Foz do Iguaçu/PR in the perspective of the Tourism Space Theory

Foz do Iguaçu/PR na Perspectiva da Teoria do Espaço Turístico

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RESUMO

O artigo tem como objetivo classificar e hierarquizar o município Foz do Iguaçu/PR com base nos pressupostos de Boullón. Para isso considera o papel que desempenha e a hierarquia que assume perante os demais destinos turísticos brasileiros, baseando-se na origem de sua demanda. A pesquisa é classificada como exploratória e descritiva de abordagem qualitativa-quantitativa com um recorte longitudinal. A coleta dos dados está apoiada em fontes bibliográficas e documentais. Os dados foram obtidos em relatórios de pesquisa de demanda, artigos científicos e informações sistematizadas da plataforma *TripAdvisor*. A análise dos dados indica que o município de Foz do Iguaçu, no que diz respeito à função espacial, constitui-se um centro turístico de distribuição, em especial, para os centros turísticos de *Ciudaddel Este* e *Puerto Iguazu*, Paraguai e Argentina respectivamente. Quanto à abrangência, tomando como base a demanda externa classifica-se como um destino internacional não limítrofe. No que diz respeito à demanda interna, ostenta a posição de

destino nacional, ocupando a posição 7, nível 3 com uma média de 17.600 turistas em um único dia. A pesquisa limitou-se a analisar o destino turístico Foz do Iguaçu, o qual se insere em um contexto de complementariedade com Puerto Iguazú (Argentina) e Ciudaddel Este (Paraguai). Com isso, surge a necessidade de pesquisas futuras com dados dos países vizinhos. Como implicações práticas da investigação, aponta-se a possibilidade para que o destino turístico Foz do Iguaçu se torne um centro de estada.

Palavras-chave: Turismo. Espaço Turístico. Hierarquia de Destino Turístico, Foz do Iguaçu/PR.

ABSTRACT

The paper aims to classify and rank the city of Foz do Iguaçu / PR based on the theory of Boullón. It considers the role it plays and the hierarchy it assumes concerning other Brazilian tourist destinations, based on the place of origin of its demand. The research is classified as exploratory and descriptive with a qualitative-quantitative approach with a longitudinal cut. Bibliographic and documentary sources support data collection. Data were obtained from demand research reports, scientific papers, and systematized information from the TripAdvisor platform. Data analysis indicates that Foz do Iguaçu, in terms of spatial function, constitutes a tourist distribution center, especially for Ciudad del Este and Puerto Iguazu, Paraguay, and Argentina, respectively. As for the scope, based on external demand, it is classified as a non-bordering international destination. About domestic demand, it boasts the position of a national destination, occupying position 7, level 3, with an average of 17,600 tourists in a single day. The research was limited to analyzing the tourist destination Foz do Iguaçu, inserted in a context of complementarity with Puerto Iguazú (Argentina) and Ciudad del Este (Paraguay). Thus, there is a need for future research with data from neighboring countries. As practical implications of the investigation, the possibility is pointed out that the tourist destinationFoz do Iguaçu becomes a center of stay.

Keywords: Tourism, Tourist Space, Tourist Destination Hierarchy, Tourist Space, Foz do Iguaçu / PR.

INTRODUCTION

In the last years, the preoccupation with the territory has become highlighted, aiming, mostly, at subsidizing both private as well public development policies. It is on the territory that most relations, interconnections and social and functional interdependence of the space occur (Cury, 2010). In this sense, to understand the social-economic dynamics and to elaborate proper strategies, it should be verified the distribution of activities and practices of the space (Lacoste, 1988; Feger, 2010).

Within this sense, Boullón (2006) proposed that tourism is an activity with direct relation with the geographic surrounding in which it develops itself. In general terms, it is observed that tourism practices are developed in several geographic scopes that surpass the political boundaries of the city unit.

In the debate on the dimension of space and territory in tourism, Pearce (2003) exposes that most of the theoretical models remain being a system of origin-connection-destination. Such three elements receive different emphasis in distinct theories defended by several authors maintaining the spacial essence. In this line, tourism is constituted by a system in which a combination among several groups of enterprises occurs, such as hotels, restaurants, attractions, which find themselves specially organized with the purpose of attending the needs of tourists (Boullón, 2006). Based on this, tourism embraces social, political, economic, and cultural dimensions (Alvares et al., 2019).

To contribute to the debate and to broaden the discussions on tourism space, the unit of analysis of Foz do Iguaçu/PR was elected. It is considered the main tourism destination in Paraná, being the Cataratas of Iguaçu, its most known tourism attraction (Castro, 2020). In addition to its relevance in the state and national tourism context, the choice of Foz do Iguaçu was based on the availability of data on tourism flow.

Foz do Iguaçu is in the triple border with Argentina and Paraguay. The city of has an estimated population of 258,480 inhabitants (IBGE, 2019). The region gathers a population of approximately 900 thousand inhabitants (IBGE,

2019). The proximity with other countries enhances some aspects such as access to international airports, mobility between countries (Silva &Gândara, 2016).

