



Master Thesis

Using Instagram to understand the tourist's Preferences in the
Chilean Patagonia

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1. Introduction

1.1. Relevance of the study

The increasing environmental destruction have brought negative effects such as an increasing scarcity of natural resources, climate change (affects in part because of the human action), contamination in our natural resources and many other negative effects which it has affected the quality of life of the inhabitants of this world (Job, Becken, & Lane, 2017). Currently, several researchers (Balmford et al., 2015; Job et al., 2017) have proved that the nature-based tourism is a relevant vehicle to reach sustainable conservations, moreover of the improvement of the community livelihoods due to the high revenue that this type of tourism leave. According to the estimation of the research “A Global Perspective on Trends in Nature-Based Tourism” (Balmford et al., 2015) the world’s national parks and nature reserves receive at least eight billion of visitors every year, where that number will be increasing due to the new trend demand of nature experiences, especially for those with higher per capita incomes. While revenues (calculated from spending on fees, travel, accommodation, etc.) of nature-based tourism could be as much as US\$600 billion per year and US\$250 billion per year consumer surplus (the difference among what visitors would be prepared to pay for a visit and what they actually spend), what is far higher than US\$10 billion which is what governments spend in safeguarding these sites. The cited paper has proved that nature-based tourism can generate funds for both conservation and development of these areas.

In 2014, a resolution adopted by consensus by the United Nations General Assembly called “Promotion of sustainable tourism, including ecotourism, for poverty eradication and environment protection (A/RES/69/233)” recognizes the contribution of sustainable tourism to poverty eradication, community development and the protection of biodiversity.

“Recognizes that sustainable tourism, including ecotourism, creates significant opportunities for the conservation, protection and sustainable use of biodiversity and of natural areas by encouraging indigenous peoples and local communities in host countries and tourists alike to preserve and respect the natural and cultural heritage” (Assembly et al., 2017)

However, It is important to highlight that the activities or products related with nature-based tourism must be in line with the protection objectives of a tourism management plan, which means restricting the use of the visitors to a level which will not cause a significant degradation to the natural resources, otherwise without a proper management and a realistic threshold based on adequate coherent data, the tourism industry could generate issues associated with the ecological, environmental, sociocultural, and economic, such as the case of the tourism industry that it has caused significant environmental impact in the Himalayan Protected Areas (Nepal, 2000).

The extreme southern part of America called Patagonia, it is shared by two countries, and the east side belongs to Chile and the west part to Argentina. Patagonia has been developing the nature-based tourism from a while thanks to its world class landscapes which have attracted visitors worldwide. Although not without problems, during many years several industries such as the energetic (mostly hydroelectric projects), salmon industry, the minery, and others have attempted to exploit the natural resources that Patagonia offers. This decade it was a famous case which brought massive protests in Chile, because a giant hydroelectric project pretended to flood an important part of the Patagonia, finally that project did not prosper partly thanks to the citizen pressure.



Figure 1 Poster of the citizen movement "Patagonia sin represas" against to the hydroelectric projects in the Chilean Patagonia

Therefore, it is imperative to boost the sustainable nature-based tourism in the whole Patagonia, since as it was explained previously the nature-based tourism can be profitable providing good business for public and private sectors which is very important at times of neoliberalism (Job et al., 2017). Currently, the tourism in Patagonia has had different success on both sides, although they have similar

characteristic in terms of nature attractions. In the case of the Chilean side the tourism still has a great potential to be developed as the Chilean authorities have recognized. In 2014 the former president of Chile Michelle Bachelet has declared during the public account of May 21, 2014 “We are going to implement a sustainable tourism development plan in national parks and protected wild areas. This plan will include significant investments in public infrastructure, special resources for tourism service providers and resources to promote these destinations nationally and internationally. This will encourage demand, strengthen our local entrepreneurs and, at the same time, add value to our offer”. This it was materialized in a strategic plan to boost the nature-based tourism called “Plan de Acción de Turismo Sustentable en Áreas Protegidas del Estado 2014-2018” and a Marketing Plan “Plan Marketing Turístico de Chile 2016-2018”. The success of these measures and others efforts which is doing the Chilean stakeholders to boost the nature-based tourism in Chile and specially in the Chilean Patagonia is vital since it allows to protect and preserve the protected areas which are home of a wide biodiversity which included endangered species. Furthermore, it encourages economic dynamism of more than 60 communities located in three regions of Chile which are part of the Chilean Patagonia, such as Cochamó, Chaitén, Puyuhuapi, Puerto Aysén, Villa Cerro Castillo, Chile Chico, Tortel, Puerto Natales, Porvenir, among many others.

Hence, the current study “Using Instagram to understand the tourist’s Preferences in the Chilean Patagonia” attempts to deliver a contribution to enhance the nature-based tourism in the Chilean Patagonia exposing the preferences of the visitors in the Chilean territory, and furthermore, giving value to the information obtained comparing it with the content exposed on the official website to promote Chile as a tourist destination in order to provide improvement suggestions and on the other hand, with the preferences identified on the Argentinian side to visualize potential destinations which have similar natural resources than destination which are succeeding on the Argentine side, and finally, which element are valued in Chile and not in Argentina to take it advantage in terms of promotion to differentiate the Chilean Patagonia of the Argentinian Patagonia to attract more tourist of the shared market.

As well as, this study has used social networks attempting to utilize the valuable information that the users provide to analyze the tourist preferences in the Patagonia, since the use of social media is increasing, millions of users worldwide generate billions of post every year which usually count with pictures or videos, texts, and location, enough to make studies with different purposes. Thereby this research replaces the traditional surveys to obtain that data, which are costly in terms of time and

resources, for the use of the content posted on the social network Instagram (www.instagram.com). Some articles have exposed the reliability of the social networks to obtain data related with the behavior of the tourist (Barry, 2014; Wood, Guerry, Silver, & Lacayo, 2013).

1.2. Objectives

- To obtain the tourist's preferences on both sides of Patagonia, using the social network Instagram.
- Provide a proposal of the photo content to use to promote the destinations of Patagonia declared by SERNATUR (the institution in charge of the tourism in Chile) and promoted by the official website to promote Chile as a tourist destination (chile.travel).
- Establishing the improvements and advantage than the Chilean Patagonia could take from the comparison with the tourist's preferences on the Argentinian side in order to attract more visitors to Chilean destinations.

1.3. Methodology used

To carry out the fulfillment of the proposed objectives, it was chosen the social network Instagram to obtain the data needed from a sample selected under several criteria explained in detail in the point 4.1 of this study, in order to get accurate information to be used. The sample considers 800 posts from Instagram, which are split in 400 posts from the Chilean Patagonia and the same amount for the Argentinian Patagonia. Thanks to the wide information that the users of this social networks provide such as images or videos, written content, geolocation, and the use of hashtag which facilitates the search for data, it was possible applying a content analysis to each posts to categorize and then subcategorize every post based on the main object that has gained the attention of the users of Instagram, in order to filter the information depending on the purpose. Thus, the results of the content analysis and the geolocation attached to every post, it has allowed getting findings in first instance according to:

- The preferences identified on both sides of the Patagonia: The categorization and subcategorization of the posts exposed accurately which are the main preferences on both sides of the Patagonia.
- Location of the preferences: Using the geolocation provided by the users on the posts, the findings expose where are concentrated the preferences of the visitors who use Instagram along to the territory.

From the previous information obtained it has given value in two ways: Firstly it is expose in this study a comparison of the Chilean Patagonian tourist destinations declared by SERNATUR and promoted by the website chile.travel with the destinations most photographed on Instagram. Secondly, the preferences obtained from the Chilean and Argentinian Patagonia allowed detecting the similarities and difference among both sides, which consequently provided challenges and potential advantages to take into consideration from Chile.

2. Theoretical Framework

2.1. The use of mobile phone during a trip

The mobile phones are part of our daily life and consequently during our trips as it is clearly explained in the publication called *Smartphone Use in Everyday Life and Travel* made by (Dan, 2014) the authors explained the links among the use of smartphones in everyday living and the tourist experience. The use of smartphone in everyday living is structured by communication, social activity, information acquisition, information research, entertainment and facilitation (e.g., pay bills, alarms, planning). Thus, the spirits of the smartphone during the daily life, according to the research mentioned previously, are to be more connected, more informed, more innovative, more entertaining and more productive. The use of smartphones in the context of travel extends the structures and spirits of smartphones into trips, although most of the daily activities within the structure mentioned are similar, there are some differences to emphasized. In the case of the area information research the activities were more focused to search flights, things to do, hotels, tickets, and deals in travel. In the area of communication and social activity the findings of the research cited indicate that the travelers feel more social obligation during trips such as send messages by the app WhatsApp, taking photos and sharing with others immediately through social networks as Facebook or Instagram, as well as, to increment the checking of social networks. In terms of the area facilitation, the authors have concluded that the travelers use the smartphone to book shows, flights and hotels, because they feel comfortable and smooth when they make transaction on the mobile platforms.

Consequently, according to the finding of the research *Smartphone Use in Everyday Life and Travel*, the tourist experiences have changed in comparison with the previous experienced lived without smartphones. In terms of security, the finding exposed that tourists feel that their experience are more secure than previously, since in case that something happens during their trips, they will be able to ask for help either to an institution such as the police of the destination or their relatives. With the use of smartphones during trips, when the tourists have wanted independence, they have been able to find it thanks to the features of their smartphones which allow them to listen music, podcast or reading. Other change in the experience during a trip declared in this study is the use of smartphone for facilitation

purposes such as managing itinerary and flight check-in it has given a perception of convenience and efficiency to the tourists. Furthermore, the use of the smartphone for information acquisition and search led to the perceptions such as “more informative,” “getting better value from trips,” “more confident about travel,” and also led to the changes of travel behaviors, including “more flexibility during trips,” “more en-route planning,” “less prior planning,” and even “more trips”. Lastly, and the most important finding to this current study called “Using Instagram to understand the tourist’s Preferences in the Chilean Patagonia” is that tourists who used social networks reported that they perceived their tourist experiences were more connected with family and friends, sharing photos and contents on social networks such as Instagram in order to share their more value experiences, exposing a relevant increase of the use of these platforms during their trips.

2.2. Tourist destination experiences and photo to store and share them

Several tourism researchers have attempted to define the factors which influence in the attractiveness of a destination, however, most of them agree that the main factors are related to the destination's environment and destination's product mix (Cohen, 1979; Murphy, Pritchard, & Smith, 2000). Even a research (Mo, Howard, & Havitz, 1993) was capable to establish a hierarchy among both factors, as a primary factor was the destination's environment (e.g. social and culture features) and as a secondary factor the destination's service infrastructure (e.g. transportation, food and lodging services), since the study consider the service infrastructure within the destination's environment. A complete model of a product's environment was developed by Kotler, Bowen, and Makens (1996), they have proposed six factors which make up the macroenvironment where the destination takes place and therefore play a relevant role in the visitor experience and perception. These are: demographic, economic, natural, technological, political and cultural forces. A research (Murphy et al., 2000) has used almost the same factors, replacing only the demographic by social factors, as well as, to explain every factor which make up the destination's environment. Then, according to this study, the economic factors are the currency exchange, market behavior and pricing. The natural elements of a destination involve the weather conditions, natural resources such as landscapes, flora and fauna, among others. The technology and

infrastructure such as the power and water supply, communication facilities and access to the attractions in a destination play an important role which the visitor take into consideration to assess his experience. Political factors are related to political stability, local policy regard to topics such as human rights, treatment of tourists (e.g. visa applications), responsiveness to tourism, and government control. Cultural aspects refer to local authenticity, its history, customs, and so on. Social factors which affect the visitor's experience are the language spoken (as native and as a second language), family structures, population density, and friendliness of locals. The Figure 1 shows a model which expose how interact the destination environment and services infrastructure in the visitor experience.

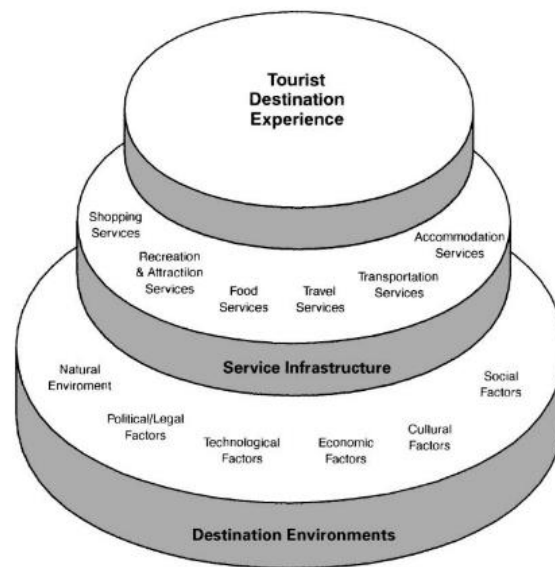


Figure 2 Conceptual model of the destination product (Source:(Murphy et al., 2000))

These travel experiences, as a result of the conceptual model proposed by (Murphy et al., 2000) it can be studied by photos since the photos taken by tourist of a destination record travel experiences of the photographers, thus, it is useful for destination marketing/management organizations (DMOs) to better manage visitors' experience, studying the visitor's photos which express a supreme emotional moments and peruse them in tourism promotion (Pan, Lee, & Tsai, 2014). Other authors (Mackay & Fesenmaier, 1997) have declared, as well, how reliable are photos as a source to study experiences and preferences since tourism is mostly a visual experience.

The findings of the research made by (Pan et al., 2014) shows that most of photos taken by travelers evoke some type of feeling depending on what they are focus in. This study explains that photos about natural resources are associated with arousing feelings such as alive, active, and forceful. In turn, with

pleasant emotions like nice, pleasing, pretty and beautiful. Therefore, the photos focused on natural resources express arousing and pleasant feelings toward a nature-based destination. The most frequently natural resources with these feelings are water bodies such as sea, lake, river waterfalls, among others. Although desert-related topography is also featured with these feelings, though not as prominently as water in the photos. Additionally, flora and fauna is another key natural resource in generating arousing and pleasant feelings toward a destination and usually comes with a “wow” factor as the findings of this research exposed.

Along with nature, history, culture and arts play an indispensable role in pushing and pulling visitors to and from a destination. However, unlike natural resources that produce arousing and/or pleasant feelings, culture is mainly associated with pleasant. The majority attributes of this image dimension identified belong to tangible cultural heritage such as museums, historical buildings and monuments. Some of these structures such as churches and cathedrals are related to religion. Architecture is thus an indispensable carrier and marker of local culture. Findings from this study indicate the importance of including tangible cultural heritage in the promotion package to create pleasant feelings toward the destination being featured.

Nowadays, the travel photos can be widely shared by several social networks, where some of them are specialized in the photo content such as Instagram which is the most popular content community as is explained below in the point **Error! Reference source not found..**

2.3. Instagram the most popular content community

The online social networks have risen heavily during the last years, Facebook, which its main mission is to connect people with their friends and relatives, has achieved 2.32 billion monthly active users as of December 31, 2018. Twitter, which is a social network with a focus in rapid communication and it works as a microblog, has 321 million monthly active users. Instagram for its part has reached over 1 billion monthly active users. The usage of social networks has been documented by a research conducted by PEW Research Center, that it has analyzed the evolution of the users in U.S. of online social networks from 2005 to 2015. The findings show higher participation of young adults (ages 18 to 29), although all the range of ages have increased notably (Chart 1), furthermore, there are similar rates in terms of gender, racial and ethnic (Perrin, 2015).

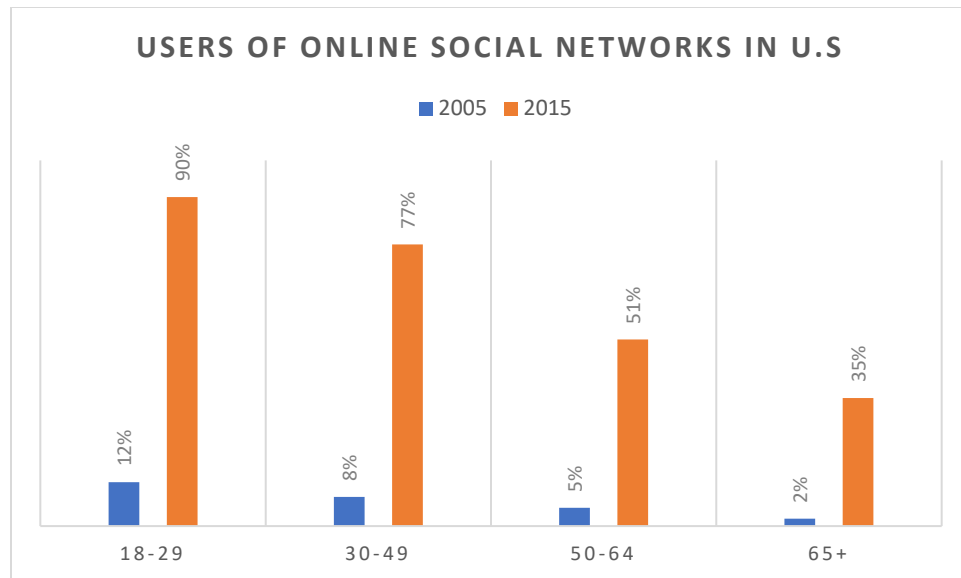


Chart 1 Source: Pew Research Center, 2015

These statistics show the wide range of users which is covering social networks. That explains why many researchers have been interested in study social media and using them as a reliable source of data.

Within social networks there are different types, which are: Collaborative projects (like the online encyclopedia Wikipedia), blogs, social networking sites (e.g., Facebook and MySpace), virtual games worlds (e.g., World of Warcraft), virtual social worlds (e.g., Second life application), and content communities (e.g., Flickr, Youtube, Slideshare and Instagram) (Kaplan & Haenlein, 2010). This research has used the last type of social media, content communities, which has as a main objective share media content among users, that it can be texts, photos, videos, and PowerPoint presentations. Users on content communities, unlike other social media, are not required to create a personal profile page, and if they do, these usually have only basic information, such as the name of user, amount of content shared, number of followers and profiles following by the user.

Nowadays, the most popular content community is Instagram which is a mobile application that enables to its users to share instantaneously photos, videos and stories of their life moment through a series of filters and other characteristics of this application. One feature it is that allows to the users to add in their posts hashtags using the symbol # in order to share with a wide community. Besides to its photo capturing and manipulation functions, Instagram provides similar social connectivity allowing to an user to follow any number of other users, called "friends". On the other hand, the users following a Instagram user are called "followers". Instagram's social network is asymmetric, meaning that if a user A follows B, B need not follow A back. In addition, users can set their privacy preferences such that their

posted photos and videos are available only to the user's followers that requires approval from the user to be his follower. By default, their images and videos are public which means they are visible to anyone using Instagram app or Instagram website. Users consume photos and videos mostly by viewing a core page showing a "stream" of the latest photos and videos from all their friends, listed in reverse chronological order, although applying a hashtag the users can search content associated a specific hashtag. They can also favorite or comment on these posts (Yarbil & Argaç, 2017).

This popular content community it was launched in October 2011 and according to the statistics presented to 2018 on its website (<https://instagram-press.com>), Instagram has reached more than 1 billion monthly active users, 50 billion of photos shared and more than 100 million of photos and videos uploaded per day. The demographics of this social media platform in U.S. according to the data provided by a research conducted in 2018 by the Pew Research Center (Smith & Anderson, 2018) are:

- 35% of all U.S. adults use Instagram
- 64% of adults ages 18-29, 40% of adults among 30 to 49 years old, 21% of adults among 50 to 64 years old and 10% of those 65 years old and older are users on Instagram.
- 39% of female adults and 30% of male adults are users on Instagram
- 42% of adults who use Instagram have more than college.

2.4. The use of geo-tagged photos as a source of data to analyze the tourist preferences

As it was explained above, the content communities are based on share content in different ways, the case of platforms such as Flickr and Instagram use photos and videos as the content that the user can share with the community. These online platforms enable the users allocated their photos through the geotagging interface which can be using either the own GPS of the dispositive or allowing to the user put the location where the photo was taken manually, this feature as well as of the own content of the photos, the text along the picture, the commentaries and "likes" given by other users, it has become the content published on the photo-sharing application a wealth reliable database, since the knowledge extracted from the social media content may answer questions such as "where?" thanks to the location

provided by geo-tagged posts, “when?” (Spatial, temporal, and spatio-temporal analyses), “what?” and “why?” through the content analysis, and indirectly “who are the users?” by their profiles. In addition to delivering information about what users find meaningful to post about and reveal different activities that the users practice during their stay in a destination that can be used to understand e.g., why users were visiting specific locations (Di Minin, Tenkanen, & Toivonen, 2015).

