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## Smart Tourism Destination: Urban versus Rural Technological Behaviours

### *Destinos Turísticos Inteligentes: Comportamientos tecnológicos urbanos versus rurales*

F. Javier de la Ballina Ballina<sup>1\*</sup>

Luis Valdés Pélaez<sup>2</sup>

Eduardo del Valle Tuero<sup>3</sup>

#### Abstract

The tourism paradigm has changed with technology. ICTs have altered the entire tourist travel model: before buying, during its realization, and after completion. The current trend is to generate business and tourist destinations based on technological criteria. The first objective is always to guarantee maximum tourist connectivity with the new ICT applications. Neither the academic literature nor the businessmen consider the existence of tourist experiences outside the ICTs. This paper aims to determine from a market segmentation which attributes, or services, are more critical to differentiate types of tourists based on their behavior and use of ICTs. The differences between tourism that goes to a city destination versus a rural destination have been studied, analyzing the relationships between technological applications, social networks, and its use in the destination by the tourist. It has been possible to determine indicators based on the strategic segmentation of tourist experiences from the use and availability of information technologies. To this end, the data obtained through two studies carried out within the framework of the CSO2014-59193-R project have been used.

**Keywords:** Tourism, Smart Tourism Destination, Rural and Urban Destinations, Segmentation, ICTs.

#### Resumen

El paradigma del turismo ha cambiado con la tecnología. Las TIC han alterado todo el modelo de viaje turístico: antes de comprar, durante su realización y después de su finalización. La tendencia actual es generar destinos comerciales y turísticos basados en criterios tecnológicos. El primer objetivo siempre es garantizar la máxima conectividad turística con las nuevas aplicaciones TIC. Ni la literatura académica ni los empresarios consideran la existencia de experiencias turísticas fuera de las TIC. Este documento tiene como objetivo determinar a partir de una segmentación del mercado qué atributos o servicios son más críticos para diferenciar los tipos de turistas en función de su comportamiento y uso de las TIC. Se han estudiado las diferencias entre el turismo que se dirige a un destino de la ciudad frente a un destino rural, analizando las relaciones entre las aplicaciones tecnológicas, las redes sociales y su uso en el destino por parte del turista. Ha sido posible determinar indicadores basados en la

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<sup>1</sup> Senior Lecturer in Marketing, University of Oviedo, Spain, [fballina@uniovi.es](mailto:fballina@uniovi.es). <https://orcid.org/0000-0001-7553-1066>

<sup>2</sup> Senior Lecturer in Economics, University of Oviedo, [lvaldes@uniovi.es](mailto:lvaldes@uniovi.es)

<sup>3</sup> Assistant Professor in Marketing, University of Oviedo, [delvalleeduardo@uniovi.es](mailto:delvalleeduardo@uniovi.es)

segmentación estratégica de las experiencias turísticas a partir del uso y la disponibilidad de tecnologías de la información. Para este fin, se han utilizado los datos obtenidos a través de dos estudios realizados en el marco del proyecto CSO2014-59193-R.

**Palabras clave:** Turismo, Destinos Turísticos Inteligentes, Destinos Urbanos y -Rurales, Segmentación, TICs.

## 1. Introduction

Nowadays concepts and terms such as “e-tourism”, “connected” tourist, “social” tourist, “prosumer”, “ewom”, “e-commerce”, “tourist apps”, “geo-location” or all those concepts related to intelligence or “smart”: “smart cities”, “Smart destination”, “wired cities”, “smart destinations” have become benchmarks in the study, planning, and management of destinations, as well as in business tourism (Ukpabi and Karjaluoto, 2017).

According to most researchers, two factors stand out as the main drivers of change in the tourism sector: on the one hand, the globalization of markets and the emergence of multiple new tourist destinations (Guevara, 2015; Ho and Lee, 2007, Parra and Santana, 2014); On the other hand, the social implementation of mobile technology (Buhalis, 1998; Camisón, 1995; Cho and Connolly, 1996, Stamboulis and Skayannis, 2003; among others). Both factors are revolutionizing the traditional mechanisms of tourism supply and demand management (Buhalis and Law, 2008; Pesonen, 2013).

Studying ICTs in terms of competitiveness and costs is very reductionist in tourism (Kim et al., 2009). The use of technologies does not end in the specific field of e-commerce, marketing of products, accommodation, and tourist destinations (Ruiz-Molina et al., 2011; Ruiz et al., 2013). From the different needs and approaches used in tourism development and planning (Dredge and Jamal, 2015; Saarinen et al., 2017, Vera and López, 2011, among others) as well as in the framework of sustainable planning (Hall, 2011; Moscardo, 2011; Moscardo and Murphy, 2014; Perles-Ribes et al., 2017) technologies play an essential role for the innovation of companies and organizations, on all in the case of tourism, due to the interactions between consumer and producer (Hjalager, 2010).

ICTs, through interactions between stakeholders and tourists, create a new tourist ecosystem of digital type. A Smart Tourist Ecosystem (Gretzel et al., 2015) that integrates the concepts of smart technologies, smart cities, and smart tourism. And that is related to the models of planning and management of destinations (Hollands 2008; Deakin and Al Waer, 2011; Mora, Bolicic and Deakin, 2017), because it allows: to share knowledge and interact in a coordinated way (Baggio and Chiappa 2014; Benckendorf et al., 2014; Gretzel, 2011). The objective will be to balance competitiveness with social and environmental sustainability (Komminos, 2015; Luque et al., 2017).

Concretely, social technologies and applications have altered the behavior of tourists at all stages of the tourist trip: from the previous search for information about the destination, accommodation, activities carried out during the trip, even in the way of sharing the experience on their return, and all of them have implications for both demand and tourism supply, altering both the production and marketing stages (Ruiz-Molina et al., 2013, Santos et al., 2016; Sirirak et al., 2011; Stamboulis and Skayannis, 2003; Ukpabi and Karjaluoto, 2016; Wang and Qualls 2007; Tsai et al., 2005) and narrowing them genuinely: information flows and converges throughout the process, up and down; the promotion is altered in its aims, and its means at the expense of the search for the virability of the experiences; the usability of the destination and its services multiplies the role of inseparability of the tourist. In short, those traditional characteristics

of complexity and variability are likely to be handled with greater ease and reliability in an intelligent, interconnected, and real-time technology environment (Berné et al., 2013).

Therefore, the trend is towards the start-up of businesses, companies and services that allow configuring destinations that take advantage of the effect of the technology network to improve their productivity (Bilgiham, 2012; Dipietro and Wang, 2010) and sustainability by offering new approaches to added value to the experiences of tourists (Cooper, 2016). The widespread acceptance of the commitment to universal tourist connectivity and the maximization of technological utilities for it may not be so real and should be relativized from a tourism segmentation perspective (Dolnicar, 2002; Weinstein, 2011).