The tourism destination presents as main attractions beyond the Iguaçu Waterfalls, the Itaipu hydroelectric plant, the Bird Park, the National Park of Iguaçu and the Three Borders Mark, which is situated on the Argentinean side of the Iguaçu river margin and on the Paraguayan side on the right border of the Paraná river, constituting the point in which the borders from Argentina, Brazil and Paraguay are found (Castro &Gândara, 2018). The city also gathers a series of other tourism attractions due to the ethnics that integrate the process of formation of Foz do Iguaçu, as the "Omar Ibn Al Khattab" mosque and the Buddhist Temple (SMT, 2019a), among others.

Previous researches approached the contributions of the application of the tourism space theory to the Center-North tourism aisle of the Piauí State (Ramos & Lopes, 2012; 2013). Feger et al., (2013) applied the theory when studying tourism on the border of the states of Santa Catarina and Rio Grande do Sul. Suzart et al.,(2016) aimed at allying the tourism space theory with the new technologies, specially the georeferencing for the analysis of the Paranapiacaba/SP district. Costa & Lucca Filho (2016) presented a theoretical reflection on tourism and urban space supported by Boullón.

The tourism space theory of Boullón (2006) is discussed in the literature and it is still currently used, demonstrating to be a valid theoretical approach for the understanding of the tourism organization in space (Fratucci, 2014). Given the capacity of the theory to provide basis for data analysis, it enables the elaboration of comparable indicators. In order to improve the decision-making processes in public or private field, the use of indicators has shown to be effective in tourism destination (Miskalo-Cruz &Gândara, 2016). Monitoring through indicators enables the verification whether the gathered information is relevant to understand the current situation, as well as, to observe if changes occur both in behavior as well as in positioning in face of specific situations in a constant and consistent form.

From the context presented the research is guided by the following question: How are Boullón's assumptions applied for the hierarchic classification and spacial function of the Foz do Iguacy tourism destination according to its demand? For this, it has the purpose of classifying and ranking the city of Foz do Iguaçu/PR based on Boullón.

According to the proposed purpose, this research is characterized as exploratory and descriptive with a quali-quantitative approached supported by the bibliographic and documental research. Data were gathered from scientific publications, technical reports and from the *TripAdvisor* platform, which were analyzed according to Boullón'stourism space theory.

The structure of the article includes in addition to this introduction, a second topic in which are worked the concepts of specialization and hierarchy, classified by the volume of demand, as well as the function which the destination holds. In sequence, it is about the adopted methodology for the data gathering and analysis. Subsequently, the results and main discussions are presented. At last, the final considerations, practical implications, limits and suggestions for future researches are described.

THEORETICAL REFERENCE

The concept of space "is associated to a specific portion of land identified whether by nature, by a particular form that man has impressed one's mark, or a simple location" (Corrêa, 2000, p. 15). Therefore, the word space has its use associated to different scales, global, continental, regional, from the city, neighborhood, street, house, and a room in its interior.

Regarding the tourism surface, its basic elements are described "as every geographic space, which cannot be defined by Euclidean borders, since at least one of its basic elements is exterior to it – the demand" (Rodrigues, 2011, p. 74). The elements of the tourism space, beyond the demand, are tourism offers, services, transportation, infrastructure, power of decision and information, promotion, and commerce system (Rodrigues, 2011; Costa e Lucca Filho, 2016).

The relation between all these elements is given by the tourism production-consumption process, which generates a new different social-spacial reality called destination, and that participates at the same time in sectorial and geographic aspects (Barrado-Timón, 2004). This way, destination is a sub-system formed by space, management, and productive elements, as well as by the group of their inter-relations and the effects which are produced, fundamentally sectorial and geographic (Barrado-Timón, 2004; Castro &Gândara, 2018).

Therefore, the tourism destination presents as characteristic the centrality of services and attractions structured and adapted to the tourist's needs (Valls et al., 2006; Costa e Lucca Filho, 2016). It is important to highlight that in spite of the relevance in the tourist's motivation, attractions need to be considered in their relations with the tourism system (Pimentel, 2020). In addition, for the tourism activity it is necessary to consider the relation between offer and demand, as well as the intervention of the super-structure (Alvares et al., 2019).

Classification by the demand's volume

The tourism demand expresses the success of a tourism center and the lack of it, naturally, its failure (Boullón, 2005). From the theory of Boullón (2005) it is stated that it is not worth it to classify the attraction at the highest level if such attraction does not motivate the demand for which it was proposed. Therefore, it is about the understanding that the amount needs to be expressed in quality. Thus, for such understanding it is necessary to know from the destination the variables on the demand's profile (Boullón, 2005; Castro &Gândara, 2018; Pimentel, 2020) (Table 1).

Table 1

Classification by demand

Position	Description
1	Number of visitors
2	Permanence of visitors
3	Season of the demand and duration of the season
4	Number of households of tourism use
5	Daily expenses from visitors
6	Origin of the visitors

Note. Source: Adapted from "The Tourism Cities" by R. C. Boullón, 2005, p.