Therefore, the content provided by Flickr and Instagram has been used by scholars and practitioners with various purposes in tourism. Specifically, the geo-tagged photos have been used to identify the tourist preferences and with that information the scholars have addressed researches with various aims. Below there are mentioned three examples of researches which have used the geo-tagged photos to identify tourist preferences.

The authors of the research “Characterizing geographical preferences of international tourists and the local influential factors in China using geo-tagged photos on social media” (Su, Wan, Hu, & Cai, 2016) have considered that understand the geographical preferences of international tourists is critical for tourism and marketing strategies, what is not an easy task due to the absence of city-level tourism statistical data because of the high cost of participant survey. Then, to provide the geographical preferences this paper has used geo-tagged photos obtained from the social media Flickr, to identify the preferences in 333 prefecture-level cities in China using data from 2008 to 2013. This data it has allowed to the authors get the intensity of photo sharing (the ratio between total number of uploaded photos and total area of the city/region) which indicate the tourist geographical preferences that reveal in this case study tourism hotpots generally concentrate in regional capital cities and economically developed megaregions. Finally, the scholars mention that the demonstrated methodological framework is not restricted to Flickr data, and it can be applicable to social media offer geo-tagging service. This paper is therefore believed to advance the applications of social media into geographical research.

The paper “Detection of tourists attraction points using Instagram profiles” (Mukhina, Rakitin, & Visheratin, 2017) have used the photo content upload on Instagram about visited places, historical buildings, culture, parks, and other interesting places. These posts are expected to be uploaded for visitors who see the place for the first time, but also for locals who upload posts of their favorite places. This study based on the assumption that there is no doubt that popular places among tourists and locals are different, attempt to response how different is popular locations of tourists and locals in San Petersburg in order to reveal new potential attractions in this city. To do this, the scholars have analyzed the Instagram profiles of the users who upload content to this social media to identify if they are either

local or tourists. Then, they have compared the content uploaded for both in order to see the difference and deliver the new potential attractions.

The paper “Social Media Data Can Be Used to Understand Tourists’ Preferences for Nature-Based Experiences in Protected Areas” (Hausmann et al., 2018) attempt to resolve the question; Can social media data be used as an alternative to traditional surveys to understand tourists’ preferences for nature-based experiences in protected areas? To figure out this interrogation the scholars have compared the preferences about biodiversity in Kruger National Park, South Africa declared by tourists through traditional surveys with observed preferences assessed from pictures shared on Instagram and Flickr by tourists visiting the park in the same period. The findings have shown that there is no a significant difference among the preferences of tourists as stated in the surveys and the preferences revealed by social media content. For instance, one of the most photographed groups on social media platforms was large-bodied mammals which it was coincident with results of the survey. Therefore, the findings suggest that social media content can be used as a cost-efficient way to explore, and for more continuous monitoring of, preferences for biodiversity and human activities in protected areas.

3. Description of the Tourism in Chile

3.1. Situation of the tourism in Chile

3.1.1. Economy contribution and current demand of international markets

The tourism industry in Chile contributes 8.300 US\$M to the GDP of the country, which it was the 3.2% of the GDP in 2014. Worldwide Chile occupied the 44th place that same year, under Brazil 77.400 US\$M and Argentina 20.600 US\$M. The average worldwide in 2014 reaches 16.300 US\$M.

The jobs generated directly by tourism were 253.000 in 2014 and the projection to 2025 is 314.000.

The demand by regions of origin of markets according to the diagnosis made to elaborate the Marketing Plan 2016-2018 to expose is:

- European markets: Spain, Italy and Germany are the countries which more travel out of Europe, for the rest of the European countries South America only represents the 3% in terms of their preferences. The favorite countries for Europeans which count with the 80% of the arrivals are Brazil (30%), Argentina (25%), Peru (10%), Chile and Colombia with a 7% each one. Despite to the economic crisis which it has suffered Europe, Europeans have kept increasing their trips around 2% per year and spending around \$US 1.200 per trip.
- North American market: The visitors from USA make nearly 2 million of trips to South America per year, being the country which more trips towards South America followed by Germany with 800.000 trips a year. Chile receives 150.000 trips reaching the 6th place of the shared market. The travelers from USA spend \$US 2.210 per international trip. On the other hand, Canadians and Mexican with much less trips spend \$US 1.250 and \$US 721 respectively. On average the North American count with 10 days of vacations, thus, they attempt to use efficiently their days.
- South American market: Brazil according to the diagnosis made in the Marketing Plan 2016-2018 is the most attractive country in South America for Chile due to high expenditure \$US 3.375 which is one of the highest worldwide and as well as the amount of trips and expenditure are increasing around 10% annually. For Brazilians Chile is in the 3rd place of preferences, near to Uruguay but still far of Argentina which is the lead of this shared market. Argentina is the

country with more arrivals to Chile, although its level of expenditure is not high in comparison with the Brazilian. For Peru and Bolivia, Chile is their main destination and the amount of trips and expenditure is increasing annually around 9%. Finally, Chile is in the 6th place of the Colombian market, although according to the Marketing Plan, Colombia could become in the “New Brazil” due to its high expenditure and because of its motivation to travel are suitable what Chile offer as a tourist destination.

- Asian and Oceania market: South America represent only the 2% out of total international trips of Asians, thus, it is still a potential market. According to the Marketing Plan is relevant to attempt to increase the arrival since China is the fastest growing country in travel and expenditure, reaching around 20% annually. The main issue detected to boost the Chinese and Asian market is the bad connectivity with South America. Korea and Japan and also Asian countries which are attractive from the point of view of travels and expenditure. In Oceania is located Australia which is the country with the highest expenditure per trip, reaching \$US 4.105, Chile has positioned well in the shared market of this country since it has direct flights to Australia along with Argentina.

The arrivals to Chile are leaded by South American countries, in 1st place is Argentina, followed by Brazil, Bolivia, and Peru. Then, the USA and some European countries have an important amount of arrivals. While the individual expense is led by Brazilians.

Table 1 Arrivals and expenditure of the main markets in South America

South America	Arrival	Expenditure \$US
Argentina	1,325,503	447 MM
Brazil	415,216	411.6 MM
Peru	349,777	88.2 MM
Bolivia	395,265	49.1 MM
Colombia	84,464	86 MM

Table 2 Arrivals and expenditure of the main markets in North America

North America	Arrival	Expenditure \$US
USA	162,366	215.1 MM
Mexico	41,702	52.7 MM
Canada	39,822	51.5 MM

Table 3 Arrivals and expenditure of the main markets in Europe

Europe	Arrival	Expenditure \$US
Benelux	26,501	33.8 MM
Germany	72,752	81.3 MM
France	69,060	80.0 MM
Italy	31,340	32.5 MM
Spain	82,805	126.8 MM
United Kingdom	45,147	48 MM

Table 4 Arrivals and expenditure of the main markets in Oceania

Oceania	Arrival	Expenditure \$US
Australia	54,839	53.2 MM

Table 5 Arrivals and expenditure of the main markets in Asia

Asia	Arrival	Expenditure \$US
Japan	15,023	24.2 MM
China	11,018	16.5 MM
Korea	12,631	No information
Russia	6,581	No information

The information more accurate about foreigners tourist in the Chilean Patagonia were found in the statistics of the institution in charge of the protected areas in Chile called CONAF, according to the statistics of the year 2018, although the information provided only consider the category foreigner without makes a difference by nationality. In total 290.395 foreigners tourists have visited both region which are part of the Chilean Patagonia, as it can be appreciated from Table 6 and Table 7 the vast majority of foreigners went to the protected areas of the Magallanes y de la Antártica Chilena Region reaching a 90.8% out of total visitors and partly this is because of Torres del Paine National Park which concentrates 64% out of the region.

Table 6 Amount of foreigners during 2018 in the protected areas of Aysén del General Carlos Ibáñez del Campo Region
(Source:CONAF, 2018)

Region	Protected Area	Amount of foreigners	%
Aysén del General Carlos Ibáñez del Campo	Cerro Huemules	4	0.0%
	Dos Lagunas	150	0.6%
	Bernardo O Higgins	23	0.1%
	Laguna San Rafael	2,401	9.0%
	Queulat	10,164	38.2%
	Cerro Castillo	2,488	9.3%
	Coyhaique	3,051	11.5%
	Lago Cochrane	1,281	4.8%
	Lago Jeinimeni	1,143	4.3%
	Río Simpson	5,920	22.2%
	Trapananda	2	0.0%
	Subtotal region	26,627	

Table 7 Amount of foreigners during 2018 in the protected areas of Magallanes y de la Antártica Chilena Region
(Source:CONAF, 2018)

Region	Protected Area	Amount of foreigners	%
Magallanes y de la Antártica Chilena	Cueva del Milodón	40,181	15.2%
	Los Pingüinos	31,498	11.9%
	Bernardo O Higgins	16,917	6.4%
	Pali Aike	1,010	0.4%
	Torres del Paine	168,776	64.0%
	Alacalufes	1,551	0.6%
	Laguna Parrillar	389	0.1%
	Magallanes	3,446	1.3%
	Subtotal region	263,768	

3.1.2. Connectivity

In the Marketing Plan 2016-2018 it was elaborated a diagnosis about the international connectivity of Chile. It was described that the international connection in Chile is by 7 international airports, 38 land borders, and 10 international cruise ports. In 2014 there were 3.976.391 arrivals. Around the 92% of foreigners enter by air or land, being the main means of transport to get to Chile. Santiago and its surroundings concentrate the 52.5% of the arrivals to Chile, where the 72% are by the international airport Comodoro Arturo Merino Benítez located in Santiago, 25% by the land border crossing to Argentina called Los Libertadores and 3% by the cruise port of Valparaíso. Thus, according to the diagnosis made by the Marketing Plan, the international airport of Santiago plays a key role to the international connection and as a main connection to the domestic flights.

Besides to the Metropolitan region where is located Santiago and Valparaíso region, the other regions which concentrate more international arrival are Arica y Parinacota with a 11.7% located in the north of Chile and Magallanes y de la Antártica Chilena Region, located in the Chilean Patagonia, with a 10.4%.

According to the origin of the foreign the Marketing Plan has concluded that:

- Europeans arrive mostly in the Metropolitan Region getting a 62.5%, and Magallanes y de la Antártica Chilena Region with a 11.6%.
- Asians come mainly to Chile through the international airport located in Santiago reaching a 72.6% and secondly by the Magallanes y de la Antártica Chilena Region with a 10.4%.
- South Americans get in into Chile by the international airport of Santiago in a 31.5%, the border crossing of Valparaíso Region (16%) and Arica y Parinacota Region (15.5%).
- The visitors from Oceania come mostly through the international airport of Santiago (77.1%) and the Atacama Region (9.5%).

South America and North America in overall, according to the diagnosis of the Marketing Plan 2016-2018, have good connection with Chile, having a wide offer of direct flights with competitive prices. European comes through flights from Spain, France, Netherlands and Italy, since there are direct flights to reach Chile. In Oceania Australia and New Zealand count with direct flight to Chile and in Asia the direct flights are not very often.

In the case of the Chilean Patagonia the Marketing Plan 2016-2018 in its diagnosis has detected that there is a deficient connection, despite its unique characteristics with attractive international hierarchy,

Patagonia only counts with 2 airports, 2 ports and 18 border crossing. In terms of flight connection only it has direct flights from Argentina, and 5 direct domestic flights going to the Chilean Patagonia.

3.1.3. Competitiveness

The World Economic Forum has developed The Travel & Tourism Competitiveness Index (TTCI) (World Economic Forum, 2017) which analyses a set of factors and policies that enable the sustainable development of the travel and tourism sector, which in turn, contributes to the development and competitiveness of a country. This report measures four broad factors of competitiveness which are: The Enabling Environment, The T&T Policy and Enabling Conditions, The Infrastructure and The Natural and Cultural Resources. These factors are organized into subindexes, which are further divided into 14 pillars.

Taking into consideration these factors The Travel & Tourism Competitiveness Report 2017 has situated to Chile in the 48th place out of 136 economies across the world, which it is three places better than the previous report in 2015. In South America Chile is leading this ranking only after Brazil which is in 27th place.

Table 8 Travel & Tourism Competitiveness Index 2017 in South America (Source: TTCI, 2017)

Country/Economy	Rank	Score	Change since 2015
Brazil	27	4.49	1
Chile	48	4.06	3
Argentina	50	4.05	7
Peru	51	4.04	7
Ecuador	57	3.91	n/a
Uruguay	77	3.61	-4
Bolivia	99	3.34	1
Venezuela	104	3.28	6

The Enabling Environment which measures the overall settings to operate in a country considers five pillars, among them, Chile highlight for having the best business environment in South America and the 33rd place across the world. This pillar ponders criteria such as property rights, time to start a business, cost to start a business, tax rate, among others. In Safety and Security Chile as well takes the first place

in South America and the 44th place across the world, among the criteria analyzed to set the score in this pillar, the best mark is in the reliability of police services. In Human Resources and Labour Market Chile has reached the 1st place in South America and 53rd place among the 136 economies of this ranking. The criteria better valued in this pillar are: Ease of hiring foreign employees and ease of finding skilled employees. The only pillars where Chile has not taken the first place in South America within the factor “The Enabling Environment” are Health and Hygiene, 3rd place, and ICT readiness, 2nd place. The lowest criteria of these pillars are physician density and mobile network coverage respectively.

Table 9 The Enabling Environment in South America (Source: TTCI, 2017)

Country/Economy	Business Environment	Safety and security	Health and hygiene	Human resource and labour market	ICT readiness
Brazil	3.5	4.5	5.3	4.3	4.6
Chile	5.0	5.7	5.2	4.8	4.9
Argentina	3.1	5.0	6.4	4.6	4.7
Peru	4.3	4.5	4.8	4.7	4.2
Ecuador	3.9	5.2	5.1	4.2	3.9
Colombia	4.0	2.6	5.0	4.6	4.4
Uruguay	4.6	5.5	6.0	4.6	5.5
Bolivia	3.0	5.0	4.4	4.0	3.8
Venezuela	2.4	3.3	5.1	3.9	3.5
Paraguay	4.3	4.7	5.0	4.1	3.7
Rank of Chile in South America	1st	1st	3rd	1 st	2 nd
Rank of Chile across the world	33rd	44th	74th	53th	53th

The factor Travel & Tourism Policy and Enabling Conditions ponders specific policies which has an impact in travel & tourism industry. In this factor Chile has heavily highlighted in the pillar International Openness since is the leader in South America and takes the 3rd position in the ranking across the world, this pillar evaluate criteria such as visa requirements, openness of bilateral Air Service Agreements, and number of regional trade agreements in force. Chile has reached the 2nd place in South America in the pillars Price Competitiveness and Environmental Sustainability. Having to enhance the criteria purchasing power parity and baseline water stress correspondingly. The worst pillar evaluated regarding to South America it was Prioritization of Travel & Tourism, where Chile is located in the 3rd position, the weakest point in this pillar is the criteria Government prioritization of travel and tourism industry.

Table 10 Travel & Tourism Policy and Enabling Conditions in South America (Source: TTCI, 2017)

Country/Economy	Prioritization of T&T	International Openness	Price Competitiveness	Environmental Sustainability
Brazil	3.9	2.6	5.3	4.1
Chile	4.6	4.7	5.3	4.1
Argentina	4.6	2.8	4.1	3.4
Peru	4.6	4.3	3.8	4.1
Ecuador	4.7	3.9	5.1	4.0
Colombia	4.1	4.6	4.4	4.2
Uruguay	5.3	2.7	4.0	3.9
Bolivia	3.6	2.8	4.3	4.2
Venezuela	3.4	2.2	5.5	3.7
Paraguay	4.9	2.5	5.0	3.8
Rank of Chile in South America	3rd	1st	2nd	2nd
Rank of Chile across the world	72nd	3rd	39nd	69nd

The Infrastructure factor measure the physical infrastructure of 136 economies taken in this raking, to carry out this measure are considered three pillars. Dislike to the previous factors Chile does not take the first place of any of these pillars, in Air Transport Infrastructure Chile reach the 3rd place shared with Argentina. The worst criteria evaluated for this pillar are the Number of Operating Airlines and the Airport Density. In the pillar Ground and Port Infrastructure Chile got the best position within this factor, reaching the 2nd place in South America getting its best mark in the criteria Quality of Roads and the worst in Road Density. The pillar Tourist Service Infrastructure Chile only got the 4th place in South America being the worst criteria measured Quality Tourism Infrastructure.

The factor Natural Cultural Resources which aims to measure the motivation to travel is based on two pillars: Natural Resources and Cultural Resources & Business Travel. Regarding the first pillar, Chile takes the 8th place out of 10 economies measured in South America, according of the criteria taken into consideration to assess this pillar, the worst qualified it was the Number of World Heritage Natural Sites since Chile does not have, and on the other hand, the best criteria evaluated for this pillar it was the Attractiveness of Natural Assets. Regarding the pillar Cultural Resources & Business Travel Chile got the 5th position in South America, being the worst assessed the Oral and Intangible Cultural Heritage and the best Cultural and Entertainment Tourism Digital Demand.

Table 11 Infrastructure in South America (Source: TTCI, 2017)

Country/Economy	Air Transport Infrastructure	Ground and port Infrastructure	Tourist Service Infrastructure
Brazil	3.7	2.4	4.9
Chile	2.7	3.3	4.4
Argentina	2.7	2.6	4.5
Peru	2.5	2.4	4.7
Ecuador	2.5	3.6	3.9
Colombia	2.8	2.3	3.7
Uruguay	2.1	2.8	4.4
Bolivia	2.2	2.2	3.3
Venezuela	2.0	2.0	3.1
Paraguay	1.6	2.1	3.3
Rank of Chile in South America	3rd	2nd	4th
Rank of Chile across the world	64th	61st	56th

Table 12 Natural and Cultural Resources in South America (Source: TTCI, 2017)

Country/Economy	Natural Resources	Cultural Resources & Business Travel
Brazil	6.1	5.7
Chile	3.3	2.7
Argentina	4.4	4.5
Peru	5.3	3.3
Ecuador	4.9	2.0
Colombia	4.5	3.4
Uruguay	2.5	1.8
Bolivia	4.0	2.0
Venezuela	4.6	2.2
Paraguay	2.3	1.4
Rank of Chile in South America	8th	5th
Rank of Chile across the world	59th	40th

3.1.4. Tourist offers

The government of Chile through its two institution in charge of tourism, Subsecretaría de Turismo (SERNATUR, 2018), has defined the tourist destinations of the country, considering 15 criteria such as amount of arrivals, tourist attractions, amount of accommodations in the area, among others, which are evaluated to every destination which want to apply to to be part of the list of destinations in Chile. According of this selection, Chile has 89 tourist destinations in its territory where 49 are consolidated, 34 emerging and 14 potentials. The Chilean Patagonia counts with 10 tourist destinations, where 4 are consolidated, 4 emerging and 2 potentials.