That is, we start from the hypothesis that not all tourists may have the need to be connected, to be measured and to be in all applications, and even the level of use of technology is defined by the destination itself, the capabilities of the same and the needs at each moment of the visitor depending on the place where he is. Thus, this work aims to determine the elements, attributes and / or services that are critical for different types of tourists applying segmentation techniques in the tourism market, what they identify based on their relationships and the use of technologies and Applications.

Therefore, in an environment with a higher weight and participation of tourists favored by mobile technologies (4G networks, Wi-Fi), segmentation takes on an even more relevant strategic role since not all types of tourists, or all types of experiences, or All types of destinations, the technological activity of the tourist will be the same, moreover, this will be changing for the same individual who will use and demand specific technological applications on different trips, or even at different times of the same trip.

In turn, it is necessary to analyze technological usability, not as a dichotomous issue: if it is used or not used in tourism activity, but as a structured element depending on the different types of applications, utilities and use of social networks (Albacete, 2012) according to every kind of tourist experience demanded by the tourist.

For this purpose and especially in order to make exciting contributions to the management of the destinations, the results obtained in two studies carried out within the framework of the CSO2014-59193-R project have been analyzed and the differences between a city destination have been analyzed whose tourist responds to different motivations in front of a rural destination where the holiday and rural aspect predominates, studying the relationships between technological applications, social networks and their use in the destination by the tourist.

For the realization of this work, the data obtained, through personal surveys of tourists, in two Asturian municipalities: Gijón (Urban) and Taramundi (Rural) are used. The first one, has an urban destiny character, which will allow operating with information on technological utilities for a particular and determined experiences: city, cultural, gastronomic, beach and nautical activities tourism as well as business tourism and professional reasons (Valdés, 2011) and that as an urban destination it is working continuously and dynamically in different programs of smart cities, Biosphere certifications, etc. In the case of rural tourism, Taramundi (R) is considered the beginning of rural tourism in Spain and a reference model in the study in the literature (Bote, 1992; Fuentes et al., 1999; Valdés and Del Valle, 2003; Vera et al., 1997).

In a rural environment context, where technology can also play an integrated role (Irvine and Anderson, 2008), it must be considered that in recent years, studies carried out by rural tourism operators in Spain through the web as Top Rural, Rural Getaway (Observatory of Rural Tourism-CETT) or Clubrural (Barometer of Rural Tourism-Nebrija University) warn that the internet has positioned itself as the first means when looking for accommodation and in the case of rural housing, with figures above 95 % in recent years. On the other hand, it is no stranger to

different problems, since the implementation of websites and their contents regarding the capacities of rural tourism entrepreneurs (Nieto et al., 2011). However, rural accommodation should consider the use of ICTs, in the search for those variables that allow improving online shopping systems (San Martín and Herrero, 2012; Polo and Frías, 2010) and determine the most appropriate distribution channel (Calderón et al., 2007; Nieto et al., 2011).

In short, the objective and the plot of this work is to develop a tourism market segmentation scheme based on the different types of technological utilities in the destination and their usability by tourists. A Discriminant Analysis will be carried out concerning the territorial destinations considered: Gijón (U) and Taramundi (R). Both will operate as dependent (typical) variables while technological utilities will do so as independent variables. This will substantially differentiate between the demands of technological services in one or another destination and raise a hierarchy of technological priorities for the management of each of them. A second analysis of the use of ICTs by tourists will be approached from logistic regression. Finally, the third topic of the study will be the eWOM effect in the two destinations.

All this will allow us to present some clues as to the usefulness of the strategic segmentation of tourist experiences from the utilities of information technologies, such as anticipating some results to improve the management of types of intelligent tourist destinations, assuming the need to contemplate its differentiation, not only in terms of public capacity and tourism supply, but, and above all, depending on tourism demand.

## 2. Methodology

In order to deepen the question of the role of new technologies in the experience and experience of the tourist, a part of the database of smart tourist destinations (STD) project carried out in two Asturian municipalities has been selected: Taramundi (R), as an exponent of a destination of rural tourism and Gijón (U), as a reference of urban, city, cultural, as well as coast and beach tourism.

The information refers to data provided by tourists, exclusively holiday-type, and all of them of the medium and low season type, through a personal survey. The technical characteristics of the fieldwork are presented in the datasheet (see table 1).

Table 1: Methodology Table

<b>Population and Sample Unit</b>	Vacation Tourists
<b>Area</b>	Councils of Taramundi (R) and Gijón (U)
<b>Date of Work</b>	October to December 2016 Mid and the low season
<b>Method of Information Collection</b>	Personal survey carried out in hotel establishments
<b>Sampling Procedure</b>	Discretionary
<b>Number of Surveys</b>	492
<b>Sample Distribution</b>	Proportional to the number of hotel beds: Taramundi (R) = 115 Gijón (U) = 377
<b>Sampling Conditions</b>	Z at 95%, P = Q = 0.5
<b>Sample Error</b>	+/- 4.35%

The analysis of the data obtained has focused on issues related to the use of communication technologies, in the form of four conceptual topics, integrators of different variables (see table 2).

Table 2: Concept topics and their variables.

TOPICS	VARIABLES	SCALE
<b>Technology and Travel</b>	<ul style="list-style-type: none"> <li>▪ What I see on social networks influences my opinion about a tourist destination</li> <li>▪ Technologies help me have a more satisfying experience as a tourist</li> <li>▪ Technologies are a fundamental part of my travels</li> <li>▪ Technologies are a useful tool in my travels</li> <li>▪ I worry that a company can register and save my activity in my tourist destination</li> <li>▪ I would let tourism companies obtain my data through the internet in exchange for offers, discounts or personalized services</li> <li>▪ I valued positively that my destiny tries to innovate and use technologies to improve my experience as a tourist</li> <li>▪ I trust what other tourists think of portals such as TripAdvisor or Booking</li> <li>▪ This destination is innovative, always proposes new experiences to the Likert tourist</li> </ul>	Likert (1 to 5)
<b>Tourist Experience</b>	<ul style="list-style-type: none"> <li>▪ Travel with Smartphone</li> <li>▪ Travel with Tablet</li> <li>▪ Travel with Notebook</li> <li>▪ Travel with Wearables</li> </ul>	Nominal (Yes/Not)
	<ul style="list-style-type: none"> <li>▪ To find general information about the destination</li> <li>▪ For reservations activities</li> <li>▪ To seek opinions or criticisms about specific businesses</li> <li>▪ To seek opinions or criticisms about attractions and specific places</li> <li>▪ To take photos and videos</li> <li>▪ To consult maps or use GPS</li> <li>▪ To share my experiences on social networks</li> <li>▪ To talk with my family and friends</li> <li>▪ To pay</li> <li>▪ To use apps from the destination</li> </ul>	Nominal (Yes/Not)
	<ul style="list-style-type: none"> <li>▪ Touch screens in tourist offices or on the streets of the destination</li> <li>▪ Official accounts of the destination on social networks</li> <li>▪ Official website of the destination in several languages, with videos, photos, possibility of booking activities</li> <li>▪ Online assistance from the Tourist Office (phone, chat, Skype)</li> <li>▪ QR codes</li> <li>▪ Free public Wi-Fi</li> <li>▪ Free Wi-Fi in the destination companies</li> <li>▪ Official destination apps for Smartphone or Tablet</li> <li>▪ Audio guides</li> <li>▪ Video guides</li> <li>▪ Online reservations on the destination website</li> <li>▪ Payment via mobile</li> <li>▪ Multipurpose tourist card (transport, museums)</li> </ul>	Nominal (Yes/Not) and posterior Likert (1 to 5)
<b>Sharing</b>	<ul style="list-style-type: none"> <li>▪ You plan to share your experience through Internet</li> </ul>	Nominal (Yes/Not)
	<ul style="list-style-type: none"> <li>▪ On Facebook</li> <li>▪ On Twitter</li> <li>▪ On Instagram</li> <li>▪ On You Tube</li> <li>▪ On Twenty</li> <li>▪ On Snapchat</li> <li>▪ On WhatsApp</li> <li>▪ On TripAdvisor</li> <li>▪ On Telegram</li> <li>▪ On Booking</li> <li>▪ On Pinterest</li> <li>▪ On Periscope</li> <li>▪ On Flickr</li> </ul>	Nominal (Yes/Not)

