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World Heritage Sites, international tourism demand, and tourist specialization in Latin America and the Caribbean (1995-2019)[1]

Patrimonio Mundial, demanda de turismo internacional y especialización en turismo en América Latina y el Caribe 1995-2019

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Abstract

The relationship between international tourism and the registration of a place as World Heritage, both tangible and intangible, has been newly studied. Since little progress has been made with regard to Latin American and the Caribbean (LAC) countries, this paper aimed to approach this problem. Furthermore, the analysis was differentiated according to the type of destination. To do so, a specialization index was introduced indicating whether a country is

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specialized in tourism or not. The study was based on a panel data of 32 LAC countries for the period 1995-2019. Results show that there is a marked direct effect of the number of World Heritage Sites on international tourism demand and that this relationship is much stronger for those countries that are specialized in tourism. However, when differentiating between tangible and intangible heritages, the former has a highly significant effect on international tourism demand in countries not specialized in tourism, but this is not the case for the latter. Conversely, cultural intangible heritage is only relevant for countries specialized in tourism.

Keywords: tourism economics, tourism specialization, World Heritage, Latin America and the Caribbean, panel data

Resumen

El estudio de la relación entre el turismo y el registro de un sitio o elemento como Patrimonio Mundial, tanto tangible como intangible, es relativamente reciente y poco progreso se ha realizado en relación con América Latina y el Caribe (ALC). Este trabajo aborda este nicho de estudio. En particular, su objetivo es cuantificar el efecto del patrimonio mundial sobre la demanda de turismo internacional al considerar el grado de especialización en turismo de los países destino. La metodología se basa en técnicas econométricas de datos de panel. La base de datos se compone de 32 países de ALC para el período 1995-2019. En general, se verifica que dicha relación es fuerte y directa, en especial para los países especializados en turismo. Sin embargo, cuando se diferencia entre sitios tangibles e intangibles, los resultados divergen. De este modo, en países no especializados en turismo, los sitios tangibles tienen un gran efecto significativo sobre la demanda de turismo internacional, pero no así los elementos intangibles. Por el contrario, para los países especializados, solo el patrimonio cultural intangible es significativo.

Palabras clave: economía del turismo, especialización en turismo, Patrimonio Mundial, América Latina y el Caribe, datos de panel.

1 Introduction

In 1972, the United Nations Educational, Scientific and Cultural Organization (UNESCO) adopted an international treaty called the Convention concerning the Protection of World Cultural and Natural Heritage. The main goal of this treaty was to encourage the identification, protection, and preservation of cultural and natural heritage around the world considered to be

of outstanding value to humanity. Since 1978, the World Heritage Committee has met once a year to decide which sites will be added to the World Heritage List (WHL).

As of 2019, 193 States Parties worldwide have signed the Convention. Sites of different nature are included on the UNESCO WHL. By now, there are 1121 sites: cultural (77%), natural (20%), and mixed (3%). Additionally, 1735 elements are trying to be part of this list, often motivated, in addition to conservation, by the possibility of increasing tourist flows capable of generating a number of positive impacts on the territory.

Although, over the first years, UNESCO nominations focused on the historical and artistic value of specific monuments and cities, the latest cases show the importance of the relations of local communities with their environment and heritage.

As Cellini and Cuccia (2016) indicated,

> The behavior of UNESCO itself has been changing, partly to take into account criticisms and suggestions, and also on the consideration of the results obtained by properties included in the WHL. While the sites receiving the recognition in the first years after the signature of the Convention were specific monuments or historical centers of cities or natural attractions, the most recent inclusions regard complex areas; a larger and larger attention is devoted to the immaterial cultural endowments of sites. (p. 22)

Considering that the emphasis of the 1972 UNESCO Convention was placed on the material heritage, both tangible cultural heritage and natural sites, hereinafter referred to as Tangible Heritage Sites (THS), it resulted in dissatisfaction due to the fact that the immaterial or intangible manifestations of culture were not protected (Arango, 2009). Thus, there is a need to include expressions associated with ethnographic heritage, folklore manifestations of music, dance, oral traditions, folk art, among others, as constituent parts of the comprehensive concept of Heritage (Morel, 2011).

The adoption of the Convention for the safeguarding of Intangible Cultural Heritage (ICH) in 2003 is a milestone in the promotion of cultural diversity since the international community began to recognize the need to support a new type of cultural expressions and manifestations. “The decisive impulse for these new UNESCO concepts emerged in a meeting in Marrakech 1996 (and subsequent expert meetings in 1997) discussing the threat of oral and intangible

traditions regarding the Jemaa el Fna Square" (Hafstein, 2018; Schmitt, 2008, quoted in Dippon & Moskaliuk, 2019, p. 2).

This Convention established the Representative List of the Intangible Cultural Heritage of Humanity. The inscription of elements therein will help to publicize the intangible cultural heritage, to achieve awareness of their importance, and to promote dialogue and respect for cultural diversity.

In this regard, Morel (2011) showed that a significant change observed by the Convention is that it no longer acts only in accordance with "protection," as is the case with material heritage, but also to safeguard heritage. Arango (2009) argued that the difference lies in the fact that protection seeks to somehow freeze a good in time, keeping it conforming to its original features. In the case of intangible heritage, the permanent evolution and transformation of the living expressions should be taken into account. Hence, an expression should be registered and documented at a given time, but not frozen, since evolution would be prevented.

> So far (2019) 508 ICH 122 States Parties have been assigned. From these 508 ICH, 429 inscriptions have been added to the Representative List. There are 59 inscriptions on the Urgent Safeguarding List and 20 inscriptions on the Register of Good Safeguarding Practices. (Dippon & Moskaliuk, 2019, p. 2)

The relationship between tourism and the registration of a place as a World Heritage Site (WHS), both tangible and intangible, is presented as an aspect of interest for the cultural tourism literature. In many cases, the inclusion of places in these listings entails a significant increase in tourism affluence, especially in international visitors (Tucker & Emge, 2010; Su & Lin, 2014; Porto, Rucci, & Ciaschi, 2017; Leonardi, Elías, & Tortul, 2018; Elías & Leonardi, 2019). Therefore, the inscription of many sites on the list is a testimony to their universal recognition as important sources of tourism affluence.

The first heritage designations in Latin America and the Caribbean (LAC) began in 1978, with Ecuador being the one with the first and only declarations, namely, the city of Quito, included on the list of cultural heritage, and the Galapagos Islands, on the one of natural heritage. Then, Guatemala gained recognition for the city of Antigua as a cultural heritage in 1979. Following these nominations, there were many more.