Table 13 Patagonian destinations in Chile (Source: Subsecretaría de Turismo, 2018)

Region	Destination	Category	Typology
Aysén	Carretera Austral Tramo P.N. Queulat	Emergent	Rural and nature
Aysén	Coyhaique y Puerto Aysén	Consolidated	Urban and nature
Aysén	Chelenko (Cuenca del Lago General Carrera)	Consolidated	Lacustrine and fluvial
Aysén	Provincia de Los Glaciares	Emergent	Rural and nature
Magallanes y de la Antártica Chilena	P.N. Torres del Paine	Consolidated	Rural and nature
Magallanes y de la Antártica Chilena	Estrecho de Magallanes	Consolidated	Urban and nature
Magallanes y de la Antártica Chilena	Tierra del Fuego	Potential	Rural and nature
Magallanes y de la Antártica Chilena	Cabo de Hornos	Emergent	Rural and nature
Magallanes y de la Antártica Chilena	Puerto Edén	Potential	Rural and nature
Magallanes y de la Antártica Chilena	Antártica Isla Rey Jorge	Emergent	Insular

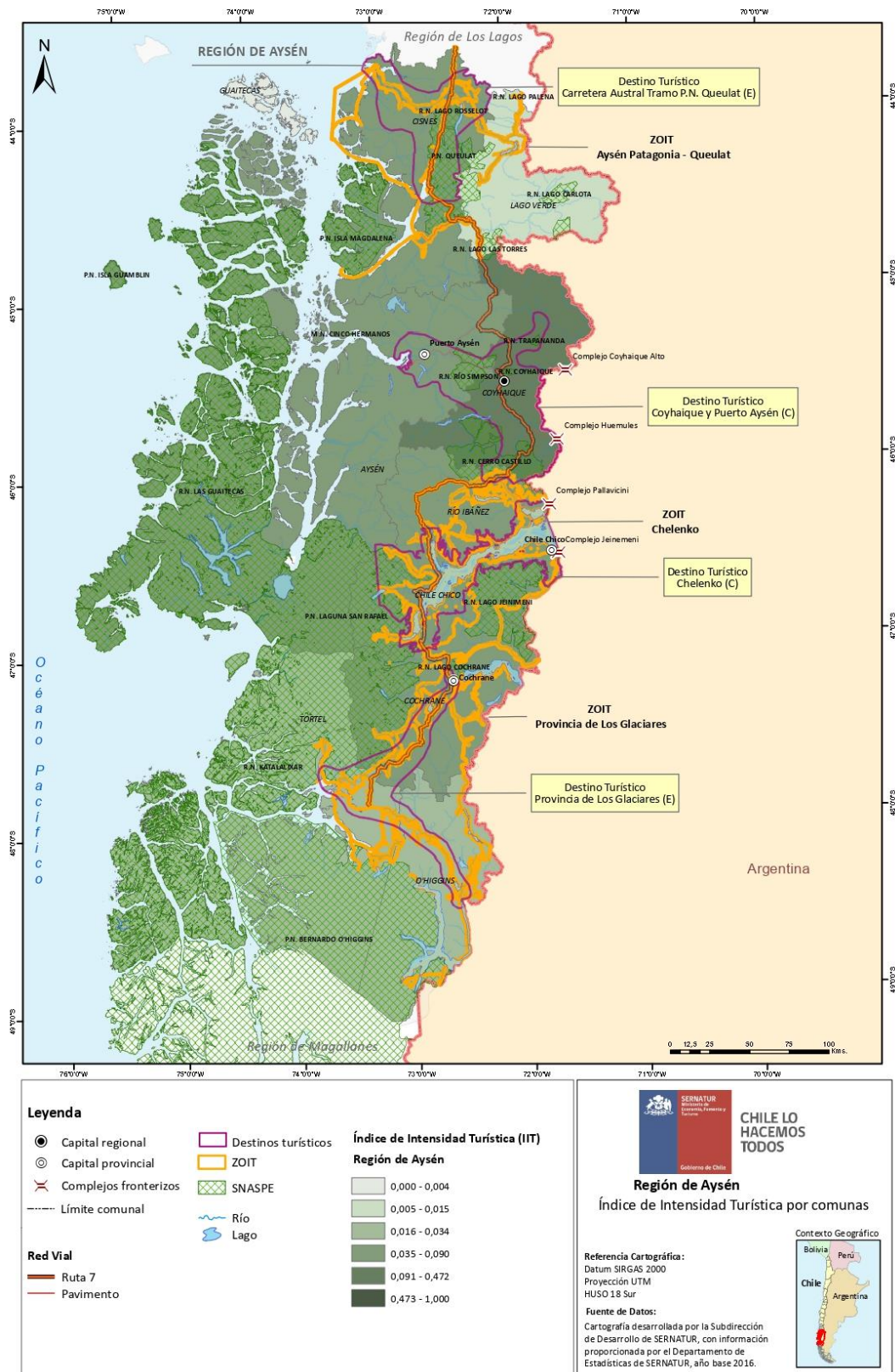


Figure 3 Map showing the tourist destinations according to list published by Subsecretaría de Turismo in Aysén del General Carlos Ibáñez del Campo Region. (Source: SERNATUR, 2018)

According to the report about the accommodation in Chile in 2017 (Instituto Nacional de Estadísticas, 2017) 25.127.369 overnight stays of passengers were registered in Chile, where the tourist accommodations received 12.328.555 passengers, giving an average stay of 2.04 night at national level. Most of the overnight stays belong to the domestic tourist reaching a 61% out of total, while the international tourists cover the 39%, although the average stay is higher for international tourist getting a 2.24 of average stay, and on the hand, the national tourists have an average stay of 1.93.

In Patagonia the average overnight stay is less than the national average, getting a 1.80 average stay. The Patagonian destination with higher overnight stay is Punta Arenas and Estrecho de Magallanes with a 41.2%, Torres del Paine and Puerto Natales getting a 26.5% and Aysén and Coyhaique reaching a 19.2% out of total of overnight stay.

Table 14 Overnight stay in Chilean Patagonia

Region	Tourist Destination	Overnight stay	Arrivals	Average Overnight stay
Aysén	Aysén and Coyhaique	267,129	140,598	1.90
	North Carretera Austral	73,172	35,081	2.09
	South Carretera Austral	88,440	47,758	1.85
Magallanes y La Antártica Chilena	Punta Arenas y Estrecho de Magallanes	572,913	324,021	1.77
	Torres del Paine and Puerto Natales	368,014	212,683	1.73
	Rest of the region	21,362	13,214	1.62
	Total Patagonia	1,391,030	773,355	1.80

The occupancy in 2017 has reached a 39.5% at the national level. In the Chilean Patagonia the only destination which it was over the national average it was Punta Arenas and Estrecho de Magallanes, the rest of the tourist destinations were under the average.

Table 15 Occupancy according to tourist destination in Patagonia

Region	Tourist Destination	Occupancy (%)
Aysén	Aysén and Coyhaique	34.4%
	North Carretera Austral	19.9%
	South Carretera Austral	17.2%
Magallanes y La Antártica Chilena	Punta Arenas and Estrecho de Magallanes	49.1%
	Torres del Paine and Puerto Natales	32.3%
	Rest of the region	13.5%

According to the SERNATUR register the tourist services up to February 2019 were 21.016, where the main tourist services are the tourist accommodations reaching the 41.37% out of total, restaurants and similar with a 13.85%, then the travel agencies and/or tour operators, adventure tourism business and tour guides have the majorities of the services. Most of the tourist services are concentrated in the central zone of Chile getting the 40%, while the Patagonia concentrates the 12% of the tourist services.

Table 16 Amount of tourist services in Chile (Source: Registro Nacional de Servicios Turísticos, 2019)

Type of service	Amount of services
Tourist accommodation	8.694
Restaurants and similar	2.910
Travel agencies and/or Tour operators	2.497
Passenger transportations by interurban road	311
Passenger transportations by maritime road	141
Passenger transportations by air	15
Passenger transportations to the airport	227
Passenger transportations by railway	2
Taxis and tourism buses	546
Rental cars	264
Cable cars	1
Adventure tourism	2.429
Leisure services	480
Handicraft	591
Tourist guides	1.840
Sport services	68
Total	21.016

SERNATUR has developed a volunteering certificated to measure the quality of some tourist services called “Sello de Calidad Turística”, this certification is only available to tourist accommodation, travel agencies and/or tour operators and lastly tourist guides. The tourist service which has the highest amount of quality certifications at the national level is the the travel agencies and/or tour operators with a 8.5%, then the tourist guides with a 5.9% and finally the tourist accommodations with 2.19%. In Patagonia the tourist services with more quality certifications is also the travel agencies and/or tour operators reaching a 9.3%, then the tourist accommodation reaching nearly 2% and lastly the tourist guides with 1.4%.

Furthermore, SERNATUR has created another certification to expose the sustainability of the tourist services called “Distinción en Turismo Sustentable” which only can apply the tourist accommodations,

travel agencies and tour operators. At the national level 1.5% of the tourist accomodations and 2.4% of the travel agencies and/or tour operators count with this certication. In Patagonia are certificated 1.3% of the tourist accomodations and nearly 2% of the travel agencies and/or tour operators.

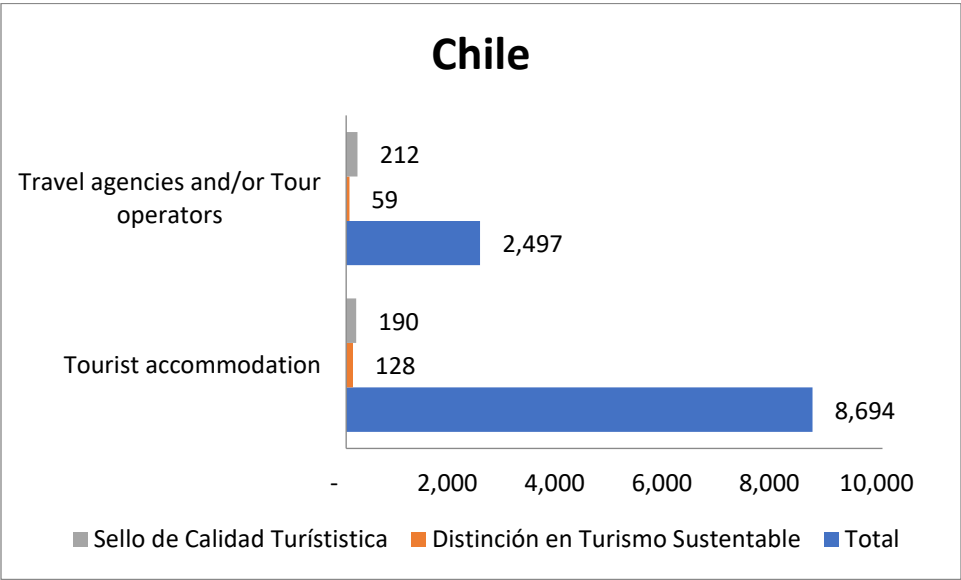


Chart 2 Showing the amount of travel agencies and/or tour operators and tourist accommodation in Chile regarding to their certification

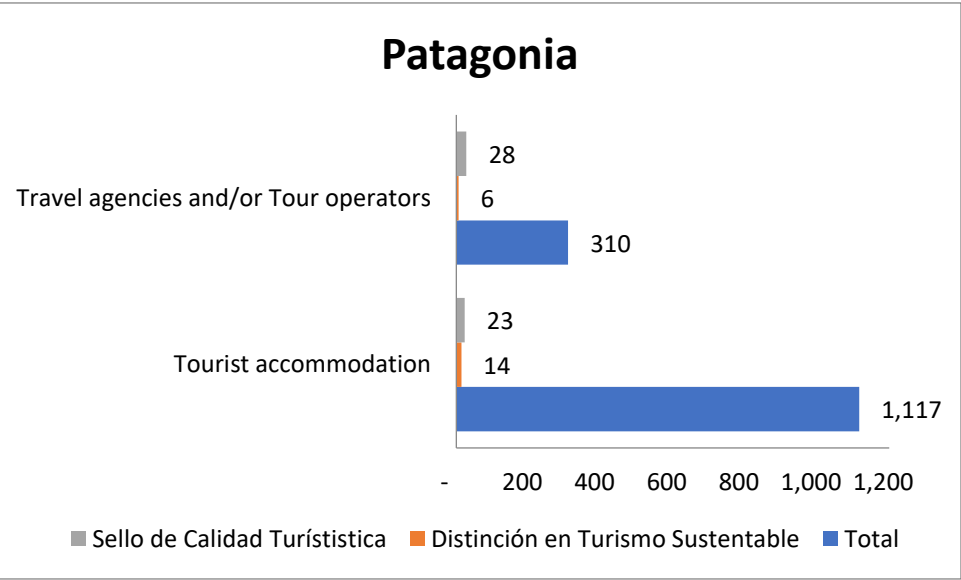


Chart 3 showing the amount of travel agencies and/or tour operators and tourist accommodation in Chilean Patagonia regarding to their certification

3.2. Marketing plan

Chile has developed a tourism national and international marketing plan 2016-2018 (Subsecretería de Turismo, 2015) with the objective to increase the contribution of the tourism receptive industry to the economy of Chile. Along to this general objective, it has established 6 specific objectives:

1. Positioning Chile as one of the indispensable destinations to visit in South America.
2. Increase the arrivals, tourist spending, and conditions needed to attract visitors, looking in turn, to reduce the seasonality.
3. Establish a strategic work process for tourist marketing in Chile.
4. Contribute to the tourism sustainability, through the diversification of the international market, the diversification of the touristic experiences offers and foster the demand in order to develop the current and potential destinations in the country.
5. Ensure the promotion effectiveness and to ease the commercialization the tourism sector to generate demand in the current and potential destinations.
6. Optimize synergies and results in a short, medium, and long term from a strategic framework of tourism marketing, with a comprehensive vision of the country and a joint benefit between sectors.

The goals which have established this international marketing plan are:

- Keeping its historical growth rate and rise the arrivals among 300.000, normal projection, and 400.000, optimistic projection, over the organic growth in 2018.
- Increasing the direct spending by tourist over the organic growth among 400 MM USD, normal projection, and 500 MM USD, optimistic projection in 2018.

The marketing plan starts from the assumption that Chile is perceived as exclusive and conventional destination, unlike other countries in the region such as Peru and Colombia which are perceived as economic and exotic destinations. The strategic of positioning is different regarding on the market, in the case of the regional market the marketing plan considers that Chile must positioning as a destination balanced among exoticism and exclusivity, in order to attract economical and conventional markets. On the other hand, for far markets Chile attempts positioning as leader in exclusivity and in turn, more exotic destination.

According to the Marketing Plan Chile is already the leader in offer several experiences in the nature, thus, this plan attempts to expand this difference and consolidate to Chile as the best country of the region in this matter. Consequently, the plan has set a strategy to promote Chile as a destination, which is based on experiences structured in three groups according to the demand and offer existing in Chile, thus, every group have their own message, channel and way to reach the target markets. The purpose of this strategy is to bring benefit to the demand by boosting the visit of new destinations and, in turn, bringing benefits to the offer by enhancing the level of products development in the potential destinations. The target markets have been selected based on the geographical proximity to Chile, since the markets which are closer to Chile have a different knowledge and positioning of Chile, unlike to the market of long distance, as well as, the medium distance markets count with more chances to visit Chile than the long distance markets. Thus, the distance factor is essential to decide what it has to offer to these markets. Furthermore, in the case of the traditional markets they have been separated in terms of the interests they have in order to make more effective the promotion.

Thus, the foreigner's market are split in different groups according to their interest.

- Group 1 “Recreación y diversion”: This group collects the experiences mostly from consolidated urban destinations, which have offers of entertainment and recreation for all ranges of budget.
 - Message: Functional about the destination
 - Channel: Mostly direct
 - Type: Online and brand activation.
- Group 2 “Chile Collection – Exclusivo y aspiracional”: Within this group are experiences associated with destination well positioned, which counts with world-class attractions, an offer of high level and a diversity of experiences.
 - Message: Aspirational, giving importance to the images and contents.
 - Channel: Direct mix and trade
 - Type: Online, fairs, roadshow, activations of selective brands and promotion campaigns.
- Group 3 “Rústico y Especialista”: This group contains the experiences related with not popular destinations, but in turn, they have world-class attractions. These destinations have a limited offer in terms of quality and quantity, however their added value are authenticity and rusticity.
 - Message: Highlighting the authenticity and rusticity as values through an emphasis of the images and contents.
 - Channel: Generals and directly to the niches.

- Type: Online, sponsorships.

One of the common factors among these 3 groups is that all of them use online tools. Chile counts with two official websites to promote the Chilean destinations; one is addressed to the domestic tourism (<https://www.chileestuyo.cl/>) and another leaded to the international market (<https://chile.travel/>).

4. Methodology

To accomplish the objectives proposed, this study has used the content community of Instagram to obtain the tourist's preferences on both sides of the Patagonia, since this online platform is a popular channel for share contents by visitors, in the case of Patagonia there are over 4 million of post using the hashtag #Patagonia, over 340.000 post using #patagoniaargentina and over 210.000 post related to #patagoniachilena. Thus, there is a vast source of relevant information thanks to the users who share pictures, text and geolocation. It is important to highlight that all these posts are publicly available.

The logical framework of this study to get the Patagonia's preferences is shown in the Figure 5 which explains the steps followed. Firstly, data mining in the case of the Chilean side comes from the use of the content shared using the hashtag #patagoniachilena and in the Argentinian side was used the hashtag #patagoniaargentina. In this study was utilized the hashtag #patagoniaargentina and #patagoniachilena for two reasons, the first one is because it was detected on the hashtag #patagonia several posts which were not related with the territory of Patagonia, for instance they were found posts about the clothes brand Patagonia. The second reason is that it was easier to work with these hashtags due to most of Instagram users associate the posts located in the Chilean territory with #patagoniachilena and the posts geolocated in Argentina with #patagoniaargentina, however that does not happen with the hashtag #patagonia where the posts belong to both parts of the Patagonia.

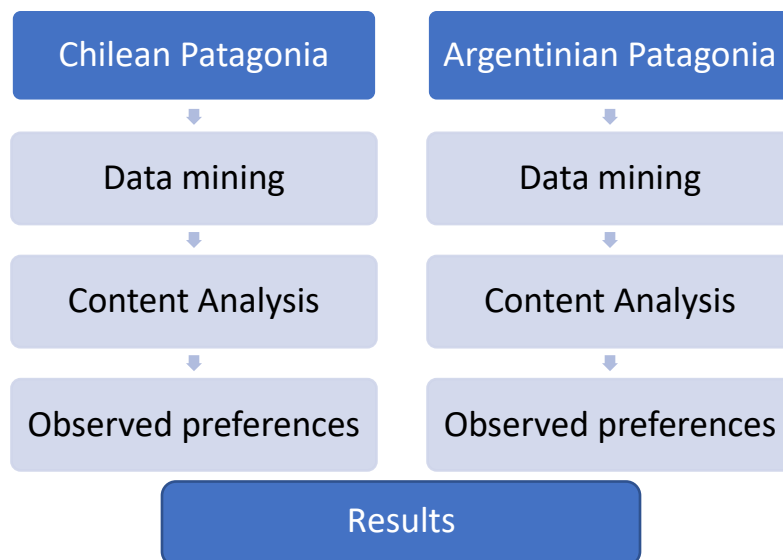


Figure 5 Logical framework of the study to get the preferences in the Patagonia

On the other hand, it was analyzed through a content analysis of the photos and texts content displayed on the official website to promote Chile (chile.travel) in order to review the images and text content that this website highlight to attract tourist to visit the Chilean Patagonia.

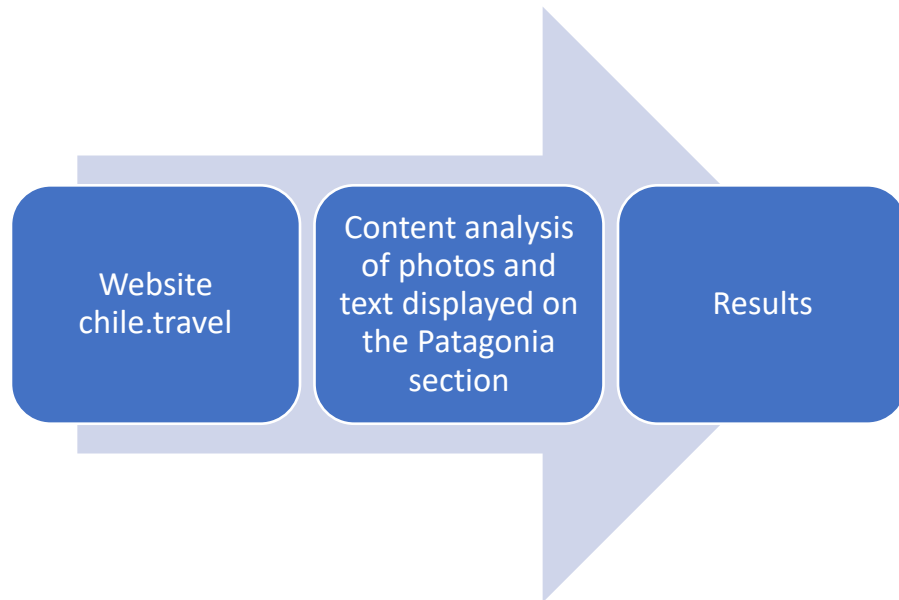


Figure 6 Logical framework of the study to analyze the text and photo content on the Patagonia section of chile.travel

4.1. Preferences in Patagonia obtained from Instagram

4.1.1. Selection of the sample to be assessed

The sample to use in this research it was 400 photos per each Patagonia, thus, in total they were analyzed 800 photos, this amount it allowed to achieve a 95% confidence. The process to choose the sample to analyze it was:

- To collect the data was used the hashtags #patagoniaargentina and #patagoniachilena.
- The posts analyzed were from February to May of 2019. This range was chosen due to the limit to search posts by a hashtag which imposes Instagram.
- It was necessary to delimit the geographical area to analyze since the denomination of Patagonia considers different limits from the north to the south on both sides. In the case of Chile is not clear where exactly starts, due to does not exist a politic limit as a region or province

called Patagonia, however, there is an imaginary limit which it is acknowledged, which starts from the province of Palena to the south. On the other hand, Argentina counts with a region called “Región Patagonica Argentina”, but this region starts farther north than the Chilean side, as it is shown in the Figure 7.