The first topic of the study refers to general opinions about technologies and tourist trips. It is made up of nine measured inputs, in the questionnaire, as variables in the Likert scale of

importance (from 1-minimum to 5-maximum). In the second topic, three types of issues are integrated, on the one hand, with what kinds of technological devices it travels, secondly, what type of tourist uses it makes and, thirdly, the use, if any, and valuation of the utility, where appropriate, of different technological services available to tourist destinations. The first two sets of variables are of nominal type, that is, Yes or No, in the third set there is a double scale, first nominal, yes or no, and having answered that if the corresponding valuation of the technology on a Likert scale (1-minimum to 5-maximum). Finally, in the third topic, the theme of tourism eWOM is raised, raising, at first, if tourists “speak” on the internet of their tourist experiences, and where appropriate, in which, if social networks and / or of types micro specialized web blogs. All the variables in this topic are nominal (with yes or no answers).

Since the objective has been to examine the specific characteristics, in technological terms, of tourists from a rural and small destination, bivariate statistical techniques, either direct or segmented the database, have been used at all times, by comparison against a large and more powerful destination in size and resources, such as Gijón (U).

### 3. Results

The technology obtains high utility ratings among tourists of the rural destination, not only measured in the value of the average but even by comparison concerning the traditional holiday destination. Specifically, in six of the eight items, the value of the average value is higher in the case of Taramundi (R) than in that of Gijón (U). Also, the items with the lowest scores, in both types of destinations, are those related to the privacy of tourists: let them obtain personal data of the technologies and worry about their use, and, even in these, the Rural has lower values (table 3).

Table 3: Average values by STD in Technology.

	Council STD	Average
What I see on social networks influences my opinion about a tourist destination.	Taramundi (R)	3.73
	Gijón (U)	3.40
Technologies help me have a more satisfying experience as a tourist.	Taramundi (R)	4.08
	Gijón (U)	3.78
Technologies are a fundamental part of my travels.	Taramundi (R)	3.88
	Gijón (U)	3.65
Technologies are a useful tool in my travels.	Taramundi (R)	4.37
	Gijón (U)	4.06
I worry that a company can register and save my activity in my tourist destination.	Taramundi (R)	3.48
	Gijón (U)	3.32
I would let tourism companies obtain my data through the internet in exchange for offers, discounts or personalized services.	Taramundi (R)	2.53
	Gijón (U)	2.74
I valued positively that my destiny tries to innovate and use technologies to improve my experience as a tourist.	Taramundi (R)	3.92
	Gijón (U)	4.09
I trust what other tourists think of portals such as TripAdvisor or Booking.	Taramundi (R)	3.59
	Gijón (U)	3.40
This destination is innovative, always proposes new experiences to the Likert tourist.	Taramundi (R)	3.37
	Gijón (U)	3.40

With an inferential analysis of means of the two STD, significant differences have been evidenced in five of the items in favor of Taramundi (R): technology as a useful tool, as a factor of satisfactory experiences, as a primary element in the trip and as a source of information in networks social (in addition, these four items are significantly correlated) and, fifthly, also the item of trust in the eWOM of the TripAdvisor and Booking microblogs. The tests used, for this, have also included the statistic of the Wilks lambda, to anticipate the

development of a possible discriminant analysis that facilitates a better classification of technologies among destinations (see table 4).

Table 4: T-test of mean differences between STD in Technology.

	Wilks Lambda	F	Sig.
<b>What I see on social networks influences my opinion about a tourist destination</b>	<b>.986</b>	<b>6.303</b>	<b>.012</b>
<b>Technologies help me have a more satisfying experience as a tourist</b>	<b>.981</b>	<b>8.458</b>	<b>.004</b>
<b>Technologies are a fundamental part of my travels</b>	<b>.986</b>	<b>6.168</b>	<b>.013</b>
<b>Technologies are a useful tool in my travels</b>	<b>.979</b>	<b>9.691</b>	<b>.002</b>
I worry that a company can register and save my activity in my tourist destination	.999	.279	.597
I would let tourism companies obtain my data through the internet in exchange for offers, discounts or personalized services	.997	1.280	.259
I valued positively that my destiny tries to innovate and use technologies to improve my experience as a tourist	.996	1.756	.186
<b>I trust what other tourists think of portals such as TripAdvisor or Booking</b>	<b>.987</b>	<b>5.811</b>	<b>.016</b>
This destination is innovative, always proposes new experiences to the Likert tourist	1.000	.062	.804

The discriminant analysis performed is of a simple type, distinguishing the two options of destinations: Taramundi (R) and Gijón (U), and using as discriminant variables the ones related to the valuations (Likert) of the different opinions on travel technologies.

The realization of it by the method of the steps (see table 5) determines two highly significant discriminant variables: the first (step 1) with a lambda value of 0.996 is the item “technologies are a useful tool in my travels”, with a significance for the F-test of .002; the second is the item “I value positively that my destiny tries to innovate and use technologies to improve my experience as a tourist”, with a lambda value of 0.979 and significant with the F-test at .000.

Table 5: Discriminant Analysis between STD in Technology.