In this context, the aim of this article was to measure the effect of the number of WHSs on international tourist arrivals in LAC countries. Specifically, two problems were addressed. First, we analyzed if such impact differs according to the degree of tourism specialization of these countries. Second, we determined if there are any variations when distinguishing between THS and ICH. The methodology to approach both problems was based on panel data estimations. The database is composed of a panel of data from 32 LAC countries from the period 1995-2019. Data from the UNESCO (2020), the World Bank (2020), and the World Tourism Organization (2019) were used as data sources.

The paper is organized as follows: after this introduction, Section 2 provides a literature review on the importance of nominating sites for their inclusion in the WHL in the tourism sector. Then, in the third section, the methodology of the research is detailed. Section 4 describes the database. In the fifth section, the results of the research are discussed. Finally, some general conclusions are presented.

2 Background

In this section, we begin with a brief literature review regarding heritage sites and tourism and continue with an investigation of the most used indicators of tourism specialization.

In the context of tourism, the concept of WHS is still poorly understood, and the debate among the researchers studying WHS, and its impact on attracting tourists, is neither definite nor conclusive. Some of them agree that a WHS does not foster tourism demand (Rodwell, 2002; Huang, Tsaur, & Yang, 2012; Poria, Reichel, & Cohen, 2013). In addition, some authors argue that the link between WHS listing, and visitor numbers is especially weak for sites that were important points of interest prior to heritage listing. Places that are known globally, such as the Egyptian pyramids and the Taj Mahal, among others, seem to benefit less from World Heritage recognition. In other lesser-known WHSs worldwide, such as Safranbolu in Turkey, Turker (2013) affirmed that the host society has seen significant change over a five-year period, in terms of improved employment, business opportunities, and community development. In the case of Italy, Patuelli, Mussoni and Candela (2013) found that,

> WHS endowment does appear to influence arrivals to tourism destinations for Italian domestic tourism, providing a justification for local policymakers' lobbying towards the national government for obtaining UNESCO designations; however, spatial competition

> may reduce the positive direct effect down to an overall negative effect, once more alternatives are considered and more sites are assigned to competing destinations as well, suggesting that the desirability of WHS designation depends on the expected spatial extent of competition. This last result strengthens the importance of WHS endowment since it implies that competition among regions on the basis of WHS can be justified. In fact, given that the positive effects of trip-chaining are outweighed by spatial competition, regions could indeed use WHS designations to gain competitive advantages over other regions, which outlines the critical role of regional tourism promotion agencies (p.23).

On the contrary, another group of researchers agrees that the WHL is one of the main drivers of tourists traveling to a destination (Shackley, 1998; Buckley, 2004; Reinius & Fredman, 2007; Yang, Lin, & Han, 2010; Tucker & Emge, 2010). Working with statistics derived from panel data for 66 countries worldwide, Su and Lin (2014) indicated that a country with more WHSs would promote international tourism. They also found that the relationship is stronger for natural heritage sites than for cultural ones. Moreover, they proved that possessing more WHSs increases international tourism demand, which also leads to relatively higher tourist expenditures in tourism-related industries, such as accommodation, transportation, or even retail outlets located around the site. These industrial linkages will generate several times the revenue earned from visits to a WHS itself. Furthermore, Roh et al. (2015) studied whether the relation between the WHL and leisure tourism differed depending on the type of heritage. Using a panel data of 78 countries, they found that the impact of intangible heritage is greater than that of tangible ones. They explained that this was due to a reduction in information asymmetry by virtue of the inscription on the UNESCO intangible heritage list. The degree of information asymmetry is higher for intangible assets than for tangible ones, because the former are country-specific, culture-related, and not visible. Thanks to the inscription on the UNESCO list, the value of intangible heritage is guaranteed and, as a result, the information asymmetry associated with them can be considerably reduced.

Finally, there is a third group of researchers who state that the extent to which the WHL attracts tourism is unclear (Timothy & Boyd, 2006; Leask & Fyall, 2006; Cellini, 2011; Frey & Steiner, 2011). There are also studies that discuss the real magnitude of this relationship and associate

it with factors that characterize different contexts and the absence or insufficiency of research data (Buckley, 2004; Tisdell & Wilson, 2001).

As shown in the previous review, academic papers mostly analyze consolidated tourist destinations such as Europe or the Egyptian pyramids, the Taj Mahal, etc. Even more, Ruiz Lanuza and Pulido Fernández (2015) explained that much of the scientific research on these issues, published from the Scopus database, refers mainly to countries such as the United States, the United Kingdom, China, Australia, and Italy.

In this scenario, even when Latin America and the Caribbean has been growing as an international tourist destination, there is still a long way to go in the study of the relationship between tourism and WHS. Prada-Trigo *et al.* (2016) pointed out that cultural tourism has been increasing worldwide in recent years, especially tourism in which cultural heritage is at the center of the visit, and Latin America was not exempt from this phenomenon, where destinations such as Lima or Machu Picchu in Peru, the pre-Columbian cities in Mexico and Central America, or Quito and Cuenca in the case of Ecuador are preferred.

Specifically related to cultural economics, the analysis of Porto, Rucci, and Ciaschi (2017) stands out. The authors conducted an empirical study for 17 countries in Latin America and the Caribbean. They used gravity models based on panel data to estimate tourism demand as a function of country accessibility and WHS designation. They found that the /nomination of tourist attractions as WHSs, as well as the accessibility component, increase international tourism demand. More generally, Hosseini et al. (2021) investigated the effects of WHSs on the performance of the tourism industry in developing countries all over the world. They offered a comprehensive parallel framework covering the contexts of both facility- and resource-oriented efficiency. Scores in the facility-oriented efficiency represent how successfully each of the studied states utilizes existing facilities to promote tourism activities compared to their peers. On the other hand, states obtaining higher scores on the resource-oriented component use their resources to advance their tourism supply chain more efficiently. Their study shows that Latin America appears to be the least efficient region in terms of both components, and they argued that this poor performance is possibly due to continued high inflation rates.

Regarding specialization indexes, the one of Balassa (1965) has been the most widely used indicator to show the specialization of a country in a particular sector. This index uses the world export share in a given sector to “normalize” the export share of each country, being notably

suited to static analyses. In the literature on tourism economics, specifically tourism and economic growth, tourism specialization has usually been measured by other indexes to identify the importance of the sector within the economy. Some authors define tourism specialization as the ratio of international tourism receipts to GDP (Brau, Lanza, & Pigliaru, 2004; 2007; Adamou & Clerides, 2010). Moreover, tourism specialization is also defined as the number of international tourism arrivals to the local population (Figini & Vici, 2010; De Vita & Kyaw, 2016), while other authors use as proxy the share of employment in tourism in the regional labor force (Romão & Neuts, 2017). The limitation of the aforementioned indexes is the inclusion of a single variable and other information related to a complex sector as tourism is not considered.