From the combination of the positions 01 to 03 (Table 1), results the number of simultaneous visitors, being this the first indicator to evaluate the importance of a tourism center. The number of simultaneous visitors is ranked accordingly to Table 2. It is important to measure and quantify the simultaneous visitors to, for example, calculate the load capacity of equipment. In addition, to know the tourist's profile may help evaluating the need to increase the number of household units, for example.

Table 2

Classification of tourism cities based on simultaneous demand

Position	Simultaneous visitors	Level
1	-200	1
2	200 to 1,000	
3	1,001 to 2,000	2
4	2,001 to 3,000	
5	3,001 to 6,000	

6	6,001 to 10,000	3
7	10,001 to 20,000	
8	20,001 to 30,000	
9	30,001 to 40,000	
10	40,001 to 60,000	4
11	60,001 to 80,000	
12	80,001 to 100,000	
13	100,001 to 120,000	5
14	120,001 to 150,000	
15	+150,000	

Note. Source: Adapted from "The Tourism Cities" by R. C. Boullón, 2005, p.

It is worth distinguishing that the flows of visitors may be divided in tourist and excursionist. At times the terms are treated as synonymous, but form the technical point of view, they present differences. One of them, to whom this study is directed, is that the first remains a superior period of 24 horas in the receptive nucleus, which means, with overnight accommodation, meanwhile the second visits for a shorter period, long enough not to involve overnight staying (Middleton & Clarke, 2002). For the methodological effects presented by Boullón (2005), one may work with the combination of both profiles, and use only the tourist profile, as the option chosen in this research (more usual).

Classification by function

The discussion that follows Boullón's tourism space theory presents possibilities of ranking the tourism spaces. In this section, the following

categories will be presented: tourism center; center of distribution; permanence center; excursion center; scale center.

Tourism center refers to the whole urban conglomerate, in its own territory or area of influence, having one or more tourism attractions of that kind and enough hierarchy to motivate a trip. According to the function it develops, it can be of four types, distribution centers, permanence centers, excursion centers and scale centers (Boullón 2006). Distribution centers are those that are characterized by the permanence of the tourist for one to three overnights, since basically its finality is that the tourist may cover the biggest number of attractions in the same location as possible (Boullón, 2006). Permanence centers are dependent on a single type of main attraction. This is the case, for example, of tourism attractions on the beach, skiing, thermal waters, or gambling. In this case, the attraction is characterized by the type that leads the visitor to want to practice the same activity everyday throughout the stay in the location, stimulating minimal permanence starting from five overnights(Boullón, 2006).

Excursion centers are not strictly tourists, since their demand is originated from the inhabitants of the close-by urban areas, who drive to the center during the weekends and on vacation and remain there for at least 24 hours. It is worth mentioning that, even referring to tourists, many times, people are hosted in a nearby distribution center. In this situation, they may behave as excursionists. At last, the scale centers, despite not being so common are the previous mentioned, are configured in the space between origin and destination, due to the distance. Many times, it corresponds to a place where the means of transportation are changes from plane to terrestrial or vice-versa (Boullón, 2006).

Such classifications are general, however Boullón (2006) presents a not so common classification, but that due to the object of study, it is worth mentioning. The tourism complex are major groups of attractions that stimulate the permanence equal or superior to three days. In such cases, the main anchor attraction should not be of the same type which composes the

permanence tourism center, but characteristic of a distribution center (lakes, mountains, historical places, ruins, archaeological sites, etc.).

In face of such categories, it is possible to understand whether a destinationcan attract and retain tourists. In addition, it allows to catalog indicators which demonstrate the functions pursued by the tourism spaces, supplementing useful information for the planning and development of tourism.

Classification according to the demand's origin

An essential characteristic of tourism destinations is to have tourism attractions, tourism's primary material (Boullón, 2006). However, it becomes relevant to obtain indicators that answer questioning such as: What attracts the tourist to a certain place? What distance is the tourist willing to cover until the destination? Issues like those are directly related to the hierarchy of the tourism destination (Boullón, 2005). In this sense, a destination may assume classifications regarding the origin of the tourists and national and international visitors. Ranking enables understanding the capacity of attraction and to generate indicators of the attraction capacity of a destination (Boullón, 2005) (Table 3).

Table 3

Ranking of tourism destination according to the demand's origin

Origin	Capacity of attraction		Distance
1. National	1.1 Internal	1.1.1 Local	Up to 200km
		1.1.2 Regional	Up to 500km
		1.1.3 National	Superior to 500km
2.International	2.1 Receptive	2.1.1 Border	Between 50km and 200km
		2.1.2 Limit	Does not consider the distance, only if it is on the frontier
		2.1.3 Non-limited	Does not consider distance and it is not on the frontier

Note. Source: Adapted from "The tourism cities" by R. C. Boullón, 2005, p.

Regarding international tourism, the following classes are attributed: *frontier,* the one that is located on the frontier with the destination city; *limit,* when the frontier with the country is included in the destination; *non-limited*, the one that is not on the frontier of the country to be visited (Boullón, 2005).