Variables in the analysis									
Step		Tolerance	F to remove	Wilks Lambda					
1	Technologies are a useful tool in my travels	1.000	9.691						
2	Technologies are a useful tool in my travels	.872	14.676	.996					
	I appreciate, positively, that my destiny tries to innovate and use technologies to improve my experience as a tourist	.872	6.673	.979					
Wilks Lambda									
Step	Number of variables	Lambda	g1	g2	g3	F exact			
						Statistic	g1	g2	Sig.
1	1	.979	1	1	447	9.691	1	447.000	.002
2	2	.964	2	1	447	8.243	2	446.000	.000
Eigenvalues									
Function	Eigenvalue	% of variance	% accumulated	Canonical correlation					
1	.051 <sup>a</sup>	100.0	100.0	.220					
a. The first 1 canonical discriminant functions were used in the analysis.									
Wilks Lambda									
Functions test	Wilks Lambda	Chi-Squared	g1	Sig.					
1	.951	22.177	3	.000					
Matrix of structures									
									Function
									1
Technologies are a useful tool in my travels.									.652
Technologies help me have a more satisfying experience as a tourist.									.419
Technologies are a fundamental part of my travels.									.333
What I see on social media influences my opinion about a tourist destination.									.294

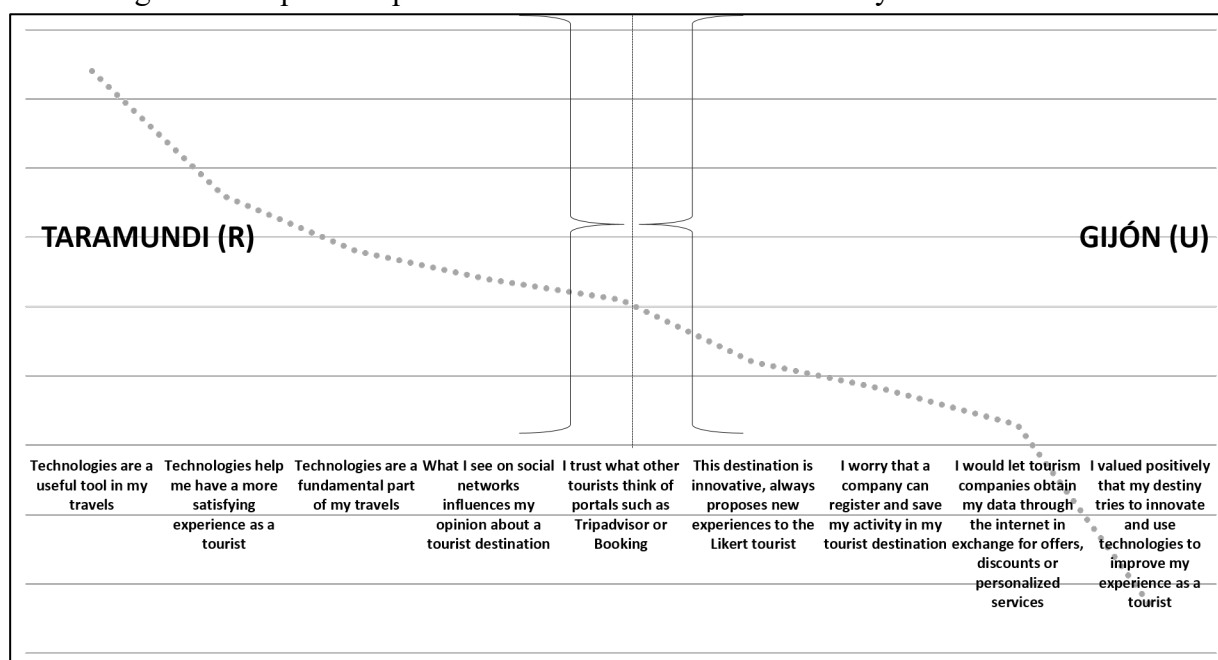
I trust what other tourists think of portals such as TripAdvisor or Booking.	.243
This destination (in which you are) is innovative. Always proposes new experiences to the tourist.	.213
I worry that a company can register and save my activity in my tourist destination (the places I visit, how much I spend on services, my opinions on social networks).	.099
I would let tourism companies obtain my data through the internet in exchange for offers, discounts or personalized services.	.038
I value, positively, that my destiny tries to innovate and use technologies to improve my experience as a tourist.	-.277
<b>Functions in group centroids</b>	
	Function
Council STD	1
TARAMUNDI (R)	.427
GIJON (U)	-.119

The discriminant function formed with such items is significant, both in terms of explained variance and in the value of the Wilks lambda (.951) and the Chi-square test (at .000). The centroid values of the function assign a positive value to Taramundi (R) (.427) and a negative value to that of Gijón (U) (-.119) in the logic of clearly discriminating between them. The review of those obtained by each item in the structure matrix allows to determine that: the opinion of considering that “technologies are a useful tool in my travels” represents the tourists of the Taramundi (R) destination (significantly), while the "I value, positively, that my destiny tries to innovate and use technologies to improve my experience as a tourist" characterizes (in a significant way) the tourists of the destination Gijón (U). Further:

- The items: "technologies help me to have a more satisfactory experience as a tourist", "technologies are a fundamental part of my travels", "what I see in social networks influences my opinion about a tourist destination", " I trust what other tourists think of portals such as TripAdvisor or Booking ", " this destination (in which you are) is innovative ", and" always proposes new experiences to tourists ", they have coefficients in the definite structure matrix, so they tend to explain the case of Taramundi (R).
- For its part, the items: "I am concerned that a company can register and save my activity in my tourist destination" and "I would let tourism companies obtain my data through the Internet in exchange for offers, discounts or personalized services" they present neutral values (close to 0) in the Matrix. Therefore, they do not discriminate in any way from the destinations. Figure 1 summarizes more visually the location of the technological items according to the type of destination: Taramundi (R) versus Gijón (U).



Figure 1: Graphical representation of the Discriminant Analysis between STD.



### 3.1. Technology results and tourism experience

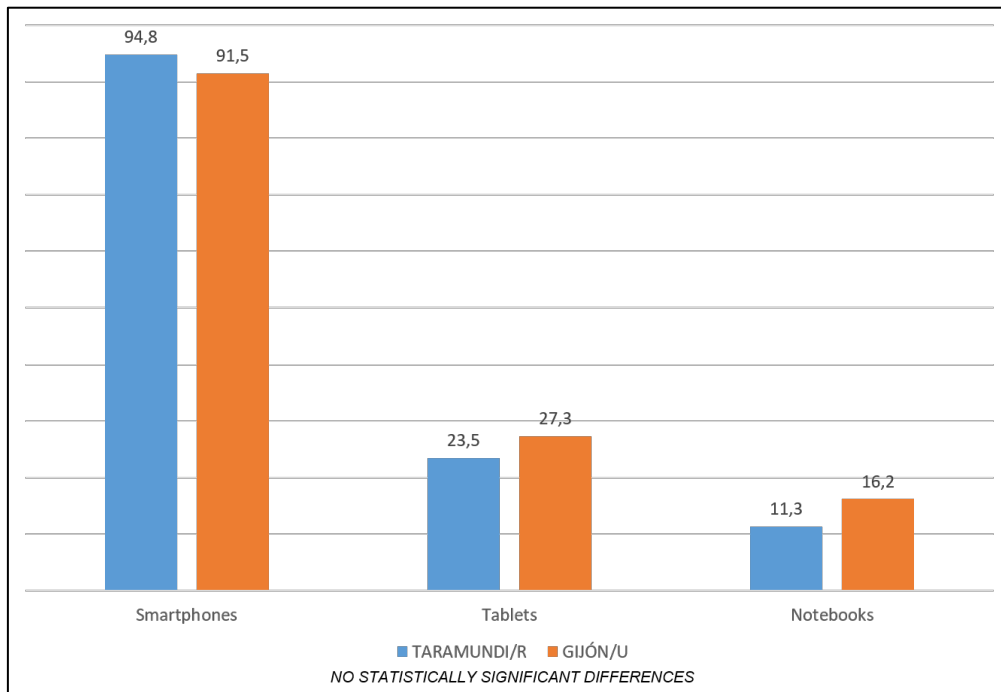
The second topic of analysis refers to the ICT equipment (hardware) that tourists use in destinations, and more specifically to the tourist uses they make of them -considering both the own equipment or hardware (smartphones, Tablets or Notebook) and those installed and provided by the destinations themselves in their technology service strategy.