Fernandez, Grill and Laumann (2011) proposed some alternative indexes that regard tourism from its activity sectors. They considered the multiple enterprises involved in the provision of tourist services, including indirect relationships with other sectors that produce goods and services. The authors suggested using a set of variables that, complemented with those applied in the indexes mentioned above, can better characterize the tourism sector in a certain country. Among these variables, the most important ones are those that capture the impact of investment on tourism infrastructure, employment in the sector, and the relative size of the industry in the economy.

Ioncica et al. (2010) considered that determining a specialization index for services and, in particular, for the tourism industry is of the utmost importance. This index will allow evaluating the contribution of services to the economy of a country from three major points of view: share in GDP, employment, and exports. Starting from the fact that most absolute indexes of service specialization emphasize their level of specialization divided by the main indicators used in determining and comparing the degree of service specialization, these authors proposed an index formula that takes into account both the share of services in GDP and in employment and exports (1).

(1) Sptx=1/3 GDPx + Ex + Expx

Where Sptx is the tertiary specialization index (for services) (specialization coefficient) in the service field x; GDPx is the share of GDP accomplished in the service field x in the entire GDP; Ex is the share of the population employed in services x compared with the total employed population (expression of tertiary specialization of the labor force); and Expx is the share of services x in the total exports.

These authors considered that the complexity and heterogeneity of services determine whether countries have comparative advantages in some services in contrast to other nations. This, in turn, makes countries specialize in certain fields of the tertiary sector where they are competitively ahead. In the case of tourism, generally the countries that specialize in this sector have valuable natural and human resources, allowing them to obtain favorable conditions of specialization.

Then, the combination of several views of specialization (internal and external), included in the index proposed by Ioncica et al. (2010), would provide a positive knowledge regarding the level of specialization and development of tourism in a certain country.

Given this background and taking into account that researchers are not reaching an agreement whether or not WHS designations attract tourists, it is relevant to continue investigating if the inscription in the WHL has different effects on countries specialized in tourism (CST) and those that are not (CNST). This is particularly true for the case of LAC countries, for which there are fewer academic studies (Leonardi et al., 2018).

Our hypothesis is that the incorporation of heritage sites has different effects on Latin American and the Caribbean economies according to their degree of tourism specialization and the type of heritage, natural (tangible) or cultural (intangible). The incorporation of ICH is expected to have a greater impact on tourism-specialized economies. In the study region, it is believed that these economies are mostly Central American countries and the island of the Caribbean, while those not specialized in tourism are considered to be the largest economies, that is, Mexico and the continental countries of South America, which is due to the interaction of several factors. First, the decreasing returns of WHSs would operate more strongly in the smallest economies, because they have fewer ICH. Then, given the prominence provided by heritage recognition (Roh et al., 2015) and considering that Central American and the Caribbean countries face a consolidated demand for nature-based tourism (Sánchez Crispín & Propín Frejomil, 2010), the addition of one more cultural element would have a greater effect on international arrivals.

3 Methodology

In order to investigate the influence of a WHS on international tourist arrivals, a tourism demand function is estimated according to Su and Lin (2014).

For the purposes of this paper, WHSs include both THSs and elements corresponding to ICH. Besides, THS comprises sites inscribed on the WHL as well as on the List of World Heritage in Danger. The latter contains sites that the Committee considers to be threatened by proven or potential dangers. Likewise, ICH involves elements from both the Representative List of the Intangible Cultural Heritage of Humanity and the List of Intangible Cultural Heritage in Need of Urgent Safeguarding, but not from the Register of Good Safeguarding Practices. As already mentioned, inscription on the latter list occurs when communities and States Parties consider that elements need urgent safeguard measures to ensure their transmission. On the other hand, the Register of Good Practices is composed of the programs, projects, and activities that best reflect the principles and objectives of the Convention and aims to develop safeguard measures for the viability of oral expressions, music, and knowledge related to textile art and agricultural technologies. Five countries in the analyzed region have a record of good practices. The one of Mexico is the Center for Indigenous Arts and its contribution to the safeguarding of intangible cultural heritage of the Totonac people of Veracruz (2012), Brazil has the project contest of the National Program of Intangible Heritage and the Fandango's Living Museum, both registered in 2011, and there is a sub-regional project that includes Bolivia, Chile, and Peru.

The demand model is yit = f xit + zit + qi, where yit is tourist arrivals, and subscripts i and t denote the destination country and the time period, respectively. xit are the main explanatory variables of interest (WHS, THS, and ICH); zit are control variables that also affect demand; and qi is the unobserved country-specific variable that varies among countries but is invariant within a country over time.

In this way, two demand functions are specified. The first considers the total number of heritage sites of each country, and the second distinguishes between tangible and intangible heritage.

(2) $ATURit = \alpha + \delta\ WHSit + \beta1\ GDPIpcit + \beta2\ EXRit + \beta3\ HEAit + qi + \varepsilon it$

(3) $ATURit = \alpha + \delta1\ THSit + \delta2\ ICHit + \beta1\ GDPpcit + \beta2\ EXRit + \beta3\ HEAit + qi + \varepsilon it$

Where the dependent variable, ATUR, is the international tourist arrivals in country i at time t (tourism demand proxy in the literature, Lim, 2006; Song *et al.*, 2010; Su & Lin, 2014; Roh *et al.*, 2015; Leonardi *et al.*, 2018).

WHS represents the number of world heritage sites, and THS and ICH, the number of material and immaterial world heritage sites, respectively. We expect the sign of these coefficients to be

positive; hence, possessing more WHSs would enhance international tourism after controlling for other variables.

GDPpc stands for gross domestic product per capita and refers to GDP converted to constant 2011 international dollars using purchasing power parity rates. As an international dollar has the same purchasing power over GDP as the US dollar in the United States, it is an appropriate indicator to compare the income level among different countries and years. It also captures the degree of economic development in the destination country (Su & Lin, 2014). A positive coefficient of GDPpc is expected, since it means that international tourists prefer to travel to a more developed country.

EXR denotes the official exchange rate between the US dollar and the local currency. A positive coefficient of this variable is assumed, since if EXR raises, the local currency is depreciated, and the traveling price (cost) decreases, in which case the number of international tourist arrivals would grow based on the law of demand.

HEA is the percentage of health expenditure in GDP and is used as a proxy variable for environmental sanitation in destination countries. A positive coefficient is expected, since if a country spends more money on caring for the health of its residents, its sanitary condition will be further improved, and more tourists will arrive[2].

To test different effects of WHS, THS, and ICH on international tourism demand among these groups, marginal effects are calculated in Equations (4) and (5).