As for the internal tourism, it is known that according to the gravitational models (Rabahy, 2003), the tendency is that destinations attract bigger flow of people from close-by locations, however, once the attraction assumes bigger importance, it starts attracting flows from further distance. In this case, it is assumed for this article that a destination becomes national when attracts

a more significant flow of tourists from locations further than 500km. It should be perceived that one does not exclude the other, but it is considered once the attraction of the destination evolves, it starts attracting people from the region, the country and even international.

Boullón's shows a systemic vision on the tourism's interaction on the geographic space and brings to the center of analysis the inter-relation of its main components (Alvares et al., 2019). At the same time, Boullón's proposition shows that the regionalization is a way to gather resources, attractions and tourism equipment to maximize benefits of the tourism activity (Ramos & Lopes, 2013; Castro &Gândara, 2018).

A possibility may be to combine Boullón's model with another one which is like it regarding the space function, but different regarding the origin of data and considered variables. Such configuration is proposed by Liu et al., (2012) to understand the relation between tourism destinations. The method assumes as parameter the flow of displacements of tourists in space to categorize the destination according to its regional relevance. To classify spaces, unlike Boullón, Liu et al., (2012) organize data from the net theory (Granovetter, 1973; Scott, 2000; Scott et al., 2008; Walter et al., 2010; Wu, 2012). A considered variable involves the centrality of the destination and highlights its importance regarding the capacity of retention of tourists, acting as an entrance portal for the region. Another variable corresponds to the degree of proximity between the destinations in a way to identify its proximity condition with the other regional destinations. A third category involves the degree of inter-mediation from regional destinations, allowing the discussion of the control condition and dependency among the several destinations located in a certain space (Liu et al., 2012). From the combination of the centrality, proximity and inter-mediation of destinations may be classified as Centers of Distribution of Flows, Centers of Tourism Flows, Passage Destinations, Tour Destinations, Attachment Destinations, Isolated Destinations (Liu et al., 2012). Such approach may be interesting, however, such consideration in the present study has shown to be unfeasible, once such perspective would

demand gathering information from a group of destinations, which is not part of the study's scope, but it can be the purpose of future analysis.

METHODOLOGY

Due to the main purpose, the developed research is classified as exploratory and descriptive, by providing bigger familiarity with the tourism development in Foz do Iguaçu and aims at studying the characteristics of the tourism offer and demand in this region. The research is of qualitative-quantitative approach by the search of understanding of the relations between the three considered thematic fields, which means, tourism space, tourism destination and ranking. At the same time, it focused in the classification of the offer in the perspective of the tourism spatialization form the origin of the demand based on the quantitative data gathered.

Data gathering and analysis involved the triangulation of documentation sources, mainly data banks from government agencies and local tourism trade combined with theoretical content from articles published on the theme. In addition to those sources, the automatic data gathering was performed (Munzert et al., 2014) from the TripAdvisor platform, technique known in the computer science field as web scraping, in which 65,000 comments were treated, in which it was verified the residence location from the issuer of the comment. Data processing was performed using the statistical software R, which has packages with specialized function for mining texts (Silge& Robinson, 2017), which enabled to deal more easily with a great volume of data. The procedure for the gathering and operationalization of data consisted of the following steps: i) data acquisition from comments in the site TripAdvisor; ii) pre-processing and tabulation of the origins from people who commented the trip of the analyzed destination; iii) elaboration of a table with all the locations of national and international origins; iv) generation of maps with tourist's data regarding origin/distance.

To ease the visualization of the information on origin of the demand, techniques of data georeferencing were applied. Data gathered from the TripAdvisor site and organized in a table from Microsoft Excel software were inserted in the environment Quantum GIS - QGIS, in the form of Geographic Information System – GIS. Data on the origin of the demand of tourists for the tourism destination Foz do Iguaçu (PR) were grouped by Immediate Geographic Regions – IGR, a new regional division in Brazil presented by the IBGE (2017). The shape file with spatial data from the GIS are available by the IBGE.

Data processing ranked the layers of IGR according to the degree of values for volume of tourists and distance. The plugin Oursins was used to generate the results related to the distance from the origin until the tourism destination of Foz do Iguaçu. With the raking tool of the attributes table, data were processed to represent the volume of tourists.

To show the volume of tourist's flow according to the IGR of origin, the representation by proportional circle was used. In such option the attribute volume (in percentage) was represented by the diameter, in which the bigger the diameter, the higher the percentage of tourists with the same origin, the inverse is also true. The same procedure was used to represent the international flows. For this, the volume was represented by the proportional circle according to the country of origin of the comments.

After the data systematization, the analyzes aimed at tracing a parallel between the consulted sources, the comments of the TripAdvisor, scientific publications on tourism destinations and the researches and controls of flux ascertained by the tourism manager in the destination (Waterfalls Iguaçu National Park and Tourism Secretary).