As for the ICT equipment of tourists on their trips, the results are similar between both types of destinations, and in no case the differences become significant. It is true that, in terms of absolute frequencies, the most significant use of the most mobile devices, such as the smartphone, stands out in the rural-type destination, while, in the urban destination, tablets and notebooks have more significant weight (see figure 2). The tourist uses of our ICT equipment are mainly concentrated (data above 50% frequency of use) in:

- "The search for general information about the destination."
- "General communication with family and friends."
- "Take photos and videos of the trip."
- "Consult maps and GPS."

Others, such as "seeking opinions" of business or attractions, have a minor use, and, in any case, very different between destinations.

Figure 2: Percentage of use of technological equipment in the tourist trip.



Indeed, the results of the use of the equipment are significantly different between the rural destination and the great traditional destination (Gijón (U)). The data is conclusive in the greater use by tourists from Taramundi (R) for (see figure 3):

- “Search general tourist information of the destination” (chi test at .000)
- “Reserve tourist activities at the destination” (chi test at .000)
- “Seek tourism business opinion” (chi test at .000)
- "Seek the opinion of tourist attractions" (chi test at .002)
- “Consult maps and GPS” (chi test at .012)

On the other hand, the use in ICT STD of ICT equipment for:

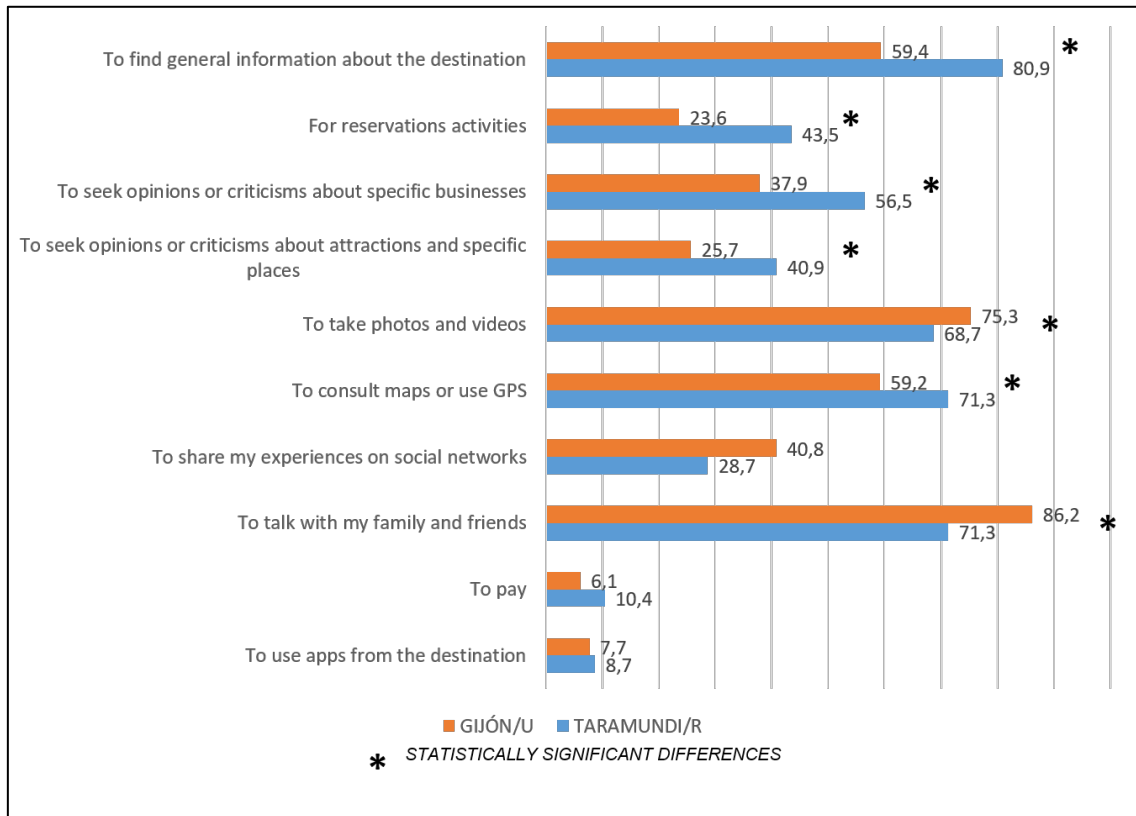
- “Comment on Social Networks” (chi test at .012)
- "Talk to family and friends" (chi test at .000)

To verify whether such variables of use of ICT elements by tourists are really adequate to define the rural STD as opposed to the large and traditional one, a Logistic Regression has been developed, appropriate when both the dependent variable (STD) and the independent ones (items of use) are of nominal type (see table 6).

Table 6: Logistic regression of STDs regarding the uses of technological equipment.