(4) Marginal effects in the first specification: $\partial ATURit/\partial WHSit = \delta$

(5) Marginal effects in second specification: $\partial ATURit/\partial THSit = \delta 1$; $\partial ATURit/\partial ICHit = \delta 2$

That is, for a destination country, possessing one more WHS, THS, or ICH would increase its inbound tourists by δ, $\delta 1$, or $\delta 2$ visits, respectively. δ, $\delta 1$, or $\delta 2$ are the average effect among all countries with different numbers of WHS, THS, or ICH, respectively.

As the data does not distinguish where international tourists come from, the specific characteristics of origin countries that may influence tourism demand are not included.

[2] Besides Health, works such as Roh et al. (2015) considered other explanatory variables like Education or Transparency, but they were not taken into account in the estimates given the availability of data and the significant correlation with GDPpc.

To assess whether the previously mentioned relationship differs between CST and CNST, LAC countries are classified according to their degree of tourism specialization. Then, the analysis is repeated for both groups of countries.

A tourism specialization index (TSI) was calculated adapting the methodology of Ioncica et al. (2010) on the data availability (6). According to the authors, it ranges between 0 and 1, whereas the specialization intervals (specialization degrees) are as follows: 0-0.1 specialization values indicating its absence; 0.1-0.5 average specialization level; 0.5-0.9 high specialization level, and 0.9-1 intense specialization.

(6) TSI = ((GDP_TOURISM)/GDP + (X_TOURISM)/X)/2

Where GDP_TOURISM/GDP is the share of the GDP accomplished in the tourism sector in the entire GDP, and X_TOURISM/X is the share of tourism exports in the country's total exports.

Furthermore, in order to compare each country's relative situation with a concrete reference environment, these authors suggested estimating the corresponding position of each country within the sample for the different components of the index. They proposed using the following ratio (7) to optimize the comparison:

(7) factor value = (present value - minimal value)/ (maximal value - minimal value)

where factor value is the indicator value (GDP_TOURISM/GDP and X_TOURISM/X), which will be included in calculating TSI; present value is the indicator-linked value, and minimal/maximal value is the minimal or maximal value of the same indicator.

Thus, a corrected tourism specialization index (TSIc) is estimated, which ranges between 0 and 1. For the purposes of this paper, only countries with values of TSIc less than or equal to 0.1 are considered CNST, which, according to Ioncica et al. (2010), indicate absence of specialization; and, conversely, countries with values greater than 0.1 are considered CST, which, for the authors, mean/signify/imply any degree of specialization.

The Breusch-Pagan test is used to evaluate cross-section heterogeneity in each model (1 and 2) for each group of countries (CST and CNST). If p-values associated with each chi^2 statistic are lower than the accepted error (1%), the constant variance hypothesis is rejected, and panel data models should be estimated, because the pooled LSE estimators will be inconsistent.

If that is the case, the Hausman (1978) test will be applied to assess which panel data model, Fixed Effects (FE) or Random Effects (RE), is more accurate. If the null hypothesis cannot be rejected, then a RE model is preferred, because the estimators are both consistent and efficient. Montero (2005) pointed out that even when a negative chi^2 statistic associated with Hausman is impossible, for the purposes of the test, negative figures should be interpreted as strong evidence that the null hypothesis cannot be rejected. On the contrary, when the null hypothesis is rejected, FE estimators are better as they are consistent.

The RE model implies that non-observable individual characteristics are not correlated with the explanatory variables. Hence, it assumes that qi follows a normal distribution and estimates one overall constant term. On the contrary, the FE model considers that each country has its own qi and estimates the constant term for each country. Since the sample is divided into two groups according to the degree of tourism specialization of the countries and the explanatory variables are macroeconomic, RE models are expected to fit the data better. This is mainly due to the similarities shared by the countries within each group. However, when distinguishing between WHS types, FE models may be preferred as more characteristics are controlled.

In addition to R^2, Wald test (RE models) or F test (FE models), and the Rho coefficient are applied to assess the goodness-of-fit of the models. When the null hypothesis of the Wald or F test is rejected, the independent variables are jointly significant to explain the dependent one. Similarly, Rho indicates the proportion of the variability of the dependent variable due to individual effects. Stata 14[3] is used to analyze the data.

4. Dataset description

Data from UNESCO (2020), the World Bank (2020), and the World Tourism Organization (2019) were adopted as data sources.

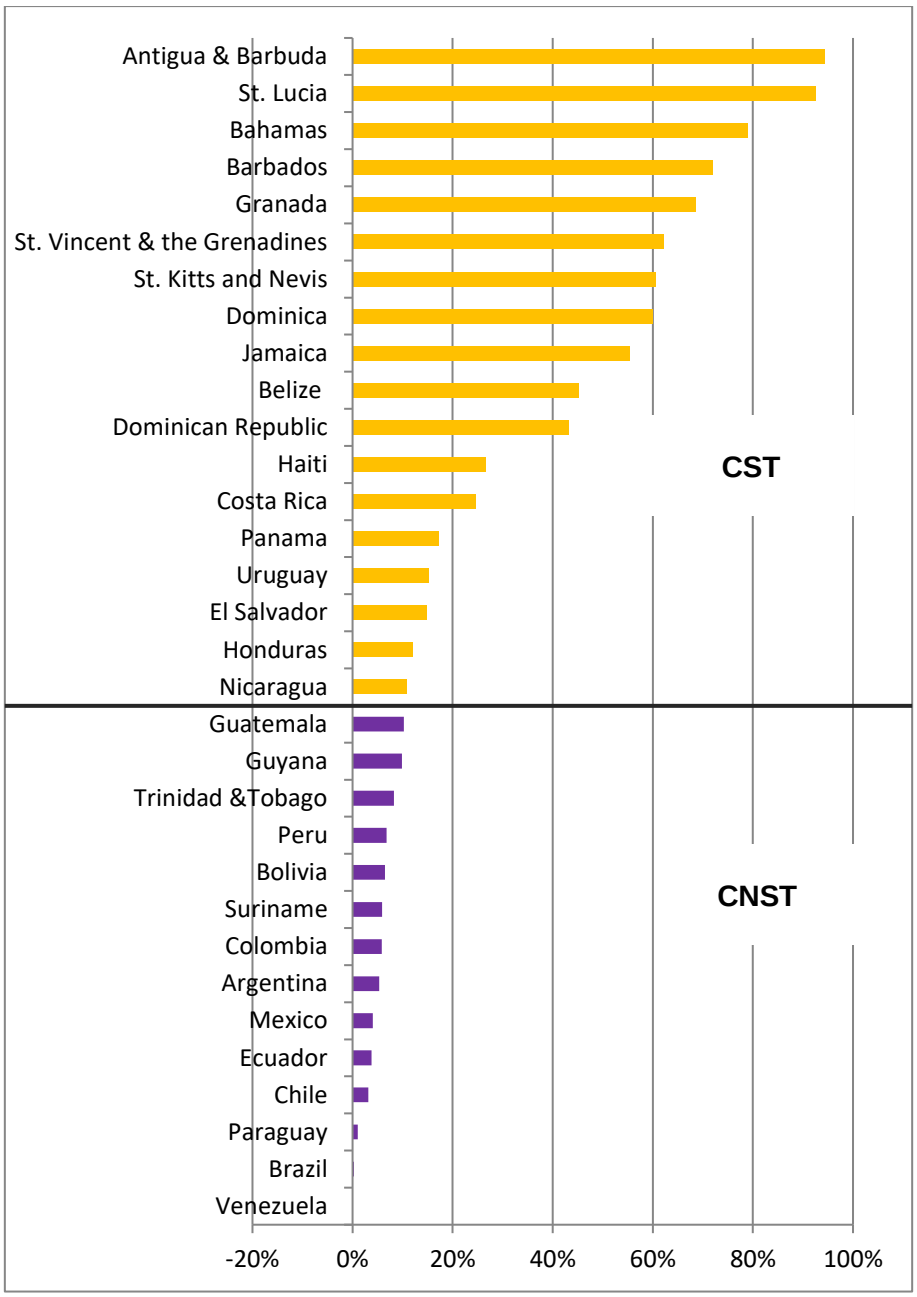
The database is composed of an unbalanced panel of data of 32 countries in LAC for the period 1995-2019. With 800 data per variable, only WHS, THS, and ICH are balanced. ATUR has 47 missing values. This data was extracted from the World Bank (2020) and, at the time, was available up to 2018. Besides, there is no ATUR data for Guatemala (1995-2006), Honduras (2018), Suriname (2018), and Venezuela (2018). GDPpc has 25 missing values, and they all