Figure 7 Chilean and Argentinian Patagonia in orange

To figure out this issue, it was considered on the Chilean side the imaginary limits which is compose for the follow areas:

- Palena Province
- Aysen Region
- Magallanes Region (without considers the Antarctic territory)

Then, on the Argentinian side it was considered:

- Chubut Province

- Santa Cruz Province
- Tierra del Fuego, Antártida e Islas del Atlántico Sur Province (without considers the Antarctic territory)

Therefore, taking into account that territory on both sides the comparison was more consistent, since they have more similarities in terms of natural resources, weather and culture. The Figure 8 shows the territory analyzed on both sides, starting from the lavender line to the south.



Figure 8 Patagonian territory to analyze in this research

- To do not use the researcher criteria to select the photos to analyze, they were randomly chosen, to do that, the process was:
 - Open the website <https://www.instagram.com/explore/tags/patagoniachilena/> to select the post to analyze on the Chilean side and

<https://www.instagram.com/explore/tags/patagoniaargentina/> to study the post on the Argentinian side.

- Once the website is open, on the screen appears 6 photos, where always it was selected the first out of 6, as it is shown in the Figure 9.
- Only it has been taken into account the photos posted by travelers and locals, thus, it was not analyzed pictures posted by a company to promote its products.

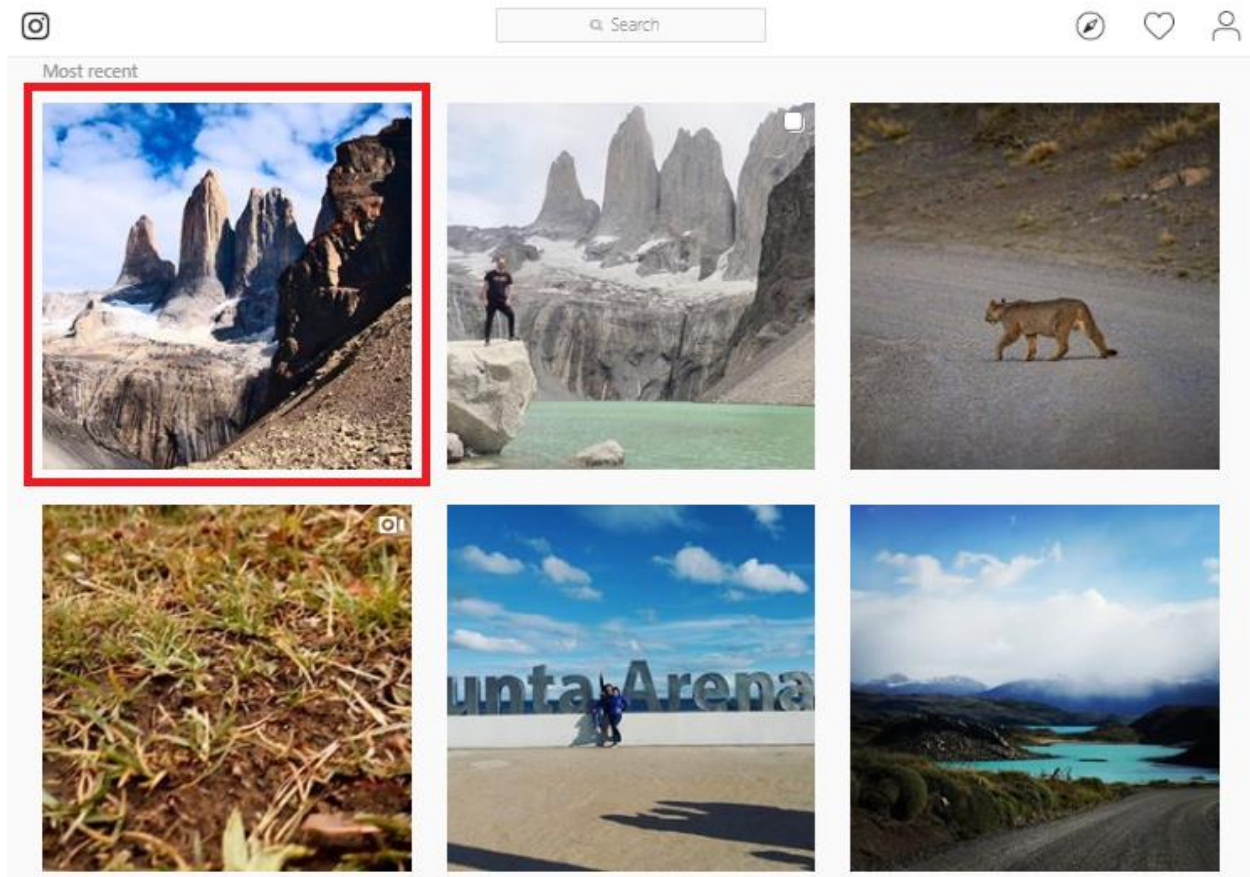


Figure 9 Example of how they were selected the photos to analyze them.

4.1.2. Categorization of the photos through content analysis

Through a content analysis the photos of the sample has been manually classified into different categories created by (Hausmann et al., 2018) to analyze the preferences of the visitors in natural areas (Table 11), the photos can belong to more than one category.

Table 17 Categories to classify photos

Category	Description
Biodiversity	Animals or plants exposed as the main object of the picture.
Landscape	Photos which has been taken attempting to show as much as possible of a certain natural area
Human activity	People doing recreational activities, including objects that were directly involved in those activities.
Posing	Pictures where the people are the main object such as selfies.
Accommodation	Pictures showing touristic infrastructures
Food	Food or drinks as main object of the picture.

In turn, every category was subdivided into subcategories suggested by the content of the posts, attempting to provide more details about the content of the photos analyzed. Then, the subcategories created were

- Biodiversity: This category was splitted up to 37 subcategories based on the information provided by the users. Among these categories are: Guanaco, Puma, Plant, Mushrooms, Fox, Condor, among others.
- Landscape: Counts with 22 subcategories such as Beach, City, Lighthouse, River, Port, Sky, Volcano, Mountain, Lake, among others.
- Human activity: The photos suggested 17 human activities different which have become into subcategories. These are Biking, Climbing, Diving, Fishing, Kayaking, Motorcycling, Horsing, Sailing, Surfing, among others.
- Posing: Besides to the act of posing, it is relevant to register which is the background of these category, since it helps to reveal the preferences of the visitants (SOURCE). Thus, they were created 20 subcategories to describe the background such as City, Fjords, Glacier, Route, Mountains, Sea, Snow, City sign, among others.
- Accommodation: Campings, cabins, hotels, hostels and shelters.

- Food: They were identified 8 categories such as Beer, Cake, Drinks, Mate, Spit roast lamb, among others.

Besides, categorize and subcategorize every post, it was registered the language of the post, the location where it was taken the photos and the date regarding, as it is shown in the figure below.

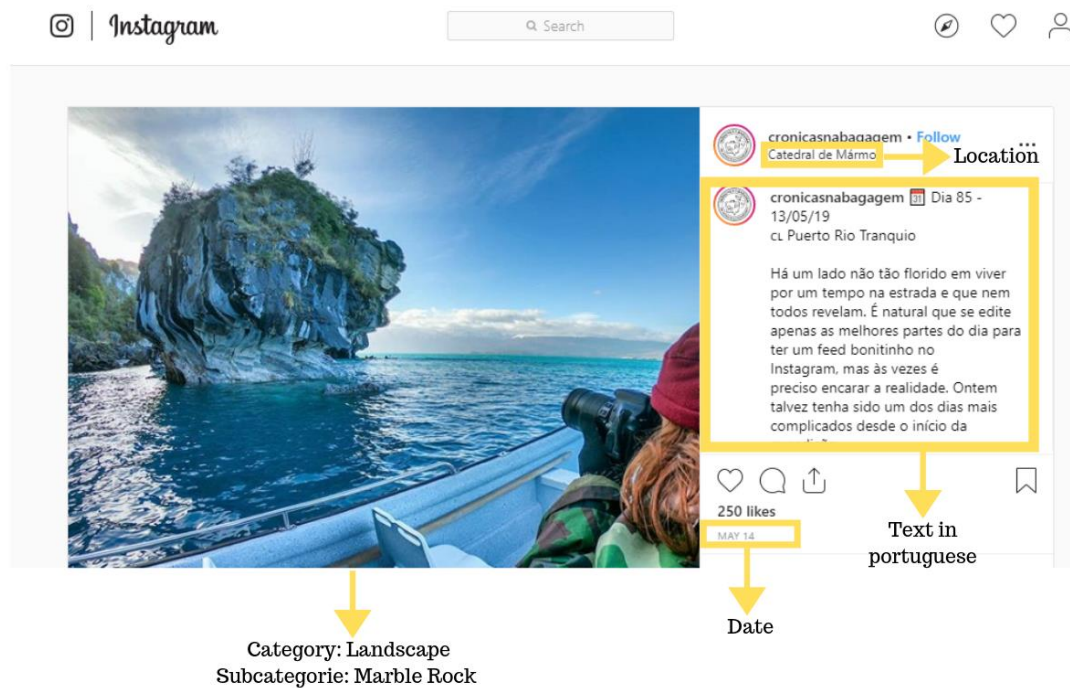


Figure 10 Example of data collected of every post

4.2. Description of the website chile.travel

On the website chile.travel Chile split the promotion in 5 zones which are: North and the Atacama Desert, Central area, Santiago and Valparaíso, Rapa Nui (Eastern Island), The South, its lakes and volcanoes, Patagonia and Antarctica. As this study is focused on the Chilean Patagonia, the description of the website will be referent to the last zone mentioned.

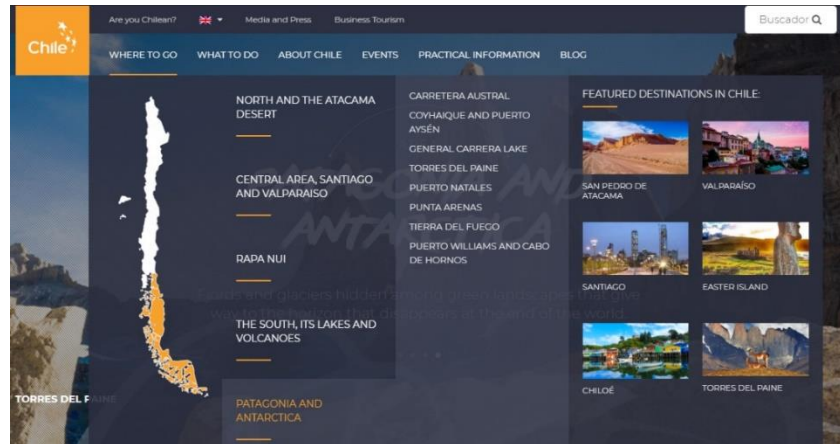


Figure 11 Official website to promote Chile in the international markets, showing the tourist destination in Patagonia and Antarctica (Source: <https://chile.travel/>)

As it can be appreciated in the **Error! Reference source not found.**, Chile promotes 9 tourist destinations on the official website which are coincident with the destinations mentioned declared by SERNATUR exposed in the point 3.1.4 of this study, although with the exception of Antarctica Isla Rey Jorge. It should be noted that the names of the destination used on the website chile.travel are not exactly the same names than the list published by SERNATUR. In the current study, the content analysis only has taken into consideration the content presented by chile.travel through text and images, not other elements such as color, typography and consistency. Since as it was mentioned previously, the aim in this study is establish a comparison of the Chilean Patagonian tourist destinations declared by SERNATUR and promoted by the website chile.travel with the destinations and, in turn, with the elements such as mountains, glaciers, biodiversity, among others, most photographed on Instagram, in order to analyze if the content published by chile.travel is coherent with the preferences of the visitors.

Once in the area Patagonia and Antarctica the website shows one image out of four at the time, where they are moving as slides of a presentation, these picture are landscapes in different locations (**Error! Reference source not found.**), showing some attributes of the Patagonia such as a glacier in San Rafael

Lagoon, a glacier on a mountain located in Pumalin National Park, a turquoise river called Palena River and the mountains of Torres del Paine National Park .

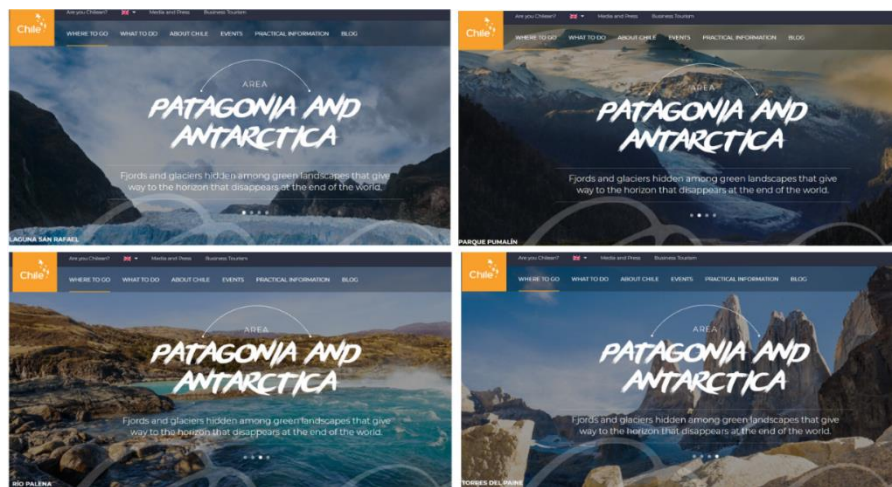


Figure 12 Photos at the beginning of the Patagonia and Antarctica presentation on the website *chile.travel*

Below to the slide presentation of some of the Patagonian attractives, it is displayed randomly 5 out of 9 tourist destination of this area, through an image plus the name of the tourist destination. The destination located in the middle highlight getting a bigger image and font size of the name, as it can be seen, for instance, in the Figure 22.

Once clicked on the destination selected, the website has always the same structure: First, it displays a photo which covers the whole screen with the destination name, below it is presented a description of the destination, then it shows the attractions to discover along the destination through images and the name of the attractions over the images, it should be noted that the attractions displayed in this section are not, all of them, coherent with the surface which covers the tourist destination according to the map showing which expose the area which covers each tourist destinations, even in some cases the attraction are presented in more than one destination. Then, the following sections are not specifically related unique with the destination selected, since contains overall content. These sections are Activities you can do in Chile, Maps events and more, Discover more through the experiences of other travelers, and lastly Explore other destination.

Below is described the nine tourist destinations of the Patagonia and Antarctica area, as it is showed on the offical website to promote Chile (*chile.travel*). As it was explained previously not all the attraction are coincident with the area of the destination exposed in Figure 3 and Figure 4. Thus, for an easier

understanding in the section "Attractions of the destination" it was described the attractions which really belong to the destination according to the area showed the previous point of this study.

5. Results

5.1. Preferences identified in the Chilean and Argentinian Patagonia

From the 800 posts analyzed in total, the vast majority of preferences on both sides belong to the category Landscape reaching a 49.3% on the Chilean side and a 48.3% on the Argentinian side, exposing clearly the nature-based tourism of the Patagonia. Then on both sides the second place of preferences belongs to the category Posing, although with a significant difference among them, the Argentinian side with a 25.5% out of total has 34 more posts than the Chilean side which got a 17% of its territory. Afterward, the users have registered different preferences on both sides, as it is exposed in the Chart 4 on the Chilean side after Landscape and Posing, the follow category was Biodiversity reaching a 16% out of total posts, which represent a significant difference with respect to the same category on the Argentinian Patagonia which got a 9%. The Human Activity category got the 4th place on the Chilean side with a total of 48 posts, only 1 more than the Argentinian side, getting on both side a 12% out of total. The remaining categories such as Food and Accommodation only got less than 3% on both side, thus, they were not considered in the analysis.

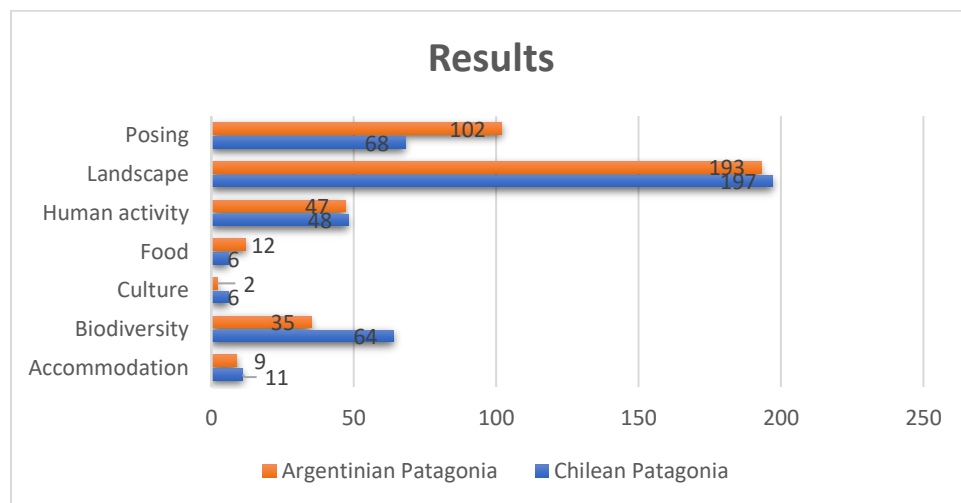


Chart 4 Results of categorization of posts on the Argentinian and Chilean Patagonia

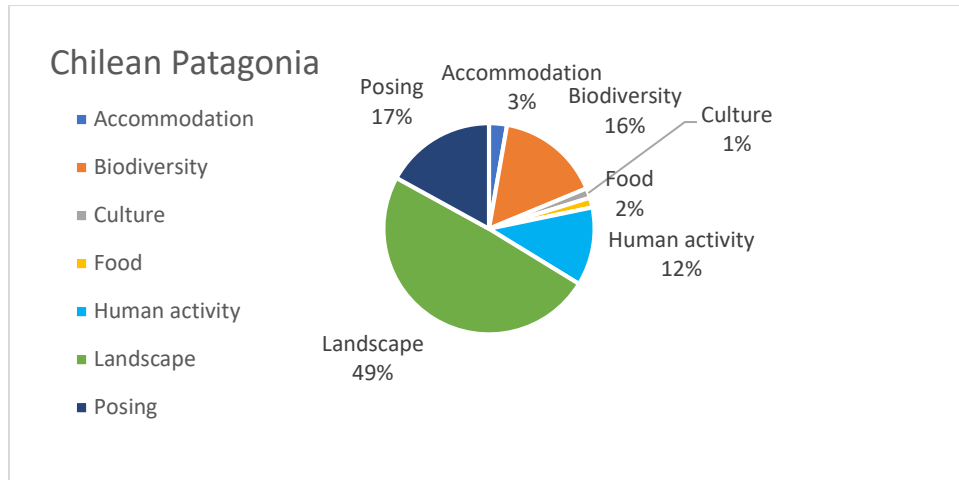


Chart 5 Results of posts categorized on the Chilean Patagonia

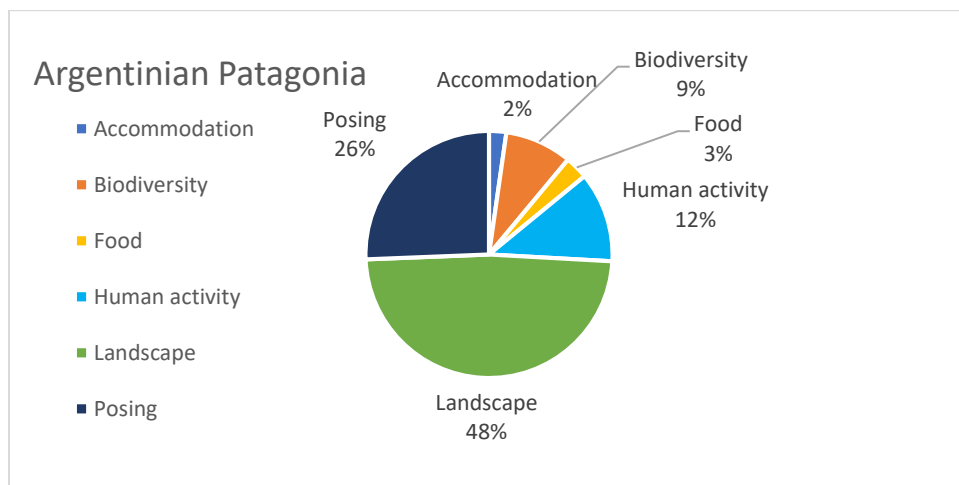


Chart 6 Results of posts categorized on the Argentinian Patagonia

5.1.1. Landscape

Within the category landscape (see Chart 7), which has only a difference of 4 photos among the Chilean and Argentinian side, on both sides the mountains have been the most photographed element, revealing to be the main attraction of the landscapes. On the Chilean side, most of the pictures where the main object were mountains, they were taken in Torres del Paine National Park reaching a 60% out of total of this subcategory, secondly with a 16% the photos were taken in Cerro Castillo National Park. The remaining 24% is distributed in 10 places.

