rural houses as well as restaurants and cafeterias. In contrast, the festivals declared of interest, access

by railway and the offer of hostels, apartments and campsites show the least outstanding values. In this sense, we hope that the arrival of the high-speed railway in 2022 can alleviate, at least in Burgos city, some of these deficiencies, since as revealed in a study carried out by Hussain (2023) air and railway transportation, including trade openness, positively affect inbound and outbound tourism in the long run. The spotlight characteristics of the province related to its natural or landscape heritage are factors that other studies have also highlighted for the promotion of inland tourism. Thus, the importance and benefits offered by the natural resources of tourist destinations are increasingly emphasized (Gios et al., 2006), in many cases relating them to health tourism, adventure tourism, active tourism, etc. (Fraiz et al., 2020) or even as a strategic option that allows territories to achieve economic development (Sánchez-Rivero et al., 2020). Possibly one of the reasons for this trend is the appearance of the pandemic caused by the SARS-CoV-2 virus (COVID-19), that has significantly transformed tourists' travel habits and destination choices, making them more environmentally conscious and shifting their preferences towards inland destinations close to nature (Eichelberger, et al., 2021). Although it is also true that other studies defend the opposite, that is, that there is no significant change in the destination choices motivated by the pandemic, but that the main influences are the aspects of safety and comfort; the consideration of environmental concerns, not play a significant role (Kupi and Szemerédi, 2021).

Regarding the target points, the work proposes the realization of around 383 observations in each of the eight municipalities selected to collect the opinion of tourists about the province of Burgos. To obtain these target points, as we have previously mentioned, a touristic potential index has been developed based on 10 categories of touristic resources, considering the resources themselves, their accessibility, and the touristic equipment. In general, these 10 categories are the most frequently used in the construction of tourism potential indices, although variations can be found that add new categories or slightly modify them. For example, tourist-related categories, considering the distance to cities of 100,000 inhabitants and the reference of the municipality as tourist zone (Calderón Puerta et al., 2020), or categories related to economic factors and ecological factors (Puska et al., 2020; Chen et al., 2021). Finally, focusing on inland tourism, Casado-Montilla and Pulido-Fernández (2021) develop a touristic potential index considering the categories of tourist attractions, tourist services and infrastructures, ancillary services and infrastructures, and public management of tourist activity. The results offer scores between 55.82 and 96.19 for the evaluated municipalities, very far from the scores obtained for the province of Burgos, which have been placed in the range between 1.83 and 19.62 as municipalities with the greatest tourist potential in each of the regions of the province (Annex I). Along the same lines, Fernandez-Arroyo (2020) obtained an indicator, called Tourism Functional Specialization Index (IEFT[1]), capable of determining the functional/structural specialization of a municipality using the classification of territorial resources, territorial accessibility, specific equipment and services, and tourist accommodation. The study was applied to the community of Castilla-La Mancha (Spain).

These comparisons reveal one of the existing problems in the use of different touristic potential indices to evaluate the tourism potential of certain municipalities. Generally, the indices used employ different categories of resources, different weights for each category or different methodologies to calculate them. To this heterogeneity must be added the different characteristics of the municipalities under study: inland municipalities, coastal municipalities, etc. For example, Cunha (2008) developed a touristic potential index using a similar methodology to the one used in this study but applied to the use case of the La Coruña area (Spain), or Hidalgo-Giralt et al. (2023) have designed a Tourism Intensity Index (TII) that allows measuring the tourist intensity in small and medium-sized Spanish cities related to non-resident travelers in Spain with the local population. With data from 2020, this study maintains the city of Burgos at the very high tourist intensity. In any case, we would like to highlight at this point the novel aspect of the work, which allows linking the municipalities with the greatest tourism potential with the appropriate target points for an effective planning of the fieldwork when surveying and subsequently extracting the opinions of the tourists, and may be, in this sense, taken as a reference.

Puntos diana como localizaciones para la realización de encuestas: Índice de Potencialidad Turística de la provincia de Burgos
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The choice of the 8 municipalities obtained in this work through a quantitative analysis as target points can be contrasted to a certain extent with reality. An empirical validation can be carried out through the results obtained by the Annual Tourism Report 2022 made by the Burgos Tourism Observatory, in which a study of visitors is carried out by reference points in the province of Burgos, obtaining the municipalities with the highest number of visitors in each region. The most visited municipalities match for the most part with those indicated as target points. A validation can also be carried out from the bibliographic point of view with the help of Artificial Intelligence. Specifically, ChatGPT has been used to obtain the most visited municipalities in the province of Burgos, obtaining the following results: (1) Burgos, (2) Aranda de Duero, (3) Miranda de Ebro, (4) Lerma, and (5) Covarrubias. Of these five municipalities, 4 coincide with the target points obtained in this study. The sixth most visited municipality according to ChatGPT also coincides with a target point (Santo Domingo de Silos).