[3] StataCorp (2015). Statistical Software: Release 14. College Station, TX: StataCorp LP.

correspond to Venezuela (1995-2019). HEA presents 192 missing values, since data is only available for the period 2000-2018. Finally, EXR has 200 missing values, because data is available up to 2014. Moreover, there is no EXR data for Honduras (2013) and Ecuador (2006-2013). Regarding EXC, 10 countries of the sample fixed their exchange rate to the American dollar during the whole period, and some Caribbean islands have the same exchange rate. In addition, other countries, like Argentina (1991-2001), adopted similar exchange policies during some years of the period of analysis. This characteristic results in a low fluctuation and could negatively affect its significance. The presence of missing values limits the period of analysis.

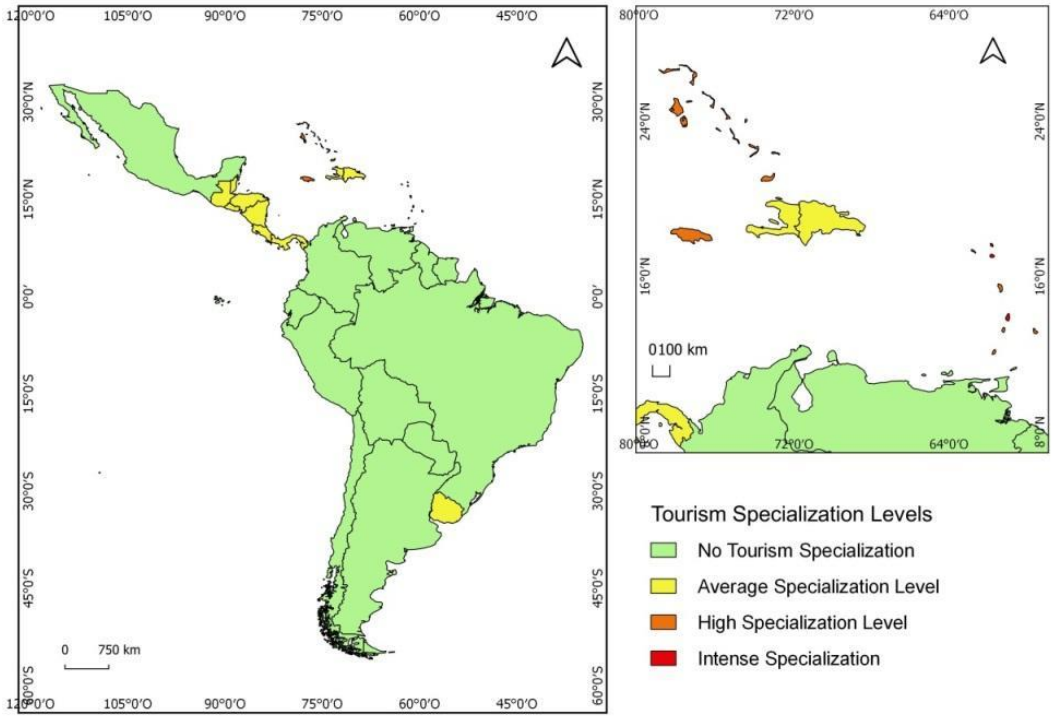
According to TSIc, countries are divided into two groups, CNST and CST. Except for Trinidad and Tobago and Uruguay, the first group includes Mexico plus southern continental countries, and the second contains Central American nations and the islands of the Caribbean Sea. Specifically, CNST comprises 14 countries: Guatemala, Guyana, Trinidad and Tobago, Peru, Bolivia, Suriname, Colombia, Argentina, Mexico, Ecuador, Chile, Paraguay, Brazil, and Venezuela. CST is composed of 18 nations: Antigua and Barbuda, St. Lucia, The Bahamas, Barbados, Grenada, St. Vincent and the Grenadines, St. Kitts and Nevis, Dominica, Jamaica, Belize, Dominican Republic, Haiti, Costa Rica, Panama, Uruguay, El Salvador, Honduras, and Nicaragua. Figure 1 ranks the countries according to their TSCc value, and Figure 2 illustrates the sample.

Figure 1. Corrected Tourism Specialization Index. Latin America and the Caribbean. Average 1995-2016



Source: Own elaboration from the WTO (2019)

Figure 2. Tourism Specialization Level according to TSIc. Latin America and the Caribbean. Average 1995-2016



Source: Own elaboration from the WTO (2019) with QGis 3.4.13

In order to describe the data set and, particularly, to differentiate both groups of countries, some basic statistics are first analyzed. Then, more details of the most relevant variables are provided.