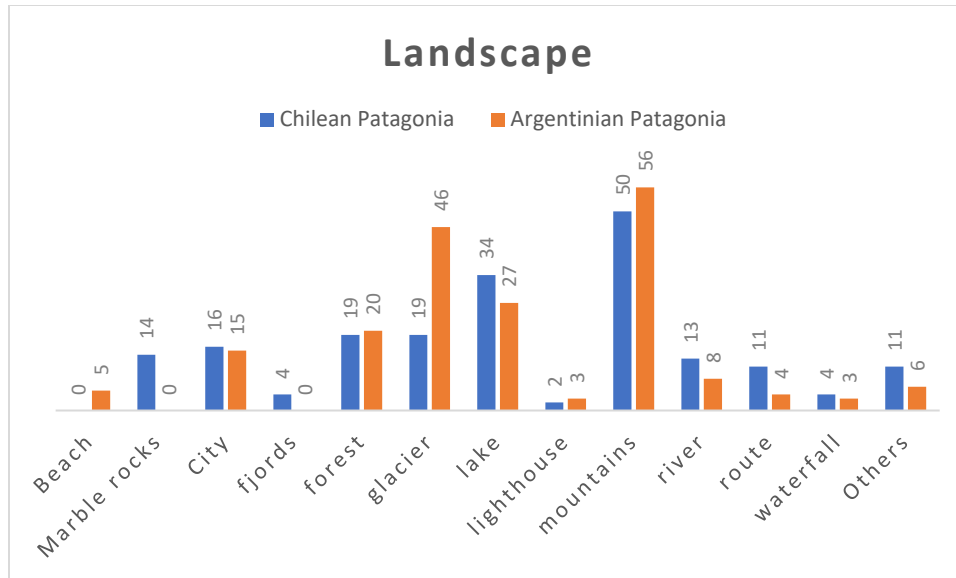


Chart 7 Results of Landscape category

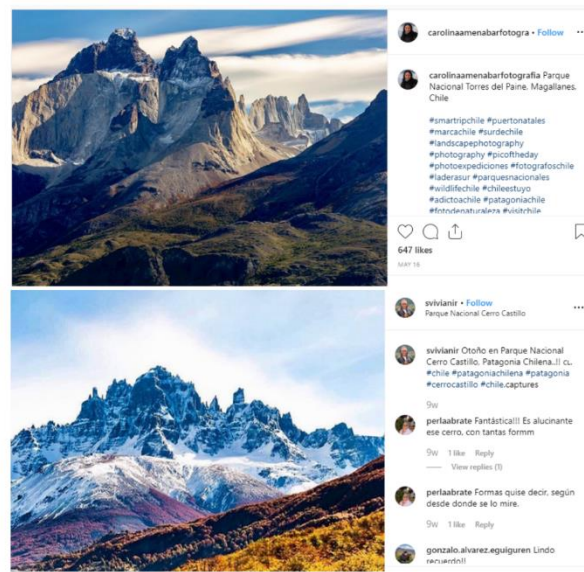


Figure 13 Examples of posts which expose the mountains of Torres del Paine (above) and Cerro Castillo National Park (below) in the Chilean Patagonia.

On the Argentinian side, as the geolocation of the photos show, the vast majority of the mountains photographed were in Los Glaciares National Park getting a 68% out of total of this subcategory, where the most post are associated to El Chalten Mountain. The second place which has most mountains photographed is Ushuaia with a 14% of this subcategory. The remaining 18% is distributed evenly in 10 places. Thus, both on the Chilean and Argentinian side the photographs associated to mountains are spread mostly in 2 places respectively.

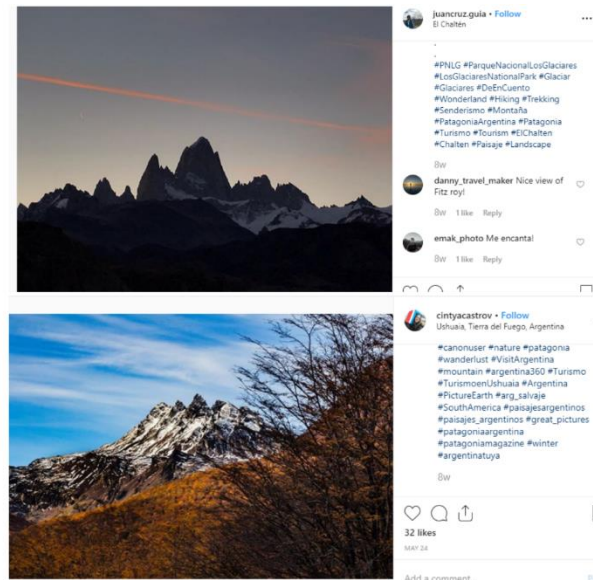


Figure 14 Examples of posts which expose the mountains of Los Glaciares National Park (above) and Ushuaia (below).

The second element most photographed in the Chilean Patagonia was the Lakes reaching a total of 34 posts, overcoming in this subcategory to the Argentinian side in 7 posts. The photos of lakes are dispersed in 20 different places, therefore, there is not a specific place which has a huge percentage of the photos, although 70% of the places registered by the location on the posts where the lakes were the most highlighted element belong to Aysén Region. Due to the Chilean geography its territory is full of lakes, thus, the lakes are not an exclusive resource of a place.

In the case of the Argentinian side the glaciers were the second object most photographed getting 46 posts overcoming vastly to the same subcategory on the Chilean side which only got 19 posts. Around 78% of the posts were geo-tagged in the glacier Perito Moreno.

The posts where the key element was the forest has a similar behavior on both sides, getting 19 posts on the Chilean side and 18 on the Argentinian side. On the Chilean Patagonia the posts belong to 11 places, consequently none of the place overcome the 3 times of posts of this subcategory. The forests are present through whole Patagonia being an attractive element for visitors as is exposed in this research.

The subcategory City within the Landscape category reflects the photos dedicated to cities in Patagonia, in terms of number of posts the Chilean and Argentinian side are similar with a difference among them of only one post. The Chilean Patagonia counts with 16 photos in this subcategory and they are dispersed in 9 cities, Punta Arenas with 4 city landscape photos and Caleta Tortel with 3, they are the

most photographed cities in this sample. On the other hand, the Argentinian side most of the the posts are concentrated in Ushuaia, getting a 73% out of total of this subcategory.

The fifth elements most photographed in Chile were the Glaciers along with the Marble Rocks. In the case of the Glacier subcategory there is vast difference among the Chilean and Argentinian side, Chile counts with 14 posts which were located by the user on Instagram in 7 different locations, highlighting in this matter Torres del Paine National Park, Laguna San Rafael National Park and Bernardo O'Higgins National Park each one with 3 posts in the Glacier subcategory. While Argentina has 46 posts in this subcategory vastly surpassing Chile and being the second most photographed landscape element in the Argentinian Patagonia, the place which has heavily most of the photos is Los Glaciares National Park and specifically the Perito Moreno Glacier, with a 91% out of total in this subcategory.

The subcategory Marble Rocks only belongs to Chile since the Argentinian side does not count with this natural resource. They were 14 photos where the main component was the Marble Rocks, they are known as "Catedrales de Marmol" and are located in Aysen Region.

5.1.2. Posing

This category is the second most popular on the Chilean and Argentinian Patagonia, although with a significant difference of 34 posts more on the Argentinian side than the Chilean part, as it is shown in the Chart 4. The subcategories show the main objects of the background, which has a significant importance since in most of the cases the visitors want to share with their relatives and friends the background along with them (See point 2.2). The amounts of posts related with all the subcategories on both Patagonian sides are exposed in the Chart 8.

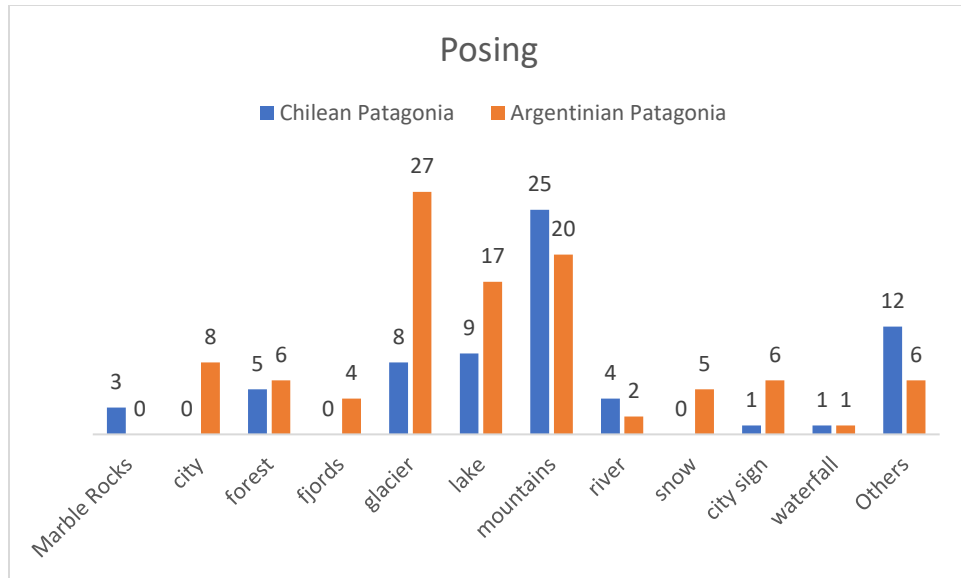


Chart 8 Results of Posing category

The findings show that on the Chilean Patagonia the visitors have a clear preference to pose with mountains which is coherent with the findings of the Landscape category, due to the mountains are the most photographed subcategories on both categories, as well as, the most popular mountains on the background of the Posing photos are the mountains located in Torres del Paine National Park which concentrates a 72% of the photos, and the mountain of Cerro Castillo National Park with a 16% out of total of this subcategory, what is similar to the results of the subcategory Mountains that belongs to Landscape category. On the Argentinian side the most photographed mountains are in Los Glaciares National Park concentrating 75% of the photos assigned to this subcategory, it should be noted that it is coincident as well with the preferences registered with the Mountains subcategory which belongs to Landscape Category.

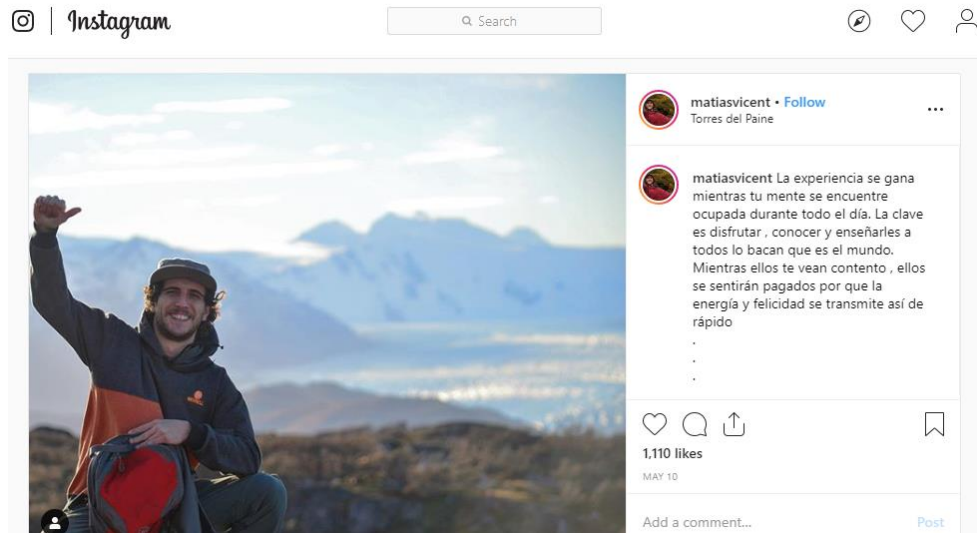


Figure 15 Example of post associated to the category Posing and subcategory Mountains on the Chilean Patagonia

The subcategory of Glacier does not have a relevant amount of posts on the Chilean Patagonia, it has only 8 posts, on the Argentinian side Glaciers are the main object of the photo's background overcoming slightly to the subcategory of mountains. A 93% of the posts have a geolocation in Los Glaciares National Pak, and specifically an 82% of the photos Posing the backgrounds is the glacier Perito Moreno, which proves the impressive which this glacier is for visitors. Thus, the categories Posing and Landscape have evidence a significant difference of preferences of the visitors on both sides, as the Argentinian Patagonia has positioned the glaciers as one of the main tourist attraction.

The other preferences of the tourists to pose were gathered in subcategories such as River, Snow, City Sign, City, Forest, Marble Rocks, waterfalls and others which grouped several subcategories which few numbers of posts associated.

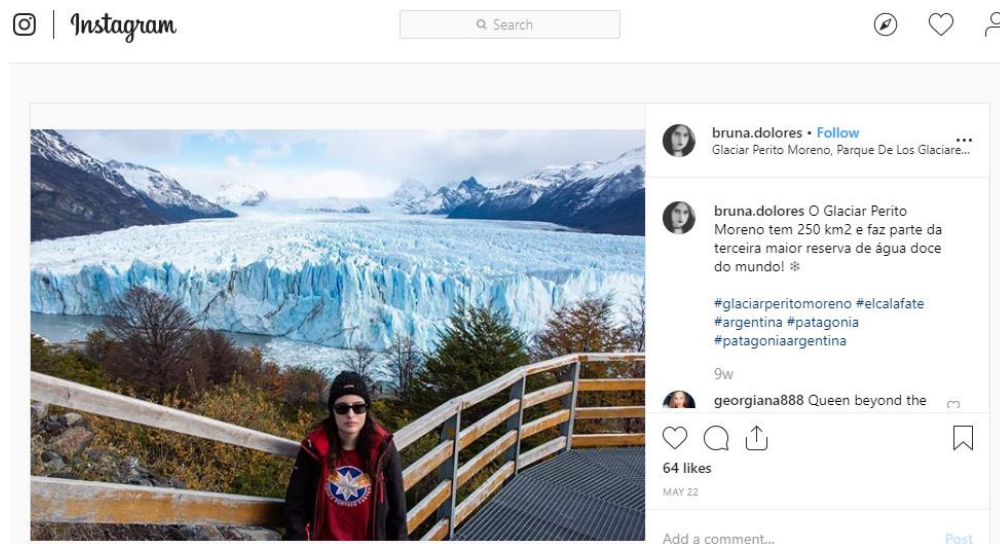


Figure 16 Example of post associated to the category Posing and subcategory Glacier on the Argentinian Patagonia

The subcategory Lake concentrates an important number of photos on both sides, especially on the Argentinian Patagonia which has almost the double of posts of this subcategory than Chile, reaching 17 posts. As the posts of lakes linked to the category Landscape, they are almost evenly distributed, only slightly highlighting of the rest, the lakes located in Torres del Paine National Park on the Chilean side and the lake Laguna Esmeralda on the Argentinian side.

5.1.3. Biodiversity

This category got the third place in terms of preferences by the visitors of the Patagonia on the Chilean side. The results regarding Biodiversity category expose an important difference among Chile and Argentina, on the Chilean Patagonia were found 64 posts, while on the Argentinian side 35 posts. The posts which belong to Biodiversity category were gathered in 5 subcategories which are: Birds, Animals, Sea Mammals, Trees-plants-mushroom, and Insects, as it is shown on the bar Chart 9. To highlight in this category is the complete information which provide the users in their post about the biodiversity, even in some cases giving the scientific name.

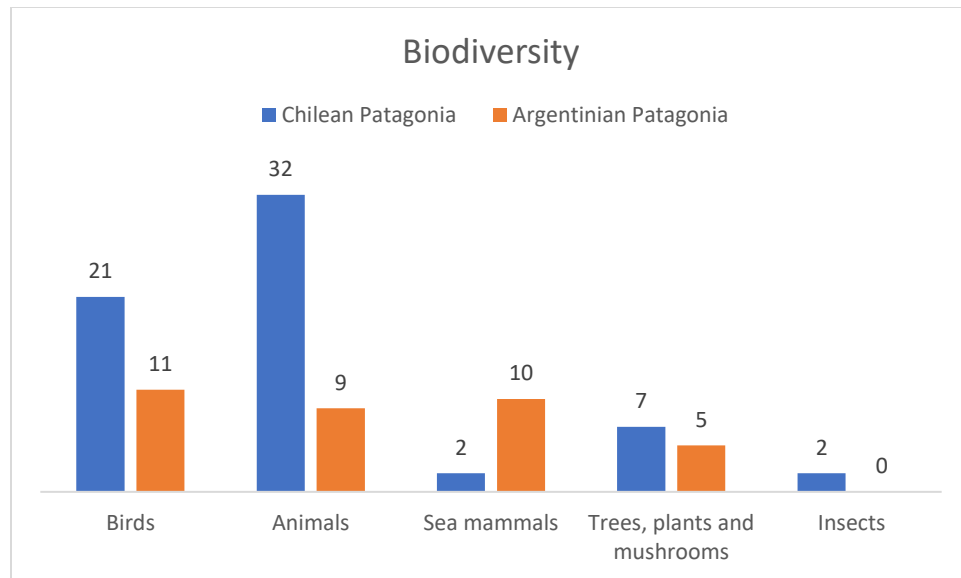


Chart 9 Results of Biodiversity category

The Animals subcategory got the majority of the posts on the Chilean Patagonia, reaching the 50% out of category. They were identified 7 different animal species, highlighting the Concolor Puma with a 50%, followed by guanacos with a 20% and sheep getting a 12% out of the subcategory. An 72% of photos regarded this subcategory were taken in Torres del Paine National Park, the rest 28% is spread in 6 places along to the Chilean Patagonia. On the Argentinian side, with only 9 posts associated, the animals photographed were mostly guanacos and foxes dispersed in 7 places of the Argentinian territory.

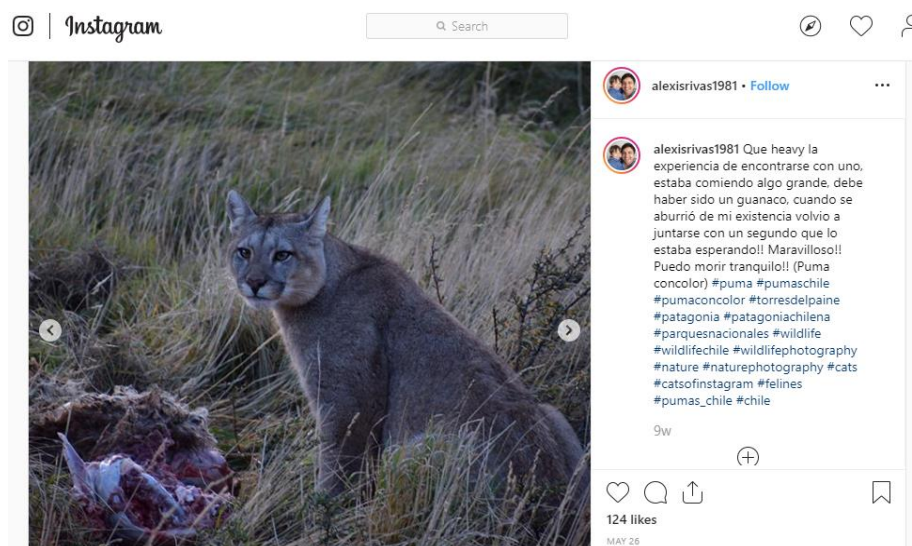


Figure 17 Example of post associated to the category Biodiversity and subcategory Animals on the Chilean Patagonia

The subcategory Birds has the second place of preferences within the Biodiversity category on the Chilean part, getting an 32.8% out of this category and exposing 16 different types of birds. The most popular is the Condor accomplishment an 19%, followed by Albatros Ceja Negra and Martin Pescador, both with an 9.5% out of this subcategory. An 43% of the posts of this subcategory were taken in Torres del Paine National Park, proving the wide biodiversity which host this national park, the rest of the posts are spread on 9 different locations along the Chilean Patagonia. On the Argentinian side, it has 11 posts linked to this subcategory, representing 5 species of birds standing out the Carancho and Pajaro Carpintero with 3 posts associated each one. According of the geolocation given on the posts Los Glaciares National Park concentrate most of the photos, getting an 54.5% out of this subcategory.

The rest of the subcategories represent the other elements of the biodiversity present in the Patagonia, although they did not capture the same interest by visitors as the other subcategories on the Chilean Patagonia.

5.1.4. Human Activity

This category in terms of amount of posts is almost equal on both sides, having only one post of difference among them. According to the posts analyzed they were created 17 subcategories which are mostly related with sports, as it can be appreciated on the Chart 10.