RESULTS AND DISCUSSION

The theoretical aspects of the tourism space were treated anchored in Boullón (2005; 2006). From this discussion, the presentation of data starts being

according to the proposed in this study, which means, the application of concepts in the tourism destination in Foz do Iguaçu. This way, data were discussed as follows, ranking the destination from its spatial function, followed by the categorization from the simultaneous demand and finally with the classification form the tourist's origin.

The spatial function of the destination

Such classification of the destination involves the verification of the flows which happen in the space where the destination is situated. The discussion proposed in this topic is to understand what the role performed by the destination is, due to the circulation of tourists internally to the destination territory.

Such debate was already performed by Boullón (2006), when expatiating on the concept of tourism complex and claimed that there is need of at least a center of distribution once the international complex of Iguaçu Waterfalls has up to three close tourism centers. The city of Foz do Iguaçu may be classified as a permanence and a distribution center, different form the 90's, period when tourists visited only the Waterfalls and the Three Borders Mark.Noweadays, it includes the tourism offer of the surroundings, going through cities which are border of the Itaipu lake (Massukado& Teixeira, 2006; Ramos & Lopes, 2012; 2013).

In this sense, the classification of the destination not only depends on people's circulation, but also on the type of attraction. Therefore, Ramos & Lopes (2012) disagree in the article when state that Foz do Iguaçu is characterized as a Permanence Tourism Center. According to the characteristics of the offer and classification by function, Foz do Iguaçu needs attraction that motivates the tourist to remain to perform the same activity for several days. According to Boullón (2005), to be able to be classified in such category, the center needs to generate at least 5 overnights, in addition to having a specific type of attraction. Foz do Iguaçu,

according to data from the Tourism City Secretary (2019b), for the last 19 years, it has maintained the mean permanence time in 3 days, in addition to having the type of attractions that do not provide for the tourist to perform the same activity all the days.

This way, it is understood that Foz do Iguaçu is characterized by a Tourism Center of Distribution once its characteristics allow to establish a role of distributing the demand to the region's cities. In addition, reinforcing such perspective, it is considered the tourism trade's disclosure, in which it is verified that the city stimulates clearly and naturally the tourism in neighbor countries, Paraguay and Argentina. The current time of permanence precisely shows such condition, distribution of the demand throughout an expressive number of attractions (see Visit Iguaçu, 2020), but there is not only one attraction capable of making the tourist return to it for several following days.

To analyze beyond only the object of study Foz do Iguaçu, it is considered its articulation and complementary with the neighbor cities (Silva &Gândara, 2016), and, therefore, this group can be classified as a Tourism Complex. Such category "comes as a derivation from tourism centers of distribution, which achieve a superior order" (Boullón, 2006, p.77). The encounter of the three tourism centers (Foz do Iguaçu, *Ciudad del Este,* and *Puerto Iguazu*) explains such definition and corroborates with the permanence time of the tourist in this destination.

This way, consequently, it does not fit as tourism center of fun or of scale, since in these cases, the special functions may not be cumulative to the main classification, which is of being a distribution center.However, it is worth alerting to the fact that it is possible that a certain space may play different roles depending on the agents involved, according to the precepts of the differential spatiality of Lacoste (1988). Such discussion, though, is not part of this research's scope.

Simultaneous demand of the destination

The simultaneous demand consists in determining the volume of tourists who simultaneous attend a certain destination. One information which allows to know the number of visitors, the seasonality, and the degree of permanence. In the case ofFoz do Iguaçu, from the data of the Tourism Secretary of the city, we have:

- Monthly mean number of visitors: 170,957
- Days of permanence: 3,1

To verify the mean number of simultaneous tourists, the formula used in hotel business was adapted (Petrocchi*apud* Feger et al., 2013)

$$SV= (NV*TP)/ND.$$

Where, SV = simultaneous visitors / NV = number of visitors / TP = days of permanence / ND = days available in the period (commercial month)

Soon, we have that,

$$SV= (170,957*3,1)/30.$$

$$SV= 17,666$$

As a result, it is possible to classify (see Table 2), the city in the ranking proposed by Boullón (2005), which means thatFoz do Iguaçu is at level 3 and position 7 (10,001 to 20,000). In relation to seasonality, it was chosen to extract the simple monthly mean number from the annual total. The calculation shows that in Foz do Iguaçu a mean number of 17,666 tourists attend the city in a single day.

Such procedure of classification may be useful in the sense of comparing any given city from which indicated variables become available. A possibility, whether having reliable data from several tourism regions, would be of constructing a historical series of this indicator, helping in the definition of strategies and even so, monitoring the results of the implemented actions in such spaces.

Origin of the destination's demand

Regarding the origin of the demand, the destination may be fit into national and international. The analysis is begun by using the data raised by the*TripAdvisor*platform. From the agglutination of cities of origin from tourists due to the IGR for the national data and for countries for international data. Data were analyzed in concentric circles and gradient of color; this form of data presentation may be necessary due to the big number of cities found with over sixty thousand comments.