Table 1 presents some basic statistics for both CNST and CST. In absolute terms, CNST received on average three and a half times more foreign tourists than CST during the analyzed period. However, they also have on average eight times more WHSs. Then, in relative terms, while CNST attract more than 400,000 foreign tourists per WHS, over 900,000 per WHS visit CST.

Table 1. Variable Basic Statistics. Countries specialized in tourism and countries not specialized in tourism. Latin America and the Caribbean. 1995-2019.

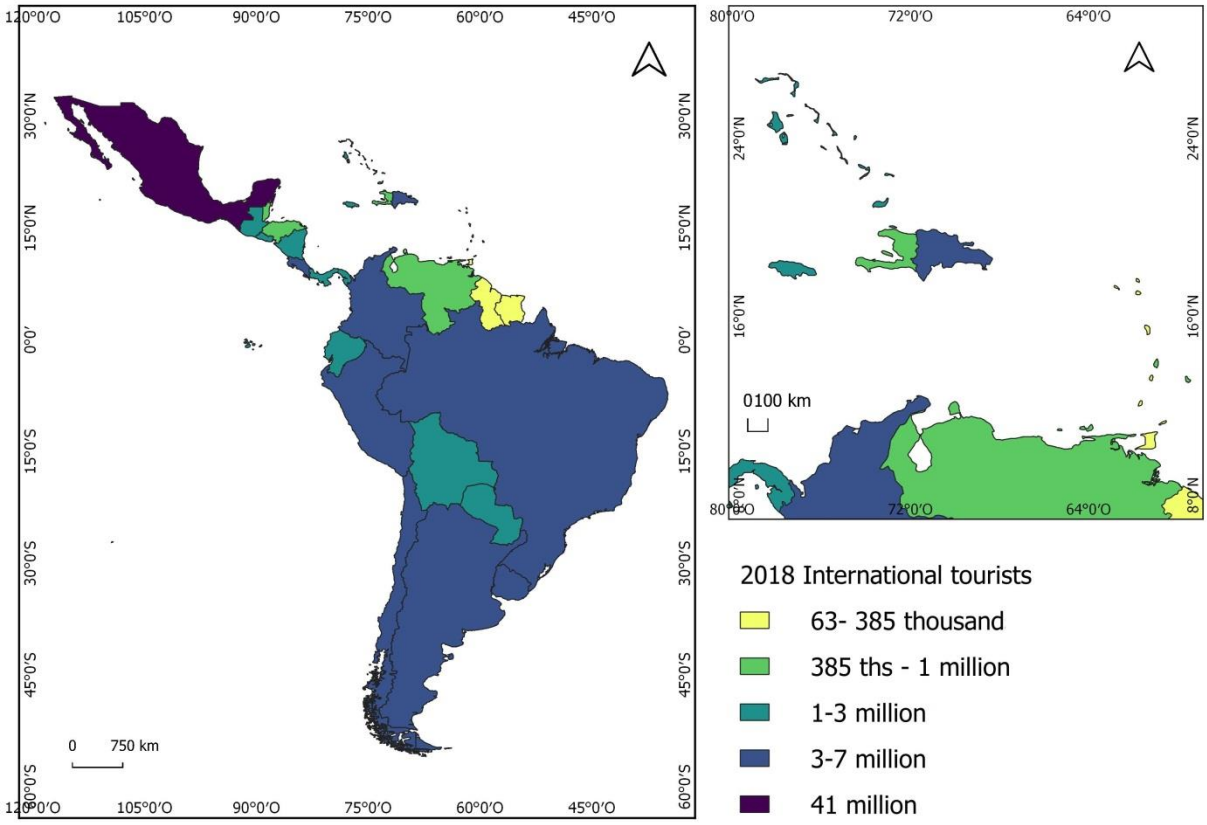
Variable	Observations		Mean		SD		Min		Max	
	CNST	CST	CNST	CST	CNST	CST	CNST	CST	CNST	CST
ATUR	322	431	3 316 795	927 100	6 416 569	1 068 247	43 000	58 000	41 300 000	6 569 000
WHS	350	450	8	1	9	1	0	0	45	7
THS	350	450	7	1	7	1	0	0	35	5
ICH	350	450	1	0	2	1	0	0	10	3
GDPpc	325	450	13 318	13 455	5 884	8 364	5 050	2 579	29 571	41 372
HEA	266	342	6	6	1	1	3	4	10	11
EXC	259	341	1 293	34	4 228	96	0	1	25 000	573

Source: Own elaboration from UNESCO (2020), the World Bank (2020), and the WTO (2019)

Regarding the main variables of the analysis, ATUR and WHS, THS and ICH are characterized in terms of CNST and CST. On the one hand, whether international tourists prefer CNST or CST in absolute terms is not clear. In 2018, Mexico (CNST) was by farthe most preferred destination with over 41 million of international tourists. It was followed by other major CNST (Argentina, Brazil, Chile, Peru, and Colombia) and some CST (Dominican Republic, Uruguay, and Costa Rica) with between 3 and 7 million of international arrivals. A third group is also composed of both CNST (Ecuador, Paraguay, and Bolivia) and CST (Jamaica, Panama, Guatemala, El Salvador, The Bahamas, and Nicaragua) with between 1 and 3 million of international arrivals. Finally, with less than a million foreign tourists, the least preferred destinations were also mixed (Honduras*, Barbados, Belize, Haiti, Venezuela*, St. Lucia, Trinidad and Tobago, Guyana, Suriname*, Antigua and Barbuda, Grenada, St. Kitts and Nevis, St. Vincent and the Grenadines, and Dominica)[4]. Figure 3 illustrates this analysis.

[4] The 2018 World Bank data for countries marked with * is not available; therefore, the 2017 World Bank data was used.

Figure 3. Arrivals of international tourists. Latin America and the Caribbean. 2018.