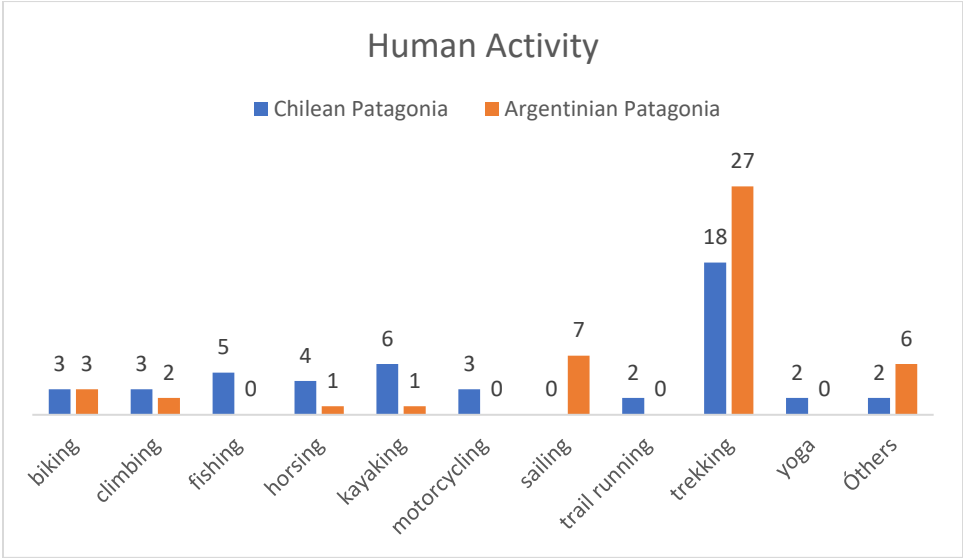


Chart 10 Results of the Human Activity category

The most popular activity by far is trekking or hiking in Patagonia, reaching on the Chilean part an 38% out of this category, while on the Argentinian side has overcome the half of the preferences of this category getting a 57%. On the Chilean Patagonia this activity is concentrated heavily in Torres del Paine National Park, since around 61% out of the photos of hiking were located there. It should be noted that this national park is known worldwide thanks to its stunning trails such as “W” circuit and “O” circuit. The second most visited place, although far of Torres del Paine National Park, with a 11% out of the preferences in this subcategory is the Exploradores Glacier, which has the characteristic of being suitable for hiking in some parts of its surface. On the Argentinian part is also this activity concentrated in one place which is Los Glaciares National Park getting a 74% out of the posts of this subcategory.

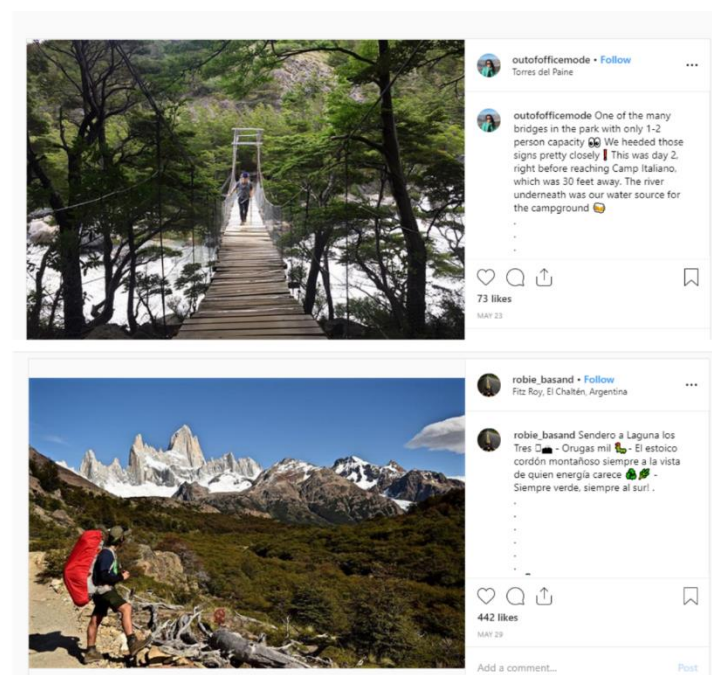


Figure 18 Examples of posts which expose the trekking activity in Torres del Paine National Park (above) and Los Glaciares National Park (below)

The other activities detected in this sample on both sides of the Patagonia, although with much less posts associated, they were Biking and Climbing with similar amount of posts on both sides, then Fishing, Horsing, Kayaking, Yoga, Trail Running and Motorcycling with a higher presence on the Chilean side and, on the other hand, Sailing with existence only on the Argentinian Patagonia.

5.1.5. Location of the preferences in the Chilean Patagonia

As it was explained in the point 4.1 the Chilean Patagonia considers three regions: Los Lagos, Aysén del General Carlos Ibáñez del Campo, and Magallanes y de la Antártica Chilena. As the posts count with geolocation, this feature, it has allowed to classify the posts by location. Thus, below it is expose the amount of posts by region, exempting the posts which belong to the road Carretera Austral, which in total are 10, since this road pass of more than 1.000 kilometers pass for two regions, and on Instagram the users have shared the photos related with this route using the location as “Carretera Austral” without specify to which region the photos were taken.

5.1.5.1. *Los Lagos Region*

Los Lagos Region in total has 23 photos, getting a 5.8% out of 400 posts analyzed in this research, which it is clearly a small part in comparison with the other regions, it should be noted as it was explained previously, in this region was taken into consideration only a province of its whole territory.

The 23 posts are distributed in 10 locations, highlighting Futaleufu and Pumalin National Park getting 21.7% out of this region each one. On both places, the category which has more numbers of photos is Landscape.

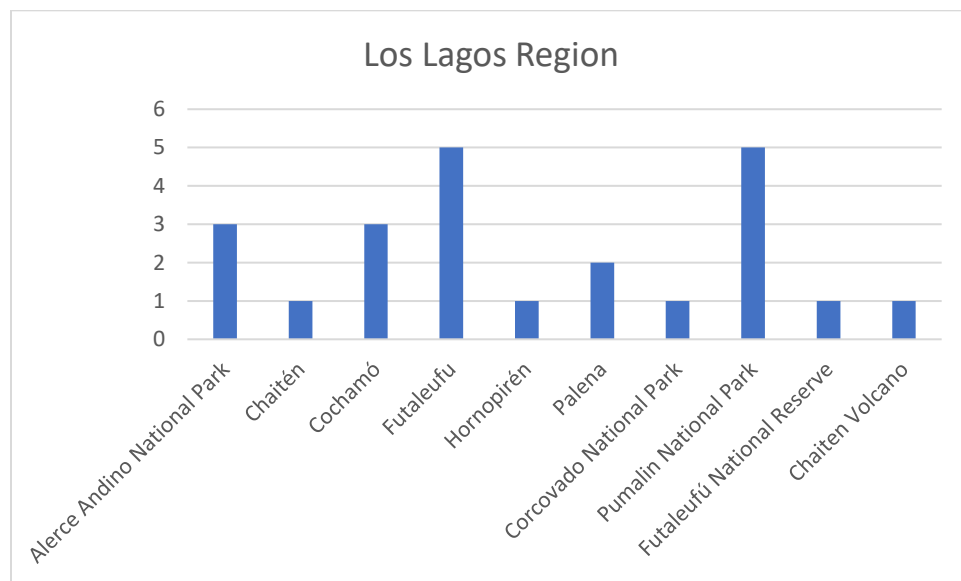


Chart 11 Distribution of posts in Los Lagos Region

5.1.5.2. Aysén del General Carlos Ibáñez del Campo Region

The Aysén del General Carlos Ibáñez del Campo Region is on the second place of preferences, not counting Carretera Austral road, achieving 178 posts which means a 44.5% out of total posts analyzed on the Chilean Patagonia. The photos are spread in 30 different locations of this region, although in the chart below are expose 19 locations in order to make it easier to understand, thus the location with less than 2 posts associated were gathered under the label “Others”.

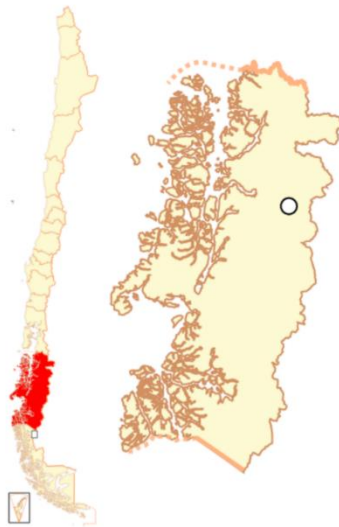


Figure 19 Aysén del General Carlos Ibáñez del Campo Region

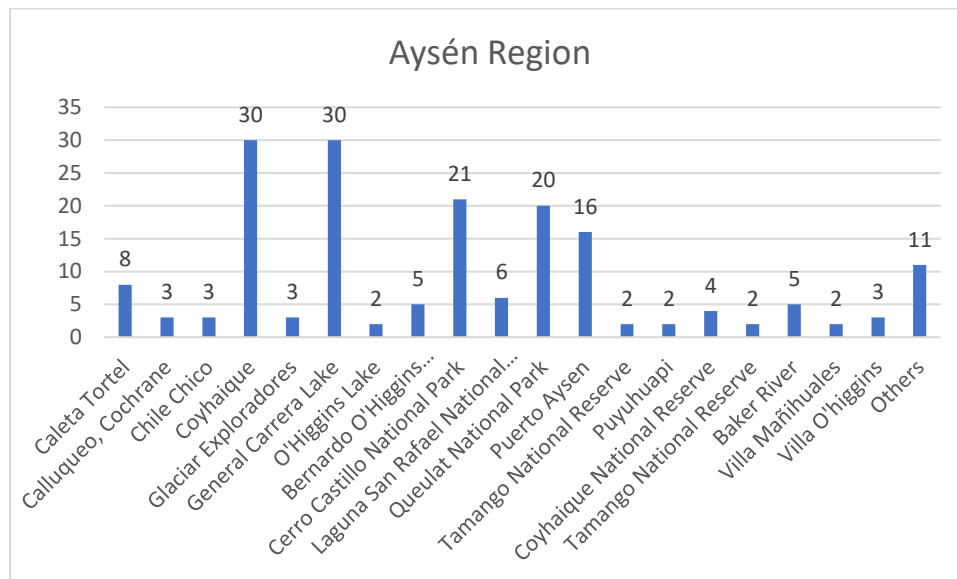


Chart 12 Distribution of posts Aysén Region

As it can be appreciated in the Chart 12 the locations most photographed were the city of Coyhaique and its surroundings, as well as, of the General Carrera Lake, both of them have gotten almost a 17% out of total of this region. In the case Coyhaique a 40% of the post regarded to the category Landscape, 20% related to Biodiversity and nearly 17% to Human Activity category. In the General Carrera Lake most of the pictures (57%) are focused in the natural attraction marble rocks located in this lake. The third place most photographed in the region was Cerro Castillo National Park, where by far the biggest attraction is the mountains since cover nearly 67% of the preferences through the category Landscape and Posing.

The Quelat National Park counts with 21 posts, where it stands out the snowdrift as the most impressive attraction manifested by photos belonging to the Landscape and Posing category getting a 45% out of the total of the photos located in this National Park.

Puerto Aysen, which is the capital of Aysen province, has gotten 16 posts which represents the 9 % out of the Aysén Region. The posts geolocated in this city are distributed in a wide range of preferences given by the attractions of this city and its surroundings, although none of them is strongly predominant. For instance, the category Landscape which has more photos associated, it has registered as a subcategory River, Forest, Sky, Mountains and City landscape.

The city Caleta Tortel located in Capitán Prat province, has gotten 8 posts which is 4.5% out of the posts in Aysén region. The posts show regarded this location are most of them focused in the beauty of this city, as it can be appreciated through the categories associated.

Other destinations where geolocated by the users of Instagram but with less amount of photos associated how is the case of Chile Chico, Laguna San Rafael National Park, Glaciar Exploradores, O'Higgins Lake, Bernardo O'Higgins National Park, Tamango National Park, Baker River, Villa Mañihuales, Villa O'Higgins, among others.

5.1.5.3. Magallanes y de la Antártica Chilena Region

This region has the major concentration of posts reaching a 47.3% out of total sample of the Chilean Patagonia, overcoming slightly to Aysén del General Carlos Ibáñez del Campo Region. Unlike to the previous region, the Magallanes y de la Antártica Chilena Region has a large part of the posts concentrated in one area which is Torres del Paine National park, as it can be appreciated on the Chart 13, getting a 72.5% out of the total of posts located in this region, the remaining percentage is distributed in 17 places.



Figure 20 Magallanes y de la Antártica Chilena, Chile

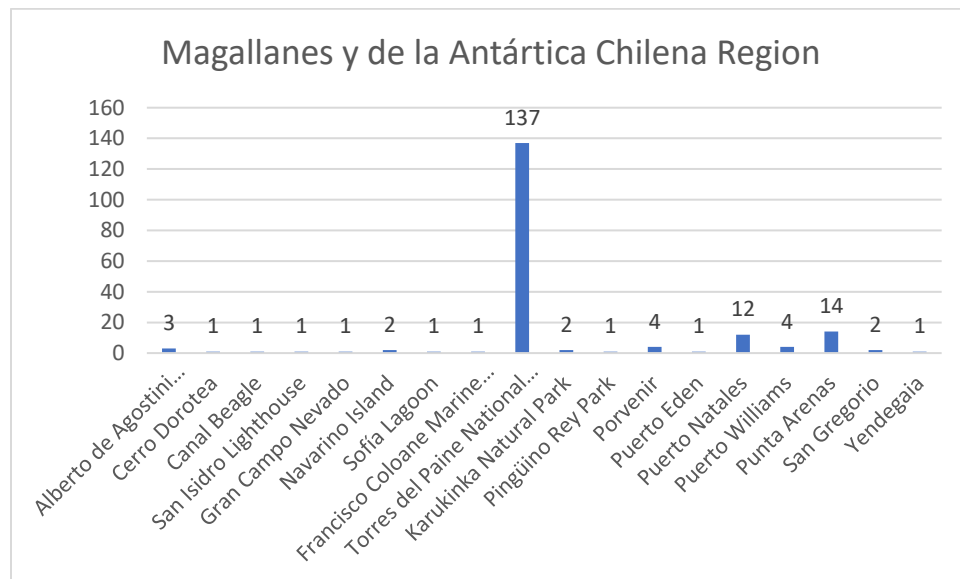


Chart 13 Distribution of posts in Magallanes y de la Antártica Chilena Region

According to the results based on the posts done by the users of Instagram Torres del Paine National Park is clearly the main destination in the region, but also in the Chilean Patagonia. The category with the highest number of post related is Landscape getting 49 posts which is a 36% out of the preferences in Torres del Paine National Park, within the Landscape category the subcategory which highlight is Mountains with nearly 61% out of the total of the category, showing that the main attraction to the users of Instagram who take photos about landscapes is the mountains called Torres del Paine. Secondly

is the subcategory River, with a big difference from the subcategory Mountains, getting around 12% out of the Landscape category, where the river most photographed it was the Paine River. The other attractions revealed by the results of this study are the subcategories Lake and Glacier, reaching a 10.1% and a 6.1% out of the Landscape category respectively. In the case of the Lake subcategory the photos were taken to the Grey Lake and in the subcategory Glacier to the Grey Glacier.

The second category which got more photos it was Biodiversity, revealing which is not difficult to watch wild animals, birds or enjoy the biodiversity in general. The animals were the most photographed getting around 72% out of the total of this category and the birds the 28% remaining. By far the most photographed animal was the feline Puma reaching 15 posts, which means is a 47% out of the total of the Biodiversity category. Then, the second most photographed was the Guanaco getting around 19% out of total of this category, followed by the Condor with nearly 9% out of total of Biodiversity. The remaining percentage is spread in 9 different species.

Slightly below in number of posts associated to the category Biodiversity is the category Posing getting a 20% out of total of the categories in this national park. The users of Instagram have a clear preference to pose with mountains as a background, the prove of this is the 64.3% of posts assigned to the Posing category belong to the subcategory Mountains, followed by the subcategory Lake with a 10.7% out of the preferences of this subcategory, the rest of the subcategories only got 1 posts per each. As it can be appreciated there is similarity among the results of the category Landscape and Posing.

The category Human Activity has gotten a 20% out of the total of photos geolocated in Torres del Paine National Park, where the main activity practiced in this area by far is trekking, which it is represented by the subcategory Trekking which it has a 58% out of the total of the total of this category. It should be noted that this National Park counts with several trails available for the visitors, where the most popular trails according to the website official of the promotion (www.chile.travel/) are the circuits called W and O. The other activities with less than 3 numbers of posts registered are motorcycling, horsing, climbing and kayaking.

The category with fewer photos related is Accommodation which has only 9 posts associated. The photos taken about camping were 6 and about hotels 9.

5.1.6. Summary of the preferences identified

Landscape

- It is the category with the majority of posts
- Only 4 photos of difference among both sides.
- Main object photographed mountains, 50 Chile (mainly in Torres del Paine NP) and 56 Argentina (mainly in Los Glaciares NP)
- Argentina (46) heavily overcomes to Chile (19) in the subcategory Glacier
- Chile counts with a natural attraction which is the Marble Rocks that Argentinian side doesn't count.
- The subcategories lakes, forest, river which are relevant in terms of amount of posts have similar numbers of posts on both sides.

Posing

- This category is the second most popular on both sides, although with a significant difference of 34 posts more on the Argentinian side than the Chilean part.
- The tourists prefer to pose with mountains on the Chilean side, mostly with the mountains of Torres del Paine NP, on the other hand, on the Argentinian side, the tourists prefer to pose with glaciers, being Perito Moreno the most popular.

Biodiversity

- On the Chilean Patagonia were found 64 posts, while on the Argentinian side 35 posts. Revealing a relevant difference among them.
- The Animals in Chile represent 50% out of the category. The most photographed animals were the Concolor Puma (50%) and Guanaco (12%).
- The subcategory Birds got around 33% and the most highlighted was the Condor with a 19% out of the birds in Chile.

Human Activity

- In this category both sides got almost the same amount of posts, with a difference of only 1 post among them. The most highlighted on both sides was hiking.

Preferences by location:

- Most of the posts were located in Magallanes y de la Antártica Chilena Region with 47.3% of preferences, then Aysén Region with 44.5% and finally Los Lagos Region with only 5.8% out of total.
- In Aysén Region the majority of posts are located in Coyhaique and General Carrera lake both with a 17%, followed by Cerro Castillo NP (11.8%), Queulat NP (11.2%), and Puerto Aysén (9%).
- In Magallanes y de la Antártica Chilena Region most of the post are uniquely in Torres del Paine NP with a 72.5% out of the region

5.2. Official website to promote Chile

Once the user clicks in the Patagonia and Antarctica, it appears a homepage presented by a title expressing the name of the area (Patagonia and Antarctica) and a subtitle which says “Fjords and glaciers hidden among green landscapes that give way to the horizon that disappears at the end of the world”, clearly this texts highlight natural attractions which are the fjords, glaciers, green landscapes and the location of the Patagonia which is at the end of the world. At the background there is an image out of four at the time, where they are moving as slides of a presentation, these pictures are landscapes in different locations along with their attributes (**Error! Reference source not found.**). These locations are San Rafael Lagoon highlighting its glacier, Pumalin National Park showing a glacier among mountains, Palena River which is a turquoise river, and the mountains of Torres del Paine National Park.

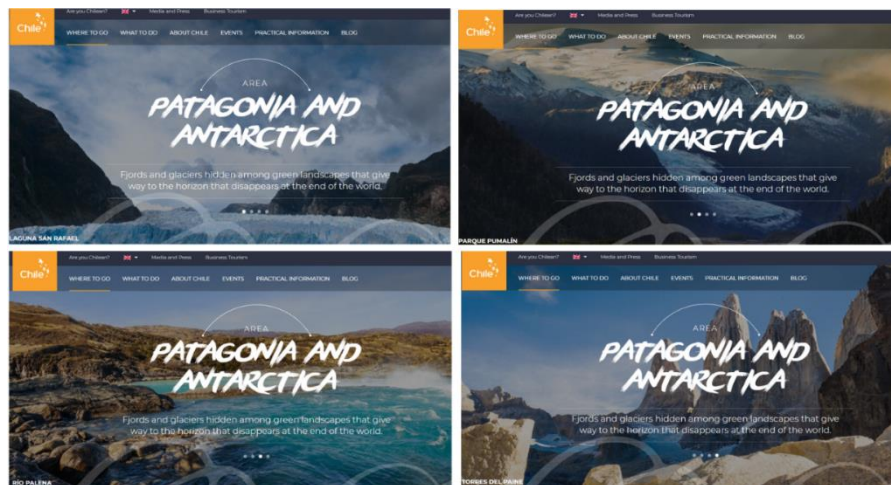


Figure 21 Photos at the beginning of the Patagonia and Antarctica presentation on the website chile.travel

Below it is described the nine tourist destinations of the Patagonia and Antarctica area, as it is showed on the official website to promote Chile (chile.travel). As it was explained previously not all the attraction are coincident with the area of the destination exposed in Figure 3 and Figure 4. Thus, for an easier understanding in the section "Attractions of the destination" it was described the attractions which really belong to the destination according to the area showed the previous point of this study.