In a first analysis, the darker colors, in which commentators were from farther distances were observed, in a range from 356 km up to 1019 km for the national scope (Figure 1). This way, one can infer that the internal tourism of the city can attract visitors by being positioned between regional and national.
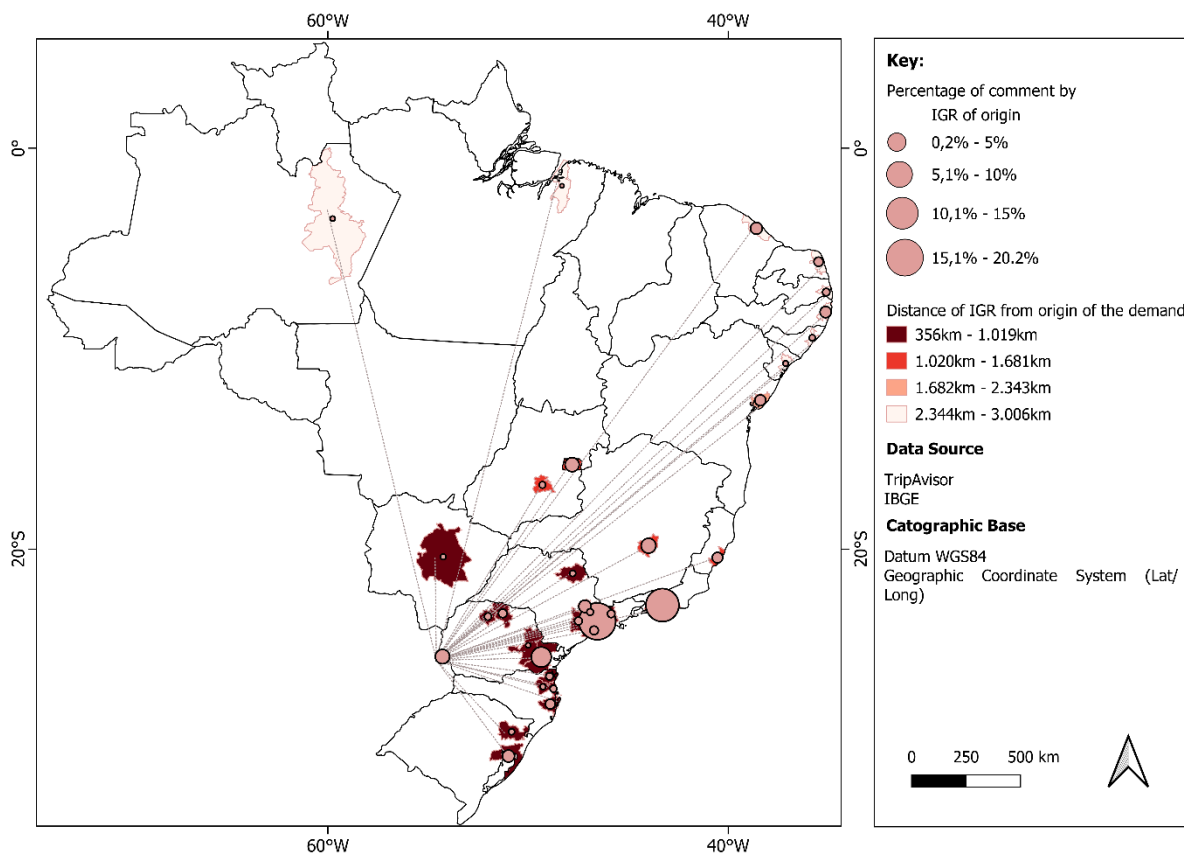

Figure 1.**Classification by the origin of the national demand**

In addition, it can be verified that there are certain tourists' concentrations in certain areas of the country, but looking to the formed

circles by the tourists percentage. In this case, a big circle situated in the IGR of the capital of São Paulo, indicating that approximately 15% to 20% of the tourists are originated from such area. Next, it can be verified that around 10% to 15% of the comments were emitted from residents of the IGR which aggregates the capital of the state Rio de Janeiro. A third circle, which is highlighted is in the IGR which is part of Curitiba, corresponding to 5% to 10% of the comments. It is highlighted that only such regions concentrate near a third of tourists who visit Foz do Iguaçu. Still, it is verified that around 76% of national tourists are originated from regions with distance over 500 km from the studied destination. From the data, it is identified that the destination can attract a national demand, concentrated on the Southeastern and Southern region. However, Foz do Iguaçu receive tourists from practically every Brazilian state, according to what can be verified by the circles distribution.

Based on the data from the Technical Inventory of Tourism Statistics fromFoz do Iguaçu base year 2012 (SMT, 2019b), it is verified that around 82% of national tourists are originated from the states of Paraná, Rio de Janeiro, São Paulo, Santa Catarina, and Rio Grande do Sul. Such fact corroborates the data obtained by the *TripAdvisor*. The sum of percentage of comments from regions of Santa Catarina (Blumenau, Joinville, Itajaí,Florianópolis) and Rio Grande do Sul (Porto Alegre) is up to 6%, which validates the data from the *TripAdvisor* with the data gathered by the Secretary of Tourism.