Classification Table							
	Observed	Predicted			Correct percentage		
		Council STD					
		TARAMUNDI	GIJON				
Step 1	Council STD	TARAMUNDI (R)	86	29	74.8		
		GIJON (U)	23	354	93.9		
	Total percentage				89.4		
a.The cutoff value is .500							
Model Adjustment Information							
Model	Criteria		Likelihood Ratio				
	Likelihood	Logarithm	Chi-square	gl	Sig.		
Null	471.689						
Final	253.970		217.719	12	.000		
Pseudo R square							
Cox y Snell	.758						
Nagelkerke	.777						
McFadden	.719						
Council STD <sup>a</sup>							
		B	Standard Error	Wald	gl	Sig.	Exp(B)
TARAMUNDI (R)	To find general information about my destination (things to do, places to visit ...) = 0]	<b>-.820</b>	<b>.305</b>	<b>7.234</b>	<b>1</b>	<b>.007</b>	<b>.440</b>
	To find general information about my destination (things to do, sites to visit ...) = 1]	0 <sup>b</sup>	.	.	0	.	.
	To book activities (excuses, tours, events, etc.) = 0]	<b>-.712</b>	<b>.272</b>	<b>6.858</b>	<b>1</b>	<b>.009</b>	<b>.491</b>
	To book activities (excuses, tours, events, etc.) = 1]	0 <sup>b</sup>	.	.	0	.	.
	To find opinions or criticisms about specific businesses (restaurants, bars ...) = 0]	-.403	.300	1.813	1	.178	.668
	To find opinions or criticisms about specific businesses (restaurants, bars ...) = 1]	0 <sup>b</sup>	.	.	0	.	.
	To find opinions or criticisms about tourist attractions and specific places = 0]	-.363	.311	1.366	1	.243	.696
	To find opinions or criticisms about tourist attractions and specific places = 1]	0 <sup>b</sup>	.	.	0	.	.
	To take photos or videos = 0]	.447	.285	2.471	1	.116	1.564
	To take photos or videos = 1]	0 <sup>b</sup>	.	.	0	.	.
	To consult maps or use GPS = 0]	<b>-.487</b>	<b>.289</b>	<b>2.835</b>	<b>1</b>	<b>.092</b>	<b>.615</b>
	To consult maps or use GPS = 1]	0 <sup>b</sup>	.	.	0	.	.
	To share my experiences on social networks (photos, videos, opinions ...) = 0]	<b>1.109</b>	<b>.278</b>	<b>15.885</b>	<b>1</b>	<b>.000</b>	<b>3.032</b>
	To share my experiences on social networks (photos, videos, opinions ...) = 1]	0 <sup>b</sup>	.	.	0	.	.
	To talk with my family and / or friends = 0]	<b>1.113</b>	<b>.303</b>	<b>13.484</b>	<b>1</b>	<b>.000</b>	<b>3.044</b>
	To talk with my family and / or friends = 1]	0 <sup>b</sup>	.	.	0	.	.
	To pay (Smartphone life) = 0]	-.545	.443	1.515	1	.218	.580
To pay (Smartphone life) = 1]	0 <sup>b</sup>	.	.	0	.	.	
To use apps related to my destination = 0]	.114	.439	.067	1	.796	1.120	
To use apps related to my destination = 1]	0 <sup>b</sup>	.	.	0	.	.	

Figure 3: Percentage of types of uses of technological equipment in the tourist trip

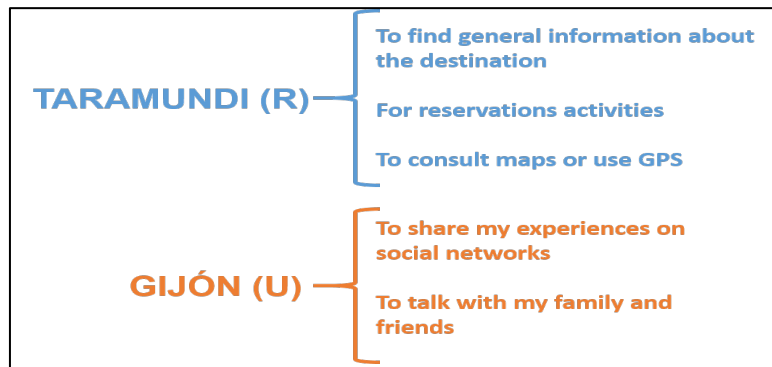


The regression presents good indicators of validity: first, the percentage of correctly classified cases is high (close to 90%), second, the Chi likelihood ratio test is significant, and, third, more specifically, the three indicators of The Pseudo R Square are more significant than 0.7 (highlighting the 0.777 of the Nagelkerke index).

Once the regression function has been validated, the coefficients of the items in it have been estimated using the Gijón (U) STD as a comparison.

As the results of the regression function indicate, there are five significant items, three of them with a negative B coefficient (Taramundi (R)), namely: "to find general information about my destination", "to make reservations for activities" and "to consult maps and GPS", and two items with a positive B coefficient (Gijón (U)) that are: "to share experiences on social networks" and "to talk with my family and friends" (see figure 4).

Figure 4: Results of distinctive uses according to the Logistic Regression



In the results related to the ICT services offered by the destinations, it is observed that their actual use by tourists is still minimal. Specifically, the search for Wi-Fi and the use of official websites are the most used services, in some cases with impressive percentages of around 40% of tourists, although never the majority. However, some elements, such as QR codes or touch screens, have minimal use by tourists. There are, on the other hand, significant differences in the rural destination about the use of technological services to tourists. In nine of the items of services considered, the percentage of tourists is higher, and significantly in four of them:

- "Use of the official website of the destination."
- "Use of public Wi-Fi."
- "Use of online reservations on the official website."
- "Mobile payment."

For its part, the great destination stands out, significantly, in the percentage of tourists who use the "Wi-Fi of the destination service companies" (see figure 5).

Figure 5: Percentages of use of ICT Services offered by Destinations

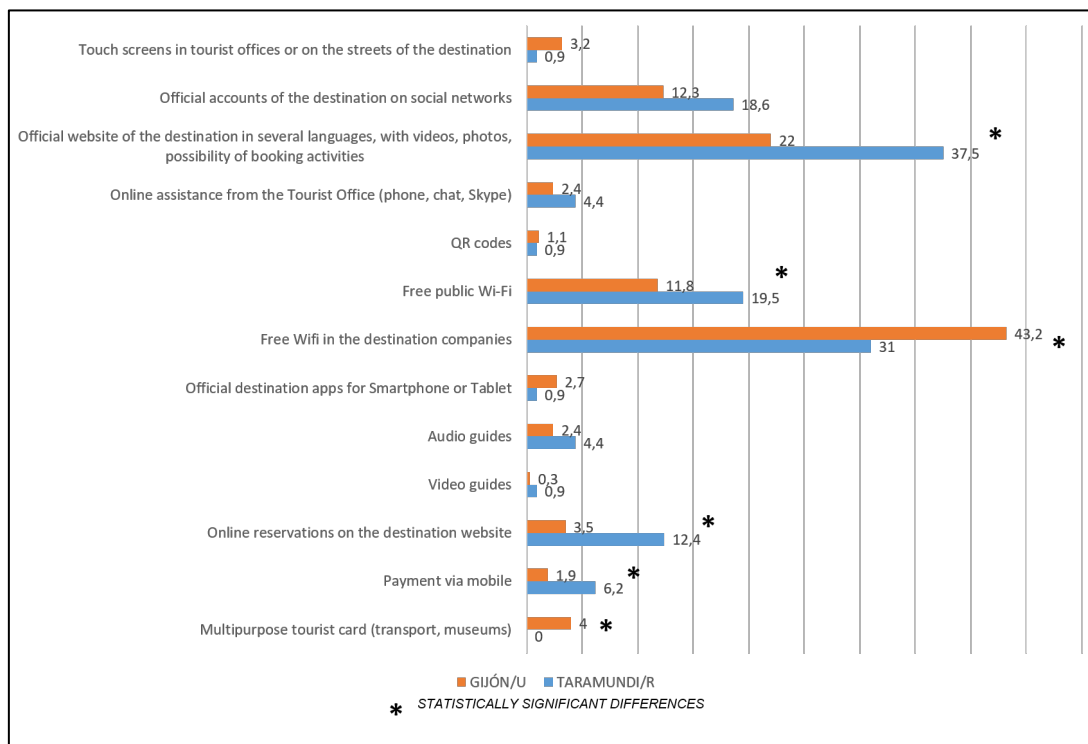


Table 7: Assessments of the Averages of the technological services of the STDs and t-test of differences.