- **Carretera Austral:** The picture on the icon to get more information about this destination is a ferry sailing in a fjord surrounding by hills.

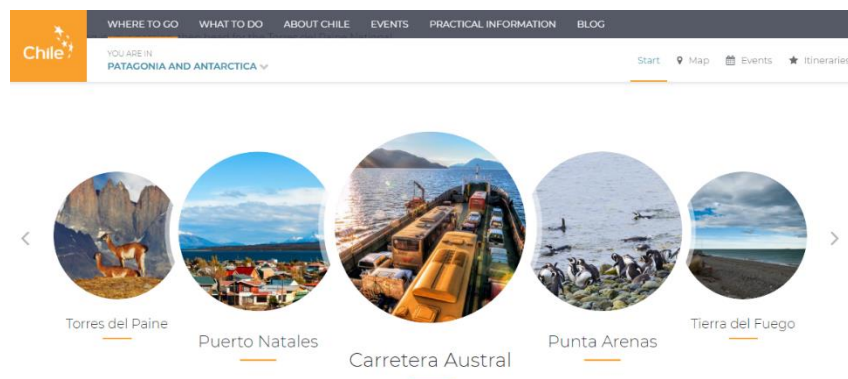


Figure 22 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination Carretera Austral

- **Description:** The website of this destination at the beginning describes the route called “Carretera Austral”, explaining what the tourist will see on his way following this route such as different types of landscapes. As well as, mention the different activities that the visitor can do as biking, rafting, fishing and hiking.
- **Attraction of the destination:** In this section, it is displayed all the attraction that the tourists could see through this route which in total as 10: Quelat National Park, Coyhaique and Puerto Aysén, General Carrera Lake, Baker River, Pumalín Park, Puyuhuapi, Futaleufú, Espolon Lake and Loncolao, Palena River and Tortel – Villa O’Higgins. In this point is only described the Quelat National Park, since the rest will be presented in the following points

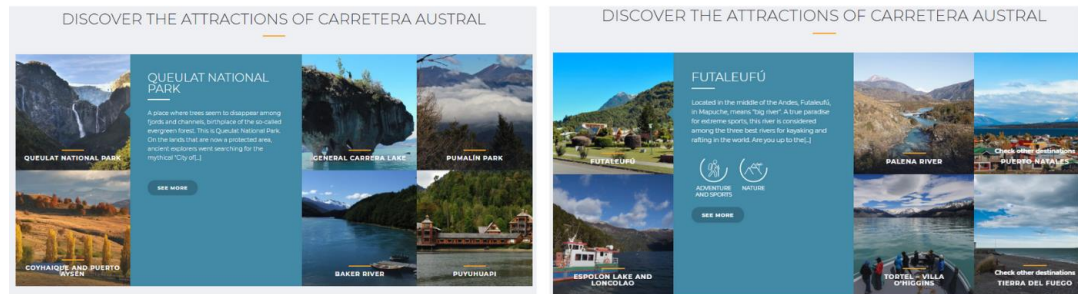


Figure 23 Attraction of Carretera Austral according to the website chile.travel

- **Queulat National Park**, which is showed through an image about the hanging snowdrift. On the description of this NP is remarked the beauty of its Hanging Snowdrift, glaciers, lagoons, and waterfalls.
- **Coyhaique and Puerto Aysén**: The image on the icon to get more information is a landscape of a field where highlight the autumn colors.

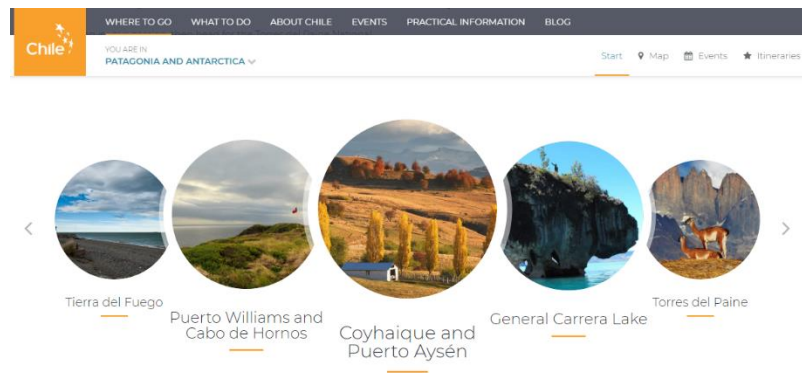


Figure 24 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination Coyhaique and Puerto Aysén

- **Description:** The first paragraph is dedicated to explaining briefly the sport activities that the visitors can do in this area, these sports mentioned are climbing, hiking and fly fishing. Then the second paragraphed remarks the natural beauty of this destination that the tourist can appreciate on the road Carretera Austral. Finally, mention Coyhaique city highlighting its arts and crafts fair located in the Main Square.
- **Attraction of the destination:** It should be noted, that Queulat National Park was described previously and General Carrera Lake is explained in detail as a destination in the next item.



Figure 25 Attraction of Coyhaique and Puerto Aysén according to the website *chile.travel*

- Simpson River National Reserve: The image exposed to access to more information is a landscape of a field where on the foreground there are purple flowers.
- Castillo hill and Paredon de las manos: This attraction is presented by a photo where the main objects are mountains as it can be appreciated on the previous figure.
- Puerto Chacabuco: It is presented by an image where is show a port, once in its own website is explained that it is the starting point to sail into San Rafael Lagoon.
- Northern Patagonian Ice Fields: The image to present this attraction is a glacier, once in its own website there is information about the glaciers that the tourist could watch in this attraction and remarking that this ice field is the third largest in the world.
- **General Carrera Lake:** The icon to access to more information displays the marble rocks located in the General Carrera lake.

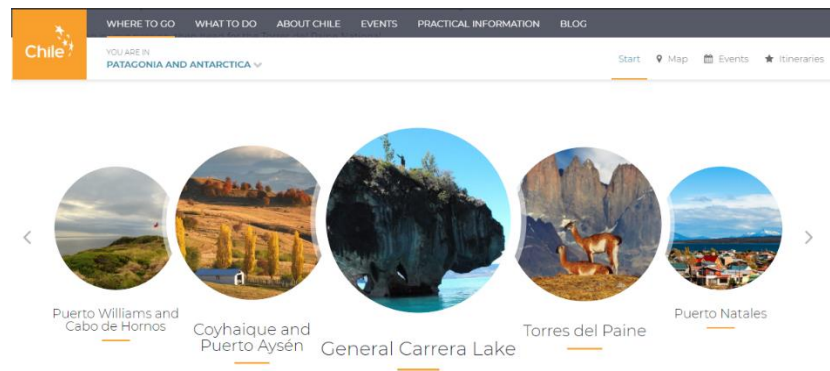


Figure 26 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination General Carrera Lake

- **Description:** The first paragraph describes several attributes of the lake such as is the biggest in Chile and its turquoise color. The second remark the beauty of the marble rocks located in this lake and the last one mentions the activities that the visitor could do in this destination.
- **Attraction of the destination:** Below are described Marble Caves, Baker river and Parque Patagonia. The rest were described previously.



Figure 27 Attraction of General Carrera Lake according to the website chile.travel

- **Marble Caves:** It is presented by an image of the marble caves, the text content is focused in the beauty of this natural treasure.
- **Baker river:** It is presented by a photo of the river, and the content is focused on the sport activities to do in this destination such as rafting and fly fishing.
- **Parque Patagonia:** It is showed by a photo of a landscape, the content highlights the biodiversity of the place and the hiking routes to do.

- **Torres del Paine:** The image on the icon to get more information about Torres del Paine is an Guanaco, a typical animal which can be seen in protected areas, with the background of the mountains of Torres del Paine National Park.

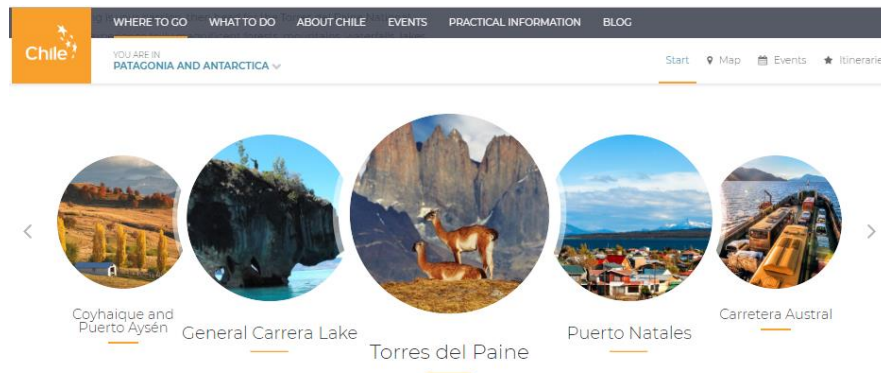


Figure 28 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination Torres del Paine

- **Description:** The first paragraph describes the immensity of Torres del Paine National park and its attractive such as the mountains, turquoise lake and the glaciers. The second paragraph invite to explore this NP hiking by its trail and mention that the NP has the category World Biosphere Reserve by UNESCO. The third paragraph give some tips about the activities that the visitors can do in this park, lastly the last paragraph remark the biodiversity present in the NP.
- **Attraction of the destination:**

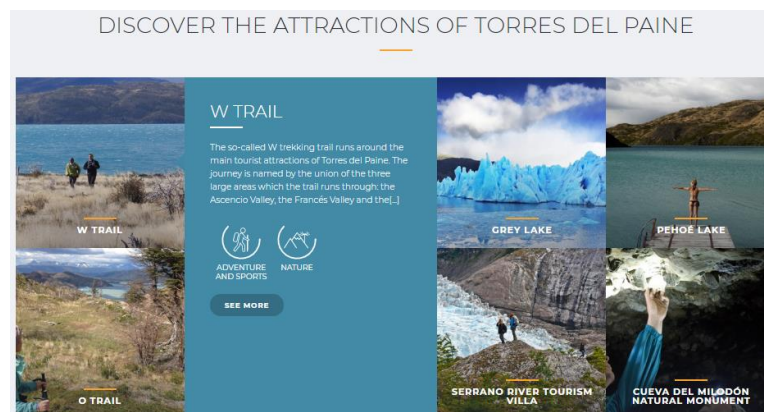


Figure 29 Attraction of Torres del Paine according to the website chile.travel

- W and O Trail: They are present by images of visitors hiking both with landscape that can be found in Torres del Paine National Park. In the description of each trail is explained how long the trail is and what the visitor can watch on his way.
- Grey Lake: It is displayed by an image that can be appreciated the lake covered by ice sediment and huge floating icebergs. The website mentions that the lake was declared International Biosphere Reserve, remarks its beauty and the activities that the visitors can do on the lake.
- Serrano River Tourism Villa: This village which is gateway to Torres del Paine NP is presented by photo of two persons admiring a glacier. The content once clicked this attraction describe the activities that can be done from the village and the offer which counts this village in terms of food, accommodation and services.
- Pehoe Lake: This lake located in Torres del Paine NP, it is displayed by an image showing a person posing with the lake in the background. In the text content explains the activities to do in the lake such as sailing and sport fishing and the views that the visitor can get from the lake of the mountains and of the lake itself.
- **Puerto Natales:** The image to introduce this destination is a city landscape where can be seen colorful houses with a natural background composed by a fjord surrounded by mountains.



Figure 30 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination Puerto Natales

- **Description:** The first paragraph described Puerto Natales as the main gateway to access to Torres del Paine NP. The, the three following paragraphs recommends places that can be reach from Puerto Natales such as Dorotea hill, the Milodon Cave, the Última

Esperanza Fjord with their respective activities to do. Lastly, the content mentions the high level of gastronomy and accommodation which are present in this city.

- **Attraction of the destination:**

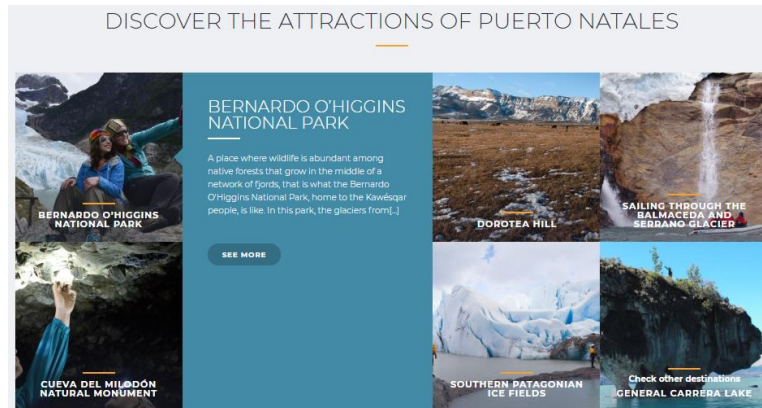


Figure 31 Attractions of Puerto Natales according to the website *chile.travel*

- Bernardo O'Higgins National Park: The image to present this attraction is two tourists posing with a glacier in the background. In the text content is explained that this NP is located in a network of fjords, that the main attraction are the glaciers from the Southern Ice Fields and lastly the activities to do in the NP.
- Cueva del Milodon Natural Monument: On the image the click to get more information it can be appreciated a person exploring a cave. In the text content explains that this attraction is a site of great paleontological interest and, as well as, mention the legends of this site.
- Dorotea Hill: Though an image of the hill is presented this attraction. Once clicked the attraction, it is explained that hiking is possible to reach the top where the tourists can get amazing views of Puerto Natales, fjords and a gulf.
- Southern Patagonian Ice Fields: The image to be clicked to access to more information expose a white glacier, the content described that this ice field is home of 49 glaciers, the activities that the tourist can do such as trekking and climbing.
- Sailing through the Balmaceda and Serrano Glacier: This attraction is showed by a photo of tourists sailing near glacier. The brief description of the attraction explains the how exciting it is sailing through these glaciers.

- **Punta Arenas:** The image of penguins in Magdalena Island was used to present this tourist destination.

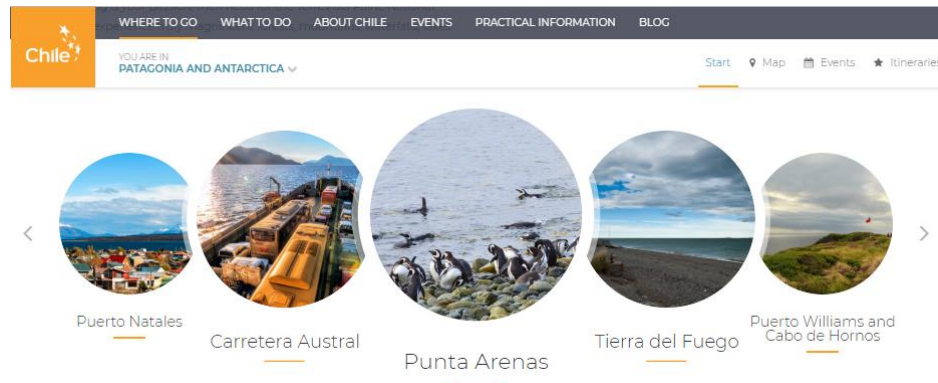


Figure 32 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination Punta Arenas

- **Description:** This destination is introduced as the gateway into Antarctica. Secondly the description tells the tourists the places that it can be reached within this destination such as Tierra del Fuego, Magdalena Island and the straits of Magellan remarking their attributes. Then, it is described the attractions of the city Punta Arenas.
- **Attraction of the destination:**



Figure 33 Attractions of Punta Arenas according to the website chile.travel

- **The Straits of Magellan:** The attraction is showed by a photo about visitors kayaking through the strait of Magellan with a city in the background. In the description there is a brief information about the places that it is possible to reach sailing on the strait of Magellan. As well as, there is information about

the activities that the tourists can do in Punta Arenas City such as trekking, horseback riding and kayaking.

- Los Pingüinos Natural Monument: On the image to access to more information there are two penguins on the foreground. The description explains how it composed this natural monument, which is by Magdalena Island and Marta Island, and how attractive it is visit this monument to watch the wildlife of penguins.
- **Tierra del Fuego:** The image to get more information about this destination is a landscape where the main object is the fjord.

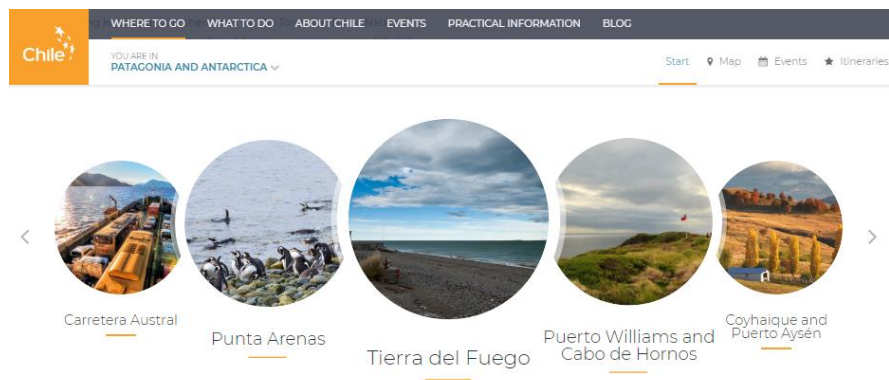


Figure 34 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination Tierra del Fuego

- Description: Firstly, there is an explanation of why this area it has the name Tierra del Fuego, then is remarked the wildlife that can be seen in this land. In the second paragraph, there is a invitation to get knowledge about the ancient inhabitants of this land, visiting the museums of the area. In the third paragraph, there is a suggestion to visit The Fagnano and Deseado Lakes to take a rest in a brilliant environment. Lastly, the website suggests to take a cruise ship to sail to Puerto Williams, Cabo de Hornos (Cape Horn), and the Tierra del Fuego fjords.
- Attraction of the destination: Below is the description of Porvenir and Karukinka Park, since The Straits of Magellan was described previously.

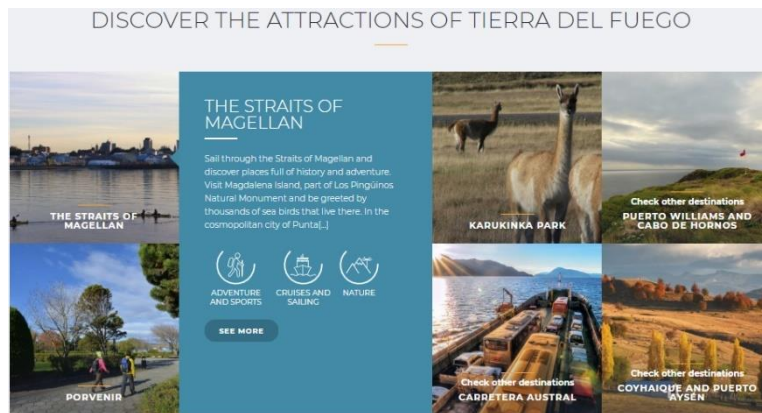


Figure 35 Attractions of Tierra del Fuego according to the website *chile.travel*

- **Porvenir:** On the image shown on the website to get more information, there is a couple walking in a park of Porvenir. In the description is explained that this city is the most populated town in Tierra del Fuego, it is remarked its attributes such as the wildlife that it can be watched in the places near to this city. Furthermore, there is a brief explanation about how to get to Porvenir.
- **Karukinka Park:** The image to access for more information expose wild Guanacos. The description highlight the location of this Park (at the end of the world) and suggest to hike this park to appreciate the Magallanic landscape.
- **Puerto Williams and Cabo de Hornos:** The image to access to this destination is a landscape where there is a lonely Chilean flag.



Figure 36 Display of 5 out of 9 the destinations in the area called Patagonia and Antarctica. In the middle is highlighted the destination Puerto Williams and Cabo de Hornos

- **Description:** At the beginning is highlighted that in this destination is located the southernmost town in the world (Puerto Williams) and its natural beauty. Then, there is a invitation to discover the culture of the ancient inhabitants of this land. Finally, the

website suggests visiting attraction as Cabo de Hornos National Park (declared World Biosphere Reserve by Unesco), Beagle Channel and the Dientes de Navarino mountain.

- **Attraction of the destination:** Below is the description of Cabo de Hornos National Park, Navarino Island and Beagle Channel. Tierra del Fuego was explained previously.