In the *TripAdvisor website* data, it was verified that in the scope of international source of comments of trips to Foz do Iguaçu, embraces 83 countries. It is observed on the map that despite the diversity of countries, Latin America concentrates most part of tourists, and great part of them are not neighboring (Figure 2). By the volume of tourists, it is observed in the circles that the United States are highlighted with a proportion between 15% to 20%, followed by the United Kingdom between 10% and 15%.
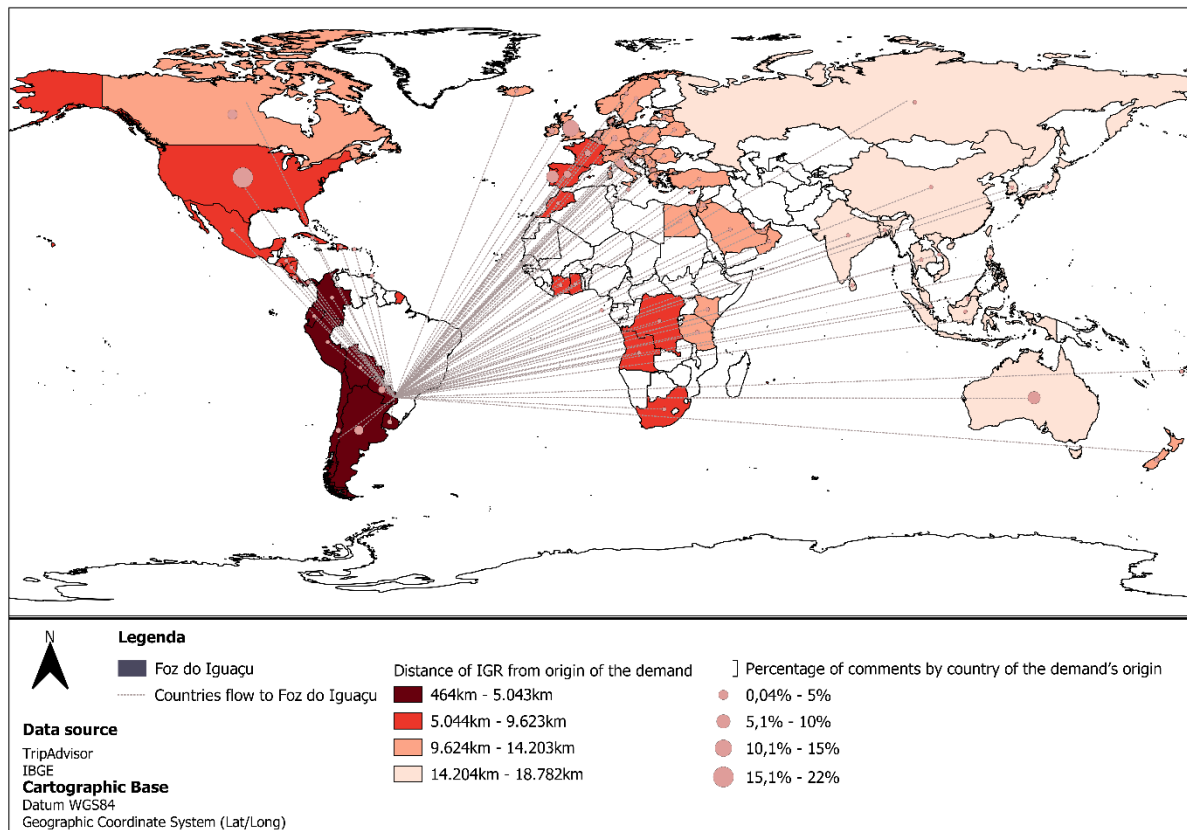
Figure 2: Classification by the origin of the international demand

This way, Foz do Iguaçu can be classified as international non-bordering limit, once it presents tourism flow in three levels, but it is highlighted by the 90% of international tourists from locations that are not boundaries with the state where the destination is located.

It is noticed equal finding, obtained in the study of tourism demand from the years 2011 and 2012, in which "are highlighted as great issuers, in international level, the United Kingdom and the United States (EUA), overcoming many countries in Latin America" SMT/SETU (2012, p. 10). Despite the privilege location within the MERCOSUL, the bigger international issuers were not countries boundaries as the ones from the quoted market (Vieira et al., 2014).

In addition to the cut form the mentioned researches, there are accumulated statistics from the Chico Mendes Institute (ICMBio), public federal organ, which manages the Iguaçu National Park, where the main

attraction of the city is located, the Iguaçu Waterfalls. The reports inform that in the year of 2011, for example, 1.394,187 tourists passed through it, having as main origin the foreign Argentina with 257,709, and the USA and the United Kingdom, which contributed with 26,946 and 19,730 visitors, respectively. At the time, the Institute also registered that Foz do Iguaçu, through the controls of the Park, registered the presence of 160 nationalities.