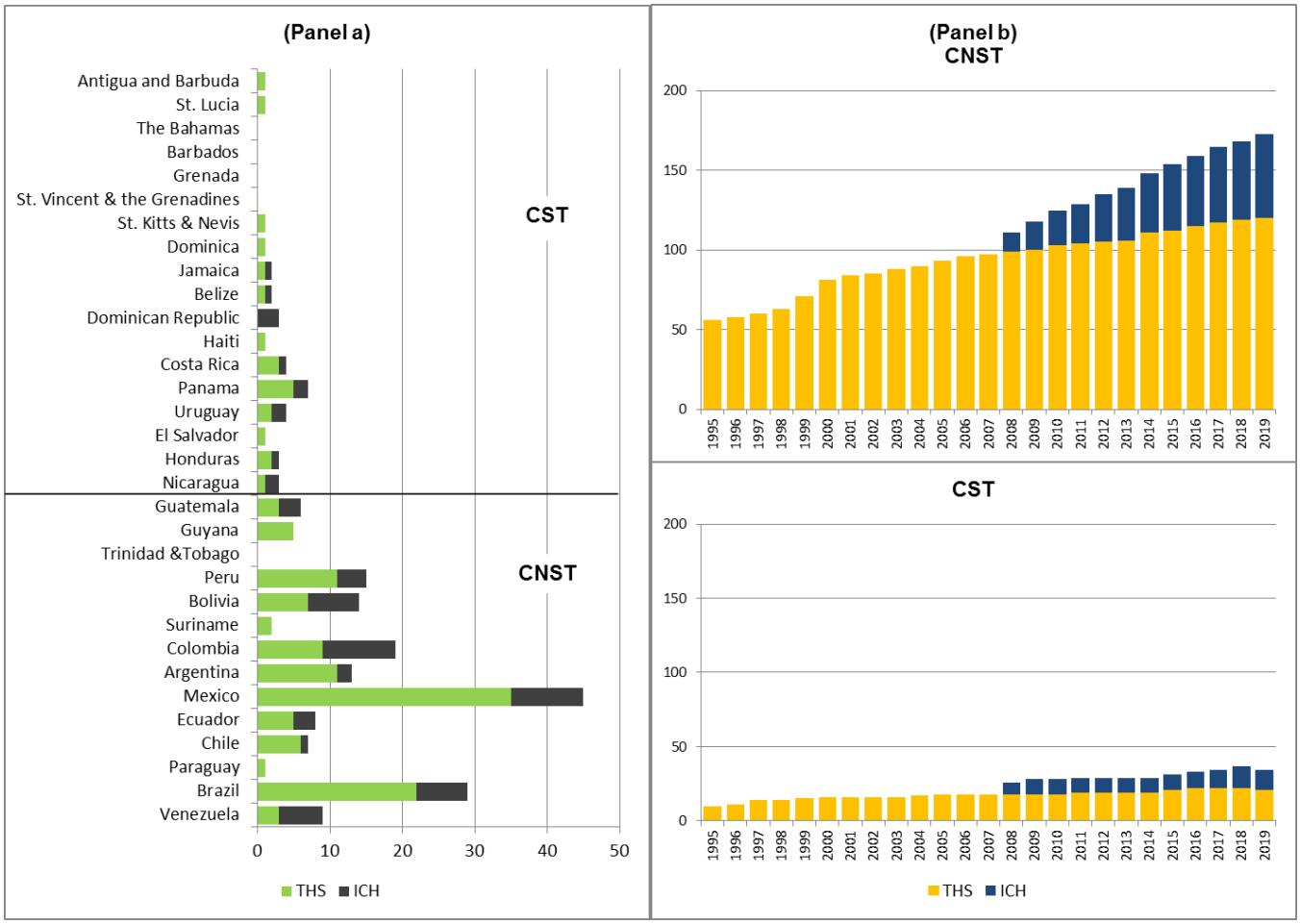


Source: Own elaboration from the World Bank (2020) with QGis 3.4.13

On the other hand, almost in every CNST there are more WHSs than in CST[5]. The exceptions are Panama, Trinidad and Tobago, Suriname, and Paraguay (Figure 4, panel a). WHSs more than duplicated in both groups of countries, however, on average, in the period 1995-2019, CNST have more WHSs than CST (110 versus 23). This trend is much more evident since 2008, when ICH started to be included in the WHL. In relation to the category of sites, in 2019, 31% corresponds to the tangible category in CNST, while, in the other group, this figure is greater: 38% (Figure 4, panel b).

[5] It is worth noting that there are five member states that do not possess any WHS: Guyana, Trinidad and Tobago, The Bahamas, Grenada, and St. Vincent and the Grenadines.

Figure 4. World Heritage Site in countries specialized in tourism and countries not specialized in tourism. Latin America and the Caribbean. 2019.



Source: Own elaboration from UNESCO (2020)

5. Results and discussion

With p-values associated to every chi^2 statistic equal to 0.000, the Breusch-Pagan test confirms that the four models of international tourism demand should be estimated by a panel data technique. The Hausman test indicates that the data is better adjusted by RE models when model 1 is estimated and by FE when model 2 is calculated (Table 2). Table 3 shows the results of the corresponding estimations for each group of countries.

Table 2. Hausman Test

	CST		CNST	
	Model 1	Model 2	Model 1	Model 2
Chi^2	5.14	24.62	-5.11	30.36
p-value	0.2729	0.0002		0.000

Source: Own elaboration

Table 3. Estimated results of international tourist arrivals (Random Effects Model). Latin America and the Caribbean. 1995-2018.

	Model (1)		Model (2)	
	CNST	CST	CNST	CST
WHS	188 902***	214 140***		
THS			289 853***	59 898
ICH			70 655**	230 392***
GDPpc	108***	69***	109***	76***
HEA	175 544**	5 075	212 499**	3900
EXC	8	3 337***	112	3 191***
_cons	-837 392	-442 026	-1 813 197**	-374 012**
R^2 within R^2 between R^2 overall	0.5896 0.7953 0.7548	0.7039 0.0840 0.1088	0.6205 0.7726 0.7835	0.7163 0.0926 0.1198
p> Wall chi^2 / F test	0.000	0.000	0.000	0.000
Rho	0.96	0.98	0.98	0.98
Observations	168	251	168	251

* p-value<0.1; ** p-value<0.05; *** p-value<0.001

Source: Own elaboration from UNESCO, the World Bank, and the WTO.

In general, the models fit the data well. According to the Wald or the F tests, as appropriate, the independent variables are jointly significant in explaining the arrival of international tourists to LAC. Similarly, /conforming to the Rho coefficient, more than 95% of the variability of the dependent variable is due to country differences. Overall R^2 results are high for CNST. That is not the case for CST; however, CST within R^2 is greater than 0.7. Hence, more than 70% of the variance of ATUR can be explained by the variance of the regressors.

The first finding to highlight is, as expected, that WHS is significantly positive in explaining the arrival of international tourists in both CNST and CST. The marginal effect of incorporating a new WHS on tourist arrivals is greater in CST than in CNST. Adding one WHS would, on

average, raise the number of international tourist arrivals in CNST by almost 190,000 in just one year, after controlling for other variables. On the other hand, the increase in this figure in CST would be approximately 215,000. Moreover, the GDPpc variable is significantly positive in both cases, with a stronger effect for CST than for CNST. HEA and EXR have the expected sign, but they are not significant in every case. This is probably explained by the existence of multicollinearity[6].