		Council STD	Average	t	gl	Sig. (b.)
Tactile screens in tourist offices or on the streets of the destination	Equal variances are assumed	TARAMUNDI (R)	2.50	-1.110	13	.287
	Equal variances are not assumed	GIJON (U)	3.54	-.678	1.088	.613
Official accounts of the destination on social networks (Facebook, Twitter, Instagram ...)	Equal variances are assumed	TARAMUNDI (R)	3.78	.160	68	.873
	Equal variances are not assumed	GIJON (U)	3.74	.147	35.532	.884
Official website of the destination in several languages, with videos, photos, the possibility of booking activities ...	Equal variances are assumed	TARAMUNDI (R)	3.98	1.633	122	.105
	Equal variances are not assumed	GIJON (U)	3.74	1.670	88.032	.099
Online assistance from the tourist office (by phone, chat, Skype ...)	Equal variances are assumed	TARAMUNDI (R)	3.33	-.313	13	.759
	Equal variances are not assumed	GIJON (U)	3.56	-.273	6.516	.794
QR codes	Equal variances are assumed	TARAMUNDI (R)	2.00	-.701	3	.534
	Equal variances are not assumed	GIJON (U)	2.75	.	.	.
Free public Wi-Fi	Equal variances are assumed	TARAMUNDI (R)	3.77	-.018	65	.986
	Equal variances are not assumed	GIJON (U)	3.78	-.020	50.064	.984
Free Wi-Fi at destination companies	Equal variances are assumed	<b>TARAMUNDI (R)</b>	<b>3.61</b>	<b>-3.997</b>	<b>195</b>	<b>.000</b>
	Equal variances are not assumed	<b>GIJON (U)</b>	<b>4.26</b>	<b>-3.551</b>	<b>46.364</b>	<b>.001</b>
Official destination apps for Smartphone or Tablet	Equal variances are assumed	TARAMUNDI (R)	4.00	.063	10	.951
	Equal variances are not assumed	GIJON (U)	3.91	.	.	.
Audio guides	Equal variances are assumed	TARAMUNDI (R)	3.80	-.231	12	.821
	Equal variances are not assumed	GIJON (U)	3.89	-.209	6.360	.841
Video guides	Equal variances are assumed	TARAMUNDI (R)	5.00	.	0	.
	Equal variances are not assumed	GIJON (U)	4.00	.	.	.
Online reservations on the destination website	Equal variances are assumed	TARAMUNDI (R)	4.00	.230	25	.820
	Equal variances are not assumed	GIJON (U)	3.92	.230	24.910	.820
Payment via mobile	Equal variances are assumed	TARAMUNDI (R)	4.14	.440	12	.668
	Equal variances are not assumed	GIJON (U)	3.86	.440	8.225	.671
Multipurpose tourist card (transport, museums, etc.)	Equal variances are assumed	TARAMUNDI (R)	.	.	.	.
	Equal variances are not assumed	GIJON (U)	4.20	.	.	.

### 3.2. Technological sharing and Tourism experience

The results of the third topic, the technological sharing of tourism experiences (eWOM) indicate a high value in this behavior. More than 60% of tourists, whatever the type of destination, will incorporate some comments on the internet, either on social networks or on the microblogs of websites specialized in the tourism sector.

The results of use, in the case of social networks, highlight the values of Facebook, followed by those of Instagram and Twitter. On the other hand, the highest amounts of private chat use are WhatsApp, and those of micro tourism blogs are Booking and TripAdvisor (see figure 6).

Also, just those six operators (Facebook, Instagram, Twitter, WhatsApp, Booking, and TripAdvisor), have significant relationships with the willingness of tourists to share their tourist experiences (chi tests, all of them, significant to .000) (see table 8).

On the other hand, the statistical analysis presents differences between the types of operators where tourists will share their experiences according to the type of destination, be it the rural destination, be the urban destination. Specific:

- In Taramundi (R) it is significantly greater to share in the TripAdvisor and Booking micro-blogs.
- In Gijón (U), it is considerably greater to share on the social network Facebook and in the private WhatsApp chat.

Figure 6: Percentages of tourists who will comment on their experiences on the internet.

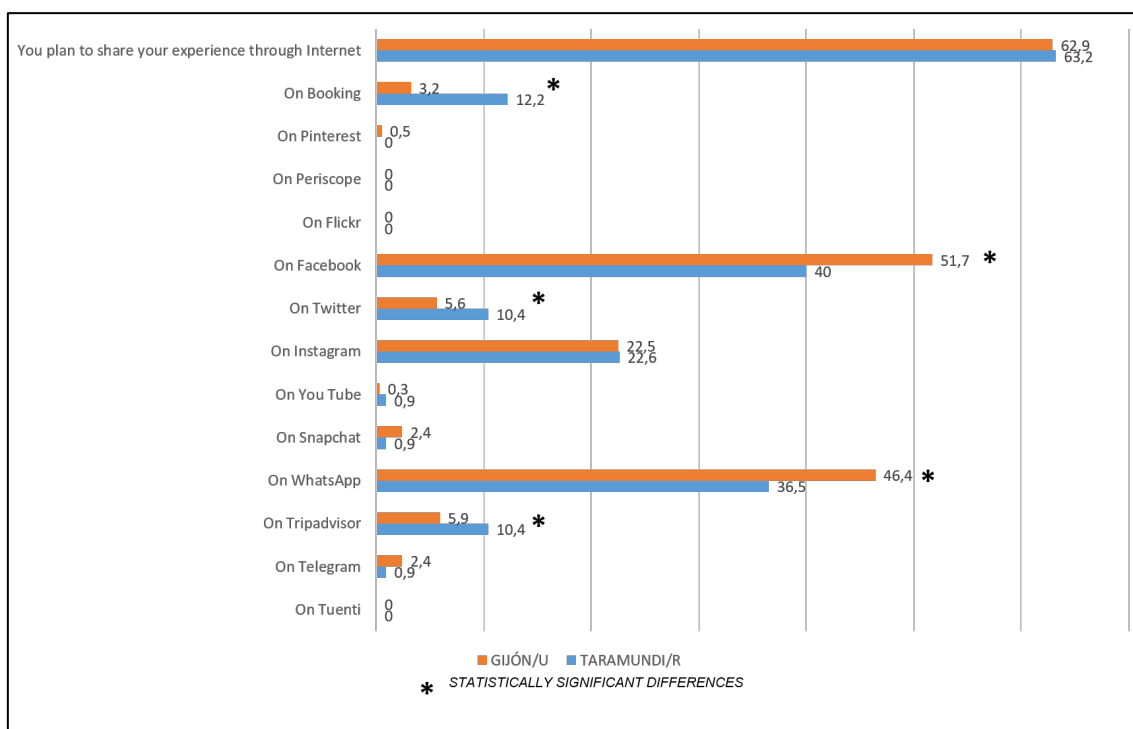


Table 8: Chi test of differences between the share action and the places where it is done.