In any case, the development of the work has also had some limitations. Mainly, the difficulty in finding disaggregated data related to the touristic demand of each municipality in the province of Burgos, as well as the adequate selection of the weights granted to each of the categories, partial indices and touristic potential index constructed. In addition, the findings are influenced by the economic, social, cultural, and environmental context from the province of Burgos so, further research of similar cities can help reinforce the results obtained by increasing their generalizability. These limitations have given rise to possible improvements and extensions of the work. In the first place, as we mentioned before, the need to standardize categories and weights in order to make comparisons of the scores obtained by the indices of different tourist areas. Secondly, it would be possible to investigate obtaining weights in a more analytical way through specific knowledge of the demand of each municipality. And thirdly, in favor of a greater diversification of the target points, obtaining the optimal number of municipalities to define as target points in each region could also be investigated, subsequently defining the optimal route for carrying out the fieldwork, minimizing the use of resources (km traveled, human resources, time spent, etc.).

We hope that both the scientific progress commenced in this work and the lines of future research proposed, will lead to the evolution and improvement in the quality of the touristic sector, both in the province of Burgos and in any other touristic destination.

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ANNEX I. TARGET POINTS BY REGION.

Annex I

| Munici-pality | Population | Region | Tourist resources | | | | Destination accessibility | | | | | Tourist equipment | | | | |
			Natural or lanscape heritage	Cultural or monumental heritage	Festivals declared of interest	*TRI*	Motor-way	Main road	Minor road	Rail-way	*DAI*	Hotels and rural houses	Hostels, apartments and campsites	Restaurants and cafeterias	*TEI*	*TPI*
Burgos	173,483	Burgos	1	29	3	12.60	1	1	1	1	1.00	71	6	272	65.10	19.62
Villarcayo de Merindad de Castilla la Vieja	3,942	Merindades	6	4	0	4.00	0	1	1	0	0.30	17	1	15	10.40	4.17
Miranda de Ebro	35,239	Bureba	3	4	2	3.20	1	1	1	1	1.00	12	0	37	9.70	3.84
Aranda de Duero	33,172	Ribera del Río Duero	1	3	2	2.00	1	1	1	0	0.60	15	1	54	13.30	3.84
Valle de sedano	417	Camino de Santiago	3	5	3	3.80	0	1	1	0	0.30	12	3	11	8.30	3.65
Lerma	2,584	Ribera del Río Arlanza	1	1	0	0.80	1	1	1	0	0.60	21	1	20	12.90	3.16
Santo Domingo de Silos	264	Sierra de la Demanda	3	2	1	2.20	0	0	1	0	0.10	18	1	7	10.10	3.15
Neila	139	Pinares	1	6	0	2.80	0	0	1	0	0.10	3	1	1	2.00	1.83

ANNEX II. LOCATION OF TARGET POINTS BY REGION OF THE BURGOS PROVINCE.

Annex II
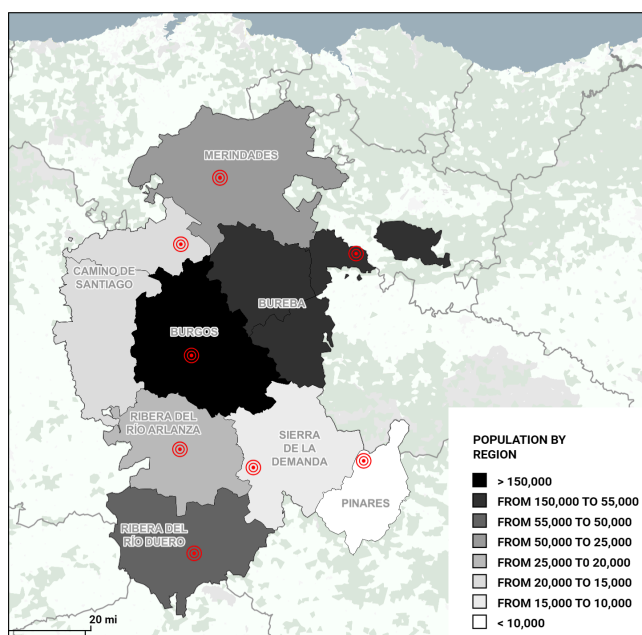
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