According to current data, from the Paraná News Agency (2020), in 2019 a total of 2.020,358 tourists passed through the visitor's center from the Iguaçu National Park, being the nationality Argentina with the higher participation among the international visitors, 436,369. For comparative effects, USA and The United Kingdom participated with 49,109 and 24,002 visitors, respectively. Therefore, such data are in conformity with the count from 2011, being those nationalities among the ones that were highlighted regarding the totality. It is highlighted, also, that in 2019, the passage of 177 nationalities through the Park was registered.

Regarding the dispersion of international visitors in Foz do Iguaçu, data from the *TripAdvisor* are compatible with the data presented from the ICMBio (2012). The Iguaçu Waterfalls Park, the main attraction, may be considered a thermometer to measure the tourism flow of the destination.

To understand the tourism flow that is developed in the region may be an instrument of fostering new tourism attractions. When adopting the view of complex, this may broaden the offer to tourists from the three centers involved, and the region would amplify its attraction potential.

A first proposition is based on the structure itself of the connection system between the tourist's origin and the destinations in Brazil and in Latin America, which are constructed through road accesses. This way, it makes sense to classify the tourism destinations according to distances, as proposed by Boullón. There is criticism to the use of the theory, as for example quoted by Almeida (2006), which proposes a matrix of classification for the tourism potential when analyzing the cities of Guaratinguetá and Cunha (SP), stating that the theory proposed by Boullón would be simplistic due to the absence

of indicators. This through is opposed by Soares & Cardozo (2012) when quoted that Almeida (2006) does not approach the issue of ranking of the analyzed destinations. The contradictions among the researches highlight the need to amplify the studies.

Some statements may be done regarding the theory, one of them regards the issue suggested by Boullon(2006) as for the region of Foz do Iguaçu, which is constituted by an international tourism complex. Such fact is maintained and currently evolves, as far as the local actors, in the three countries, organize themselves to develop tourism in a coordinated form.

A second proposition is that the obtained indicators provide conditions to compare tourism destinations according to the characteristics of their demands. In this case, there is a difficulty in Brazil, since there are few researches which segregate the demand at city level. In this case, when using the data from the TripAdvisor platform, it opens the possibility of performing a comparative study between Brazilian tourism destinations, from one side pointing to the coverage of the market and, from another, indicating possible expansions.

The application of the theory here used in studies in Brazil, as well as its dissemination in national literature, reveals that it is about a consistent theoretical body for spatial analysis. The study here performed also suggests valid finding, once that the analysis of the results shows that they are perfectly compatible withBoullón's classifications. The criticism to the model and the results of subsequent studies inspired in the theory of Boullón have brought contributions but have not offered a new theory yet. Still, it points out to its validity and with this, it stimulates new researches using other destinations such as objects, in order to obtain more data for its consolidation. It is suggested that studies of cases should be broadened so that the applicability of Boullón'sspace theory can be deepened.

FINAL CONSIDERATIONS

Boullón's theory of the tourism space is a classic in tourism studies. In this sense, the proposal of this study is characterized as a review exercise to the theory, enabling the amplification of the discussions on the pertinence for the current reality. Therefore, it is needed to consider that the present investigation is not conclusive and yes, exploratory, still it allows the formulation of propositions that lead to new incursions on the theme. Despite considering that when adopting certain analytic assumption, the researcher already prints a certain bias to its interpretations and conclusions, it was aimed at verifying in the present study how the theory is applied to Foz do Iguaçu.

The research showed that Foz do Iguaçu in its more relevant classification is a distribution tourism center due to its main attraction. In this sense, in addition to the offer characteristics, one should consider the tourism flow, in order not to commit mistakes (Pimentel, 2020). Regarding the origin of its demand, it is constituted as international destination, as for its external demand, when receives tourists of more than a hundred countries. Under internal demand, it is characterized as a national destination, since it has a flow of regions located over 500 km distance. As for the volume of its flow, it is classified in position 3, level 7 with a simultaneous mean presence of close to 17,666 tourists on the same day.

As practical implications of the investigations, within the interest of tourism planning, the results indicate that in addition to having a role of distribution center, Foz do Iguaçu has the capacity of becoming a permanence center. It can be observed that the Paraná Tourism Plan 2026 – Pact for An Intelligent Destination, Paraná Tourism (2016) points out that one of the strategic purposes regarding Foz do Iguaçu is its consolidation as inductor of international tourism demand for Paraná aiming a deconcentrating effect that would benefit other destinations from Paraná.

After the analysis it was possible to observe that both in the data gathered from *TripAdvisor*, as from studies of tourism demand, that the origins of international tourists were not within the gravitational model that takes into

consideration the geographic distance between origin and destination or attended the rule that the closer the higher the demand (Rabahy, 2003). In this case, it is indicated as limitation of the research that the data gathered are not corroborated by systematic studies performed by the ICMBio.

Therefore, there is the need of further studies to better understand this issue. In addition, considering that the focus of this study was exclusively the city of Foz do Iguaçu, the destination is inserted in a bigger context, encompassing the neighbor countries. Soon, new researches may also collect data from Paraguay and Argentina to aggregate what has already been exposed here.

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