Sig. Chi-Squared .000			DO YOU HAVE TO SHARE YOUR EXPERIENCE THROUGH INTERNET?		Total
			No	Yes	
<b>BOOKING</b>	0	Count	183	281	464
		Expected Count	173.3	290.7	464.0
	1	Count	0	26	26
		Expected Count	9.7	16.3	26.0
<b>Total</b>		Count	183	307	490
		Expected Count	183.0	307.0	490.0

Sig. Chi-squared .000			DO YOU HAVE TO SHARE YOUR EXPERIENCE THROUGH INTERNET?		Total
			No	Yes	
<b>FACEBOOK</b>	0	Count	183	66	249
		Expected Count	93.0	156.0	249.0
	1	Count	0	241	241
		Expected Count	90.0	151.0	241.0
<b>Total</b>		Count	183	307	490
		Expected Count	183.0	307.0	490.0

Sig. Chi-squared .000			DO YOU HAVE TO SHARE YOUR EXPERIENCE THROUGH INTERNET?		Total
			No	Yes	
<b>TWITTER</b>	0	Count	183	274	457
		Expected Count	170.7	286.3	457.0
	1	Count	0	33	33
		Expected Count	12.3	20.7	33.0
<b>Total</b>		Count	183	307	490
		Expected Count	183.0	307.0	490.0

Sig. Chi-squared .000			DO YOU HAVE TO SHARE YOUR EXPERIENCE THROUGH INTERNET?		Total
			No	Yes	
<b>INSTAGRAM</b>	0	Count	183	196	379
		Expected Count	141.5	237.5	379.0

	1	Count	0	111	111
		Expected Count	41.5	69.5	111.0
Total		Count	183	307	490
		Expected Count	183.0	307.0	490.0
Sig. Chi-squared .000					
			DO YOU HAVE TO SHARE YOUR EXPERIENCE THROUGH INTERNET?		
			No	Yes	Total
WHATSSAP	0	Count	183	90	273
		Expected Count	102.0	171.0	273.0
	1	Count	0	217	217
		Expected Count	81.0	136.0	217.0
Total		Count	183	307	490
		Expected Count	183.0	307.0	490.0
Sig. Chi-squared .000					
			DO YOU HAVE TO SHARE YOUR EXPERIENCE THROUGH INTERNET?		
			No	Yes	Total
TRIPADVISOR	0	Count	183	273	456
		Expected Count	170.3	285.7	456.0
	1	Count	0	34	34
		Expected Count	12.7	21.3	34.0
Total		Count	183	307	490
		Expected Count	183.0	307.0	490.0

#### 4. Conclusions

The work carried out allows us to obtain indicators on the improvement of tourist experiences based on the uses and utilities of information technologies and anticipates results to intervene in the development of the management of tourist destinations from a smart destinations approach.

For this, two types of destinations that respond to different antagonistic tourist typologies are analyzed: the small and rural versus the urban and large. In the case of rural destinations, it is evident that tourists value aspects related to the usefulness and use of ICTs as essential tools and sources of information during their trip, while, in an urban destination, the importance of technologies for the tourist it is smaller compared to the rural one. It is possible to understand that technologies and communication indirectly print a security character to tourists in the rural destination, knowing how to connect and having tools to work with, while, in an urban destination, the importance lies in the innovation of one's destination.

On the other hand, in the case of rural destiny, in addition to the recommendations and relevant opinions to be informed, innovations and proposing new experiences are also considered positive.

It is significant that in neither of the two destinations, it is appreciated that the tourist is concerned with the registration of their activity, nor with the data shared in the technological applications. Either there is excellent confidence in the action, or there is no awareness of how that information can be used.

The citizen, with the use of mobile technology, can be classified as "mobile," and as a tourist is also "mobile" as observed in the results obtained. The relationship between technology and tourism is manifest, not only at a theoretical level but also from the perspective of use for supply and demand.

The smartphone is the citizen's new wallet and the tourist's new backpack. Tourism is movement, it is a novelty, and it is a risk. The smartphone is mobile technology that allows you to solve these questions through 4 principal utilities: access to information (to develop in a new



environment), the use of maps (move without getting lost), recording (save your experiences) and communication (share them).

The Rural Destination should consider that the smartphone is not a means in itself, but an instrument that tourists use intensely to enjoy, in a broad way, the tourist experience of nature and rurality. A permanent access tool to all the information you need to get the most out of such experience. Here ICT becomes essential as a way (in real-time) of access to "all" the information of the destination, but "not" as a builder of new experiences, not even as a means of immediate communication.

In the case of the urban destination, the use of devices to send comments and be connected with friends and family is superior to that of the rural destination, where a purpose prevails towards the search for information and opinions of the destination, as well as to the query of maps and tourist attractions.

The rural destination must, therefore, mainly work on the possibility of connecting smartphones through Wi-Fi networks, as the "mobile" tourist neither wants nor should lose the connection to support their immediate experiences. Wi-Fi networks can even be integrated with a protocol of websites, apps, reservations, and online guides of the rural destination itself. In this line, the results show that the search for free Wi-Fi and the use of official websites are the most demanded services, to the detriment of some technological solutions such as QR codes or tactile service screens that are hardly used by tourists. In the case of Gijón (U), the fact that the companies of the destination have Wi-Fi is an essential element for the tourist while, in the rural destination, although this demand exists, its importance is not so high.

Ewom is a phenomenon derived from the technological world that must be taken into account in the tourism field. However, in a rural destination, it is a resource to the eWOM looking for an informative utility based on the decision, that's why it nourishes more than specialized micro-blogs, leaving the eWOM to communicate and share generic for other types of tourist experiences. In contrast, in urban destination, social networks, and instant messaging prevail.

This study allows us an approach to the use of ICTs and applications by tourists in two destinations that respond to different motivations. The limitation of the study would come from the analysis of the destinations in terms of their situation in a context of intelligence or degree of technical implementation of the same. Try to relate the technological offer (s) of the destinations with the use of the tourist. On the other hand, we must consider the substantial limitations that exist in rural areas due to the lack of technological infrastructure and services, and even the impossibility of adapting the current approaches of smart destinations to certain areas or municipalities, given the lack of facilities and infrastructures.

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