Subsequently, regressions were conducted to differentiate the effect on the flow of tourists when adding a THS or an ICH to the list (model 2). Results are similar for CNST, but not for CST. In the case of the former, THS and ICH have a significant positive effect on ATUR. However, the effect of tangible sites is more than four times greater than that of intangible elements. Thus, a CNST that obtains a declaration for a THS would increase international arrivals by approximately 290,000 tourists a year, but only by 71,000 if it adds an ICH. On the contrary, for CST, only ICH is significantly positive. Incorporating a new intangible element raises international tourism by approximately 230,000 visitors per year. The significance and signs of the control variables are like model 1 for each group of countries.

In sum, three main results were found. First, WHS has significant positive effects on international tourist arrivals in both groups of countries, when considering tangible and intangible sites together. This result is in line with Shackley (1998), Buckley (2004), Reinius and Fredman (2007), Yang et al. (2010), Tucker and Emge (2010), Su and Lin (2014), Roh et al. (2015), Porto et al. (2017), and Leonardi et al. (2018), among others. In this sense, the efforts of countries to add a new site to the WHL could be more than compensated by a greater flow of international tourism, which in turn could generate an increase in GDP[7].

Second, the magnitude of this effect differs among countries, being much higher for CST than for CNST. The reason might be that CNST have on average more WHSs than CST; thus, adding a new site to the WHL has a smaller effect on international tourism.

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6 The correlation coefficient between HEA and GDPpc is positive (0.3) and highly significant in the case of CNST and negative (-0.2) and highly significant in the case of CST.

7 The literature recognizes the positive effects of tourism on the economic growth and development of welcoming countries, as tourist expenditures fosters both directly the economic activity of the visited places and indirectly the demand of connected economic sectors. In this sense, tourism encourages employment and GDP, and, when considering international tourism, it also improves the balance of payments (Almirón, Bertoncello, & Kuper, 2008; Brida, Lanzilotta, & Risso, 2008; Brida, Monterubbianesi, & Zapata-Aguirre, 2011; Brida, Pereyra, Pulina, & Such Devesa, 2013; Cuadrado Roura & López Morales, 2015; and Rodríguez Brindis, 2015).

The third result, and maybe the most interesting, emerges when analyzing tangible and intangible sites separately among the groups of countries. We found that tangible sites are relevant to CNST, but this is not the case for intangible elements, which are significant to CST. This confirms the hypothesis of the research based on the explanation of Roh et al. (2015) about the reduction of information asymmetry. As stated above, the authors suggested that the impact of intangible heritage is greater than that of tangible ones, since the inscription on the UNESCO intangible heritage list decreases information asymmetry. The extent of information asymmetry is higher for intangible assets than for tangible ones, because the former is country-specific, culture-related, and not visible. Therefore, their declaration as ICH guarantees their value and helps to promote them all over the world.

Moreover, this result is also founded on the type of tourism that is carried out in CST. In these countries, tourism is mostly nature-based, while that concerning culture is less developed; thus, adding one more ICH would have a relatively greater impact on tourism demand. According to Sánchez Crispín and Propín Frejomil (2010), although most international tourists traveling to Central American nations are interested in their culture, in reality, when deciding where to travel, they are much more motivated by the natural settings they expect to find. For example, lush tropical forests in Costa Rica; active volcanoes in Guatemala, Nicaragua, and Costa Rica; lakes in Guatemala and Nicaragua; idyllic beaches, such as Belizean, Honduran, Costa Rican, and Panamanians; milder climates, both tropical and temperate, in parts of Costa Rica and Panama, and exotic flora and fauna as in Costa Rica. The same argument could be extended to the Caribbean Islands, where the diversity of natural landscapes and wildlife are fundamental to sustain tourism. Therefore, new intangible heritage might generate a differentiation by increasing the attractiveness of the destinations, and this effect would be stronger in the countries of Central America and the Caribbean than in the continental ones because of the law of diminishing returns. As ICH are relatively scarcer in the former than in the latter region, the addition of one more site to the WHL would have a greater impact on international tourist arrivals in those smaller economies than in the larger ones.

6. Final reflections

In this work, we tried to shed more light into the relationship between tourism and the nomination of a WHS, both tangible and intangible, for LAC countries. Furthermore, we

investigated if that relationship varies according to the tourism specialization level of the destinations.

We found that there is indeed a direct relationship between the variables of interest and that it is much stronger for CST than for CNST. This indicates that for larger economies, where tourism is a relatively small sector of the local economy, the number of WHSs might be less important to foreign tourists. On the contrary, this figure is more significant for smaller CST. This may be related to the number of WHSs they possess. As CNST have on average more WHSs than CST, then adding a new site to the WHL has a smaller effect on international tourism.

A further contribution of this paper focuses on the type of heritage. We analyzed whether different types of WHS have diverse effects among the groups of countries. Indeed, we evidenced that only ICH has a positive impact on international tourism for CST, while it barely affects foreign tourism demand in CNST. On the contrary, THS has significant positive effects on the demand of the latter group. This could be explained by the reduction of information asymmetries around intangible assets (Roh et al., 2015). These assets are more prone to experience information asymmetries, plus they are newer in the WHL and, therefore, less known by international travelers; hence, the UNESCO recognition could booststhem. In agreement with Sánchez Crispín & Propín Frejomil (2010), the incorporation of an intangible site in CST could be relevant, since, in these countries, tourism is nature-based, and the islands and beaches are essential for the promotion of tourism in Central America and the Caribbean, with its diversity of natural landscapes and wildlife being the fundamental support for tourism. Thus, this incorporation might generate a differentiation and increase the attractiveness of the destination.

The results of this research have important implications on economic policies. Countries could foster international tourism and, in consequence, economic growth by increasing the number of WHSs they possess. However, they should consider the type of WHS they try to add to the WHL. CNST should allocate more resources to boost THS, and CST, to promote ICH.

Nevertheless, this article has some limitations that may require to deepen the study. On the one hand, only 32 countries comprise the data set. According to the World Bank, the LAC region is composed of 42 countries, but, due to data availability regarding control variables, the following nations were not considered for the analysis: Aruba, Cuba, Curaçao, the Cayman Islands, the

Turks and Caicos Islands, the US Virgin Islands, the British Virgin Islands, Puerto Rico, St. Martin (France), and St. Martin (Netherlands). Finding new sources of information or adding new control variables that enable considering the whole region could be key to deepening the investigation. In addition, expanding the sample to compare the results with other developing regions of the world could enrich the research. Another limitation is related to the specialization index. As calculated, it varies from year to year; consequently, a country could be a CNST in a particular period, but a CST in another. To simplify the analysis, we considered the average value to classify the sample; nevertheless, future studies could address this issue. Finally, taking into account the moment when WHSs were incorporated into the WHL could provide new insights.

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