Figure 37 Attractions of Puerto Williams and Cabo de Hornos according to the website *chile.travel*

- Cabo de Hornos National Park: On the picture to get more information about this attraction is used the same picture utilized to access to Puerto Williams and Cabo de Hornos destination. In the description is heavily remarked the location at the end of the world of this NP. Besides, it is exposed that this NP was declared a Biosphere Reserve by Unesco and all its species like the leopard seals, dolphins, whales, sea lions and birds are currently protected.
- Navarino Island: It is showed by a photo of mountains. The text content invite to hike through the southernmost trekking route in the world.
- Beagle Channel: In the photo used to access to this attraction it is shown the channel. The website invite to the visitors to discover the Yamana culture (the ancient inhabitants who lived in this area), follow the route of Charles Darwing and discover the islands that can be reached sailing through this channel.

6. Analyses and Discussion

6.1. Comparison of the Chilean Patagonian tourist destinations with the destination most photographed on Instagram.

As it was exposed on the chapter 3.1.4 on the Table 13 the Chilean Patagonia counts with 10 tourist destinations, where 4 are consolidated, and 4 emerging and 2 potentials. This list of tourist destinations plays an important role since the strategy of commercialization and promotion considers the category of every destination to promote to different target markets associating them within the three groups exposed in the point 3.2. Although, independent of the group, as it was mentioned previously all of them consider the website chile.travel as one of tool to promote Chile in the international market, that it is why it was taken into consideration as well for this analysis.

6.1.1. Analysis of destinations in Aysén del General Carlos Ibáñez del Campo Region

According to the Table 13 in Aysén del General Carlos Ibáñez del Campo Region was established 4 destinations:

- **Carretera Austral Tramo P.N. Queulat:** This area is considered in the category emergent and counts with destinations such as Queulat National Park within it as is exposed in the Figure 3. In the present study were registered three destination which belong to this area, which are Quelat National Park with 20 posts related, which means the 11.2% out of the region, Puyuhuapi with 2 posts and lago Rosselot with only one post. Therefore, in total this area has 23 posts associated, which is around 13% out of the region. In this area, the attraction what most caught the attention of users on Instagram it was the hanging snowdrift located in Quelat National Park with nearly a 40% out of the total of this area, consequently, the image of the hanging snowdrift is well used to promote Quelat NP on the website chile.travel, but this stunning attractive it should be used to promote this emergent destination in the first line, and currently is not used

neither in Carretera Austral (as tourist destination) nor Patagonia and Antarctica as it can be appreciated from the point 5.2 of this study.



Figure 38 Example of post uploaded by an user posing with the hanging snowdrift

- Coyhaique and Puerto Aysén:** This area contains destinations such as Coyhaique, Puerto Aysen and Cerro Castillo National Park, as is shown in the Figure 3 exposed in the chapter 3.1.4. These destinations are considered in the category “Consolidated”. The findings of this study as well expose how attractive is this area defined as “Coyhaique y Puerto Aysén”. In total were registered 8 destination in this area, getting a total of 79 posts which is almost the 50% out of the post of the region, which confirm which is an area consolidated and appreciated by the users on Instagram.

Coyhaique was one of the locations most photographed of Aysén del General Carlos Ibáñez del Campo Region reaching nearly 17% out of total of this region, being one of the most valued destination. Cerro Castillo National Park was the second place most photographed in this area getting 21 posts which is around 12% out of the region. Puerto Aysén has obtained a relevant part of the photos of this region reaching 16 posts which is a 9% out of the region. The rest of the post are distributed in the other 5 destination registered in within this area.

The attraction more valued by the user on Instagram was the mountains of Cerro Castillo National Park reaching around 20% out of the total of this area. On the website chile.travel is

used a photo of a field near to Coyhaique where highlights the autumn colors. For this destination, it should be used the image of the main mountain of Cerro Castillo with the lake on the bottom since it is a proved attraction by users on Instagram. As well as, as it can be seen in the point 5.2 of this study the image to promote Castillo hill and Paredon de las manos does not allow to appreciate the mountain most photographed along with the turquoise lagoon on the bottom as it is shown in the figure below.

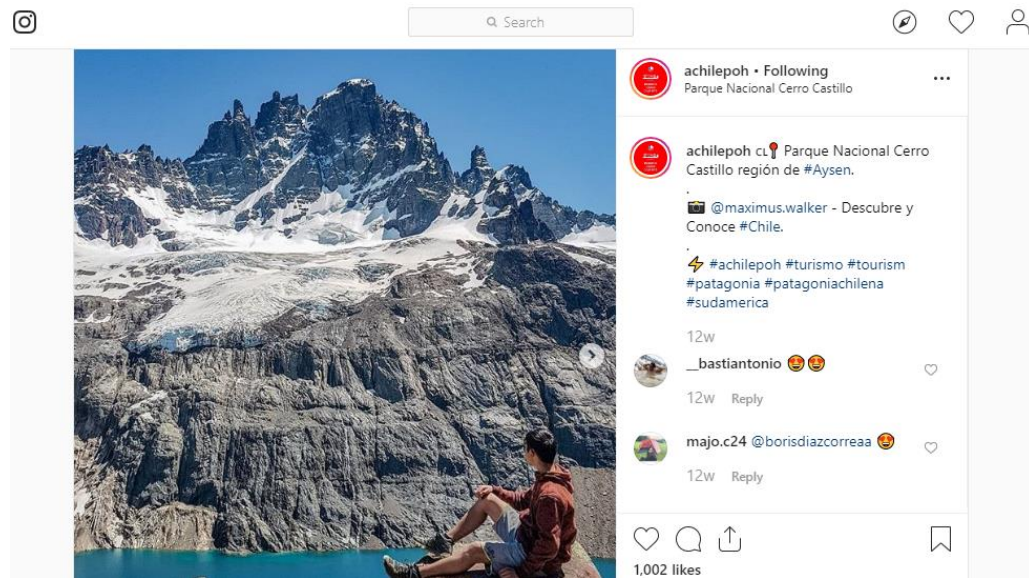


Figure 39 Example of a post uploaded by a user on Instagram of the most photographed mountain in Castillo hill

- Chelenko (General Carrera Lake):** SERNATUR has defined this area as a tourist destination within the category “Consolidated”, which contains destination such as General Carrera Lake, Marble Rocks, Exploradores Glacier and Laguna San Rafael among others, as it is shown in the Figure 3. In this area, it was registered 45 posts which is 25.6% out of total of this region, getting the second place of posts. Within this area by far the most photographed attraction it was the Marble Rocks with 17 posts which is around 38% out of this area. The rest of the photos are focused in the General Carrera Lake and its surrounding. Thus, clearly it should be used the image of the Marble rocks to attract tourists as it is currently doing the official website (see point 5.2.).

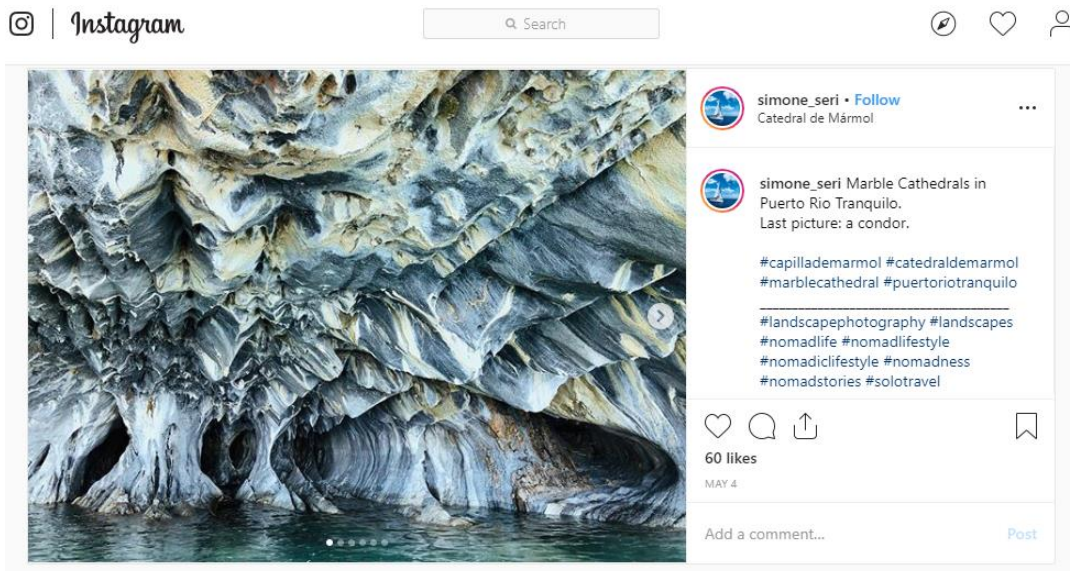


Figure 40 Example of a photo of Marble Rocks uploaded by an user on Instagram

- Provincia de los Glaciares:** This area that is further south of the region, which is exposed in Figure 3 in the point 3.1.4, it has been declared as a tourist destination in the category “Emergent”. In this research, only two places have been registered within this area, getting 11 posts which is 6.3% out of the region, far from the other areas declared as destinations by SERNATUR. In total these destinations count 21 posts which is the 11.8% out of total of the region, thus, if the province is as seen as a unique destination it has a relevant percentage in comparison with the others in the region, however if it is analyzed one by one the destinations which were registered by the users on Instagram within the province, only Caleta Tortel plays a relevant role as a tourist destination getting 8 posts, which means a 4.5% out of total of this region, on the other hand, the other places have less than 3 posts per each. Therefore, clearly at the moment the province “Provincia de los Glaciares” must be used by the Marketing Plan as an emergent destination, since the destinations within this province do not get the enough attention of the tourist yet.

As it can be deduced from the point 5.2 of this study, even Caleta Tortel is not an attraction in any of the destination mentioned on the website chile.travel, however is considered within the area of the destination Provincia de Los Glaciares as is shown in the Figure 3. Although I realized that the information exists on chile.travel, but it is not presented neither on the frontpage of Patagonia and Antarctica nor in the menu showed in the **Error! Reference source not found..** Thus, it is almost impossible to access to the information about this Caleta Tortel and its

surroundings, only can be reached through a secondary drop-down menu as can be seen on the left side of the Figure 41. Once clicked on “Tortel-Villa O’Higgins” the website expose a photo of Caleta Tortel what is coincident with the preference showed by the users on Instagram.

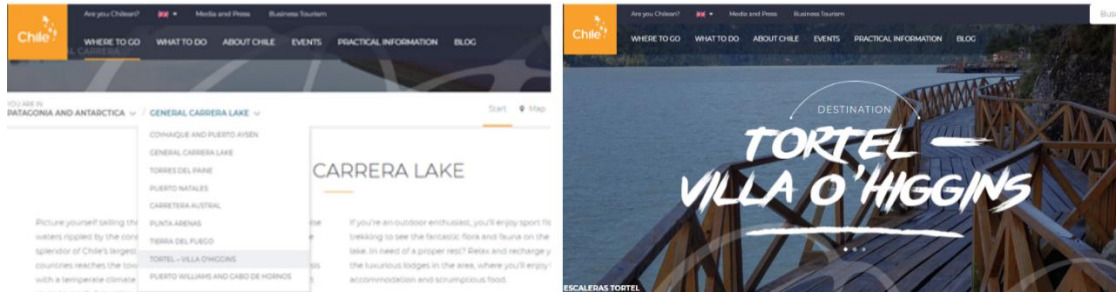


Figure 41 On the left, the way to get information about Caleta Tortel and its surroundings on chile.travel. On the right, the website of the destination Tortel-Villa O’Higgins

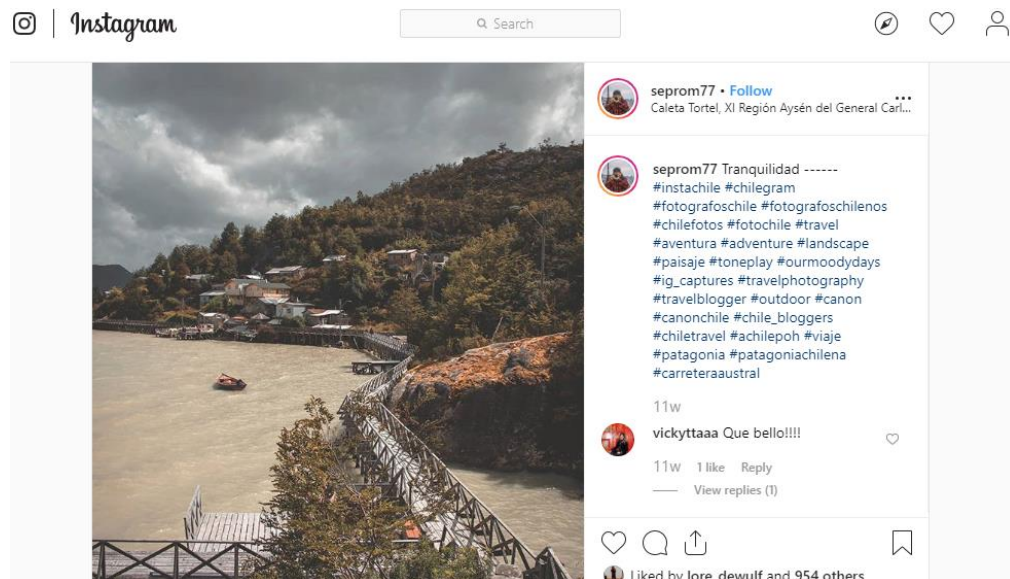


Figure 42 Example of a photo of Caleta Tortel uploaded by an user on Instagram

6.1.2. Magallanes y de la Antártica Chilena Region

This region concentrates most of the tourist destinations defined by SERNATUR to apply the Marketing Plan, establishing 5 destinations with different category through the territory of this region, as it was explained in the point 3.1.4 of this study.

- **Torres del Paine National Park:** According to the list of tourist destination created by SERNATUR, the area defined as P.N Torres del Paine showed in the Figure 4 of the point 3.1.4, appears in the category consolidated. This area involves destinations as Torres del Paine National Park and Puerto Natales. From the results based on the photos uploaded on Instagram by the users Torres del Paine National Park by far is the most attractive Patagonian destination getting a 34.3% out of total of the sample analyzed on the Chilean Patagonia and a 72.5% out of the total of the region. Then, there is a coherence with the definition made by SERNATUR and the preference of the sample analyzed. On the other hand, other destinations considered in this area such as Puerto Natales got only 6.3% out of total of the region, which is far about the attention which had Torres del Paine National Park, but it should be noted that most of the accommodation is located in Puerto Natales.

On the website chile.travel the area which cover this destination showed in the Figure 4 is displayed by two destination (see point 5.2) Torres del Paine and Puerto Natales on both destinations the images used on chile.travel are coherent with the results of this study which highlight the mountains of Torres del Paine National Park and as well the city landscape of Puerto Natales. Furthermore, since the mountains of Torres del Paine are by far most photographed object of the whole Patagonia must be in the first line of promotion as it is doing the website chile.travel.

- **Estrecho de Magallanes:** This area showed in the Figure 4 exposed in the point 3.1.4 it was declared as a “Consolidated” destination by SERNATUR, the area considers destinations such as Punta Arenas. According to the data collected from the users on Instagram, of this area the most photographed place it was Punta Arenas with 14 posts associated, which is a 7.4% out of the region, although is in the second place of destinations most photographed, is far of the first place which belongs to Torres del Paine with a 72.5% out of the region. Only two places more were registered by the users which are San Isidro Lighthouse and Francisco Coloane Marine Park each one with one post regarded. Therefore, in total this area defined by SERNATUR as “Estrecho de Magallanes” has 16 posts, which is 8.5% out of the region, does not seem to be

totally consolidated since it does not get enough attention by the users in comparison with other destinations in the Chilean Patagonia. As Estrecho de Magallanes was declared as a consolidated destination, but it does not get enough attention by the tourists, this it could affect the promotion of the Chilean Patagonia, since the consolidated destinations are used to offer to specific markets as it was explained in the point 3.2. Therefore, at least it should be reviewed its category.

Aside from the category discussion, on the website *chile.travel*, the destination Estrecho de Magallanes belongs to the destinations called Punta Arenas. Although, the destination it has the name of the city, almost it can no be found information related to Punta Arenas, since it is not defined as attraction by its own, as it can be observed in the Figure 33, and it has only presence through a brief description on the text content of the destination. Although it was the most photographed attraction of the destination Estrecho de Magallanes. Therefore, it must be presented on the website *chile.travel* Punta Arenas as a attraction since according to the results of this study is the favorite attraction of the whole destination.



Figure 43 Example of a photo uploaded on Instagram in the cemetery of Punta Arenas

- **Tierra del Fuego:** On the list of tourist destination published by SERNATUR this area is categorized as “Potential”. Within this area, it was found 5 destination with posts associated, which are Porvernir with 4 posts, Alberto de Agostini National Park with 3 posts, Karukinka Natural Park with 2 posts, Pingüino Rey Park with 1 post, and Yendegaia with 1 post as well. The destination Tierra del Fuego got 11 posts which is 5.8% out of the region. Due to the amount of

posts associated is well considered in the potential category which will be used to promote this destination to specific target markets.

On the website chile.travel this destination has the same name than the list published by SERNATUR about the tourist destination. Within the attraction of Tierra del Fuego, it was exposed Porvenir what is coherent with the results of preferences based on the posts on Instagram, the Karukinka Natural Park did not get any photo. Within the attractions of this destination, there is no mention to the Pingüino Rey Park that although only got one post, contains king penguins, which is the only king penguin colony in South America according to the website of the park (<https://pinguinorey.com>).



Figure 44 Example of post uploaded on Instagram taken in Porvenir

- **Cabo de Hornos:** It is considered in the list made by SERNATUR of tourist destination in the category of “Emergent”. In this study were detected 3 destinations in this area which are Puerto Williams with 4 posts, Navarino Island with 2 posts and Beagle Channel with 1 post. Thus, in total Cabo de Hornos has 7 posts, which is only a 3.7% out of the region. As this destination does not count with a relevant number of posts, what means it does not get enough attention yet from the visitors in the Chilean Patagonia to be used as a destination to generate easier demand.

On the website chile.travel is defined this destination is called Puerto Williams and Cabo de Hornos. On the website there is a similar situation than the destination Punta Arenas discussed previously, although Puerto Williams is part of the name of the destination, then only has

presence in the text content of the destination, but it is not defined as a attraction by itself, although is the location which concentrated more posts of the destination. As well as, this city the southernmost in the world, which is something that can be used a strong brand to attract tourists, as Argentina use the city of Ushuaia, which by the way, it has 66 posts associated being one of the most popular destination in the Argentinian Patagonia. The attraction showed on the website only got posts Navarino Island (2) and Beagle Channel (1).

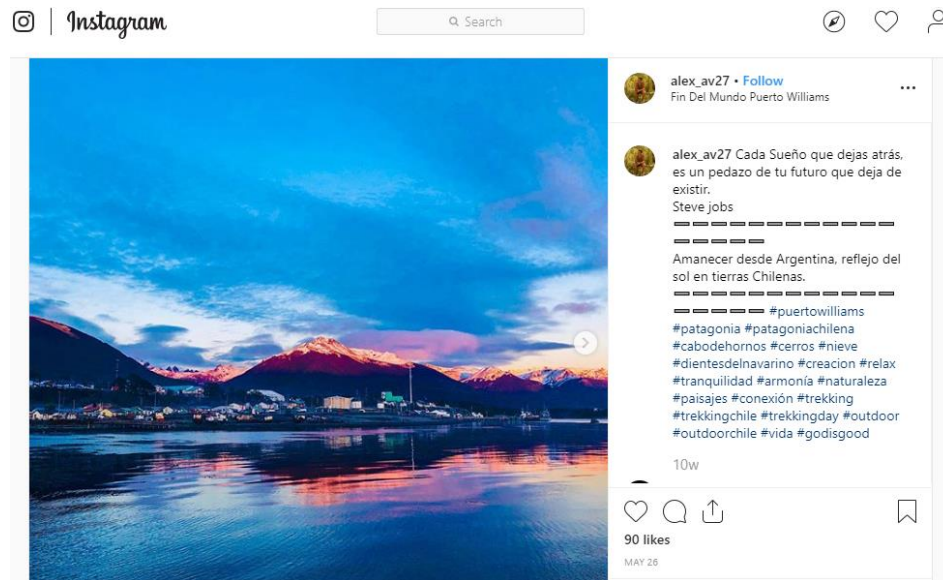


Figure 45 Example of a photo uploaded on Intagram about Puerto Williams

- **Puerto Edén:** Unlike to the other destination on the list, this one only has 1 destination regarded which has the same name. This destination is in the category “Potential”. In this study only 1 post was identified which belong to this place. Thus, it is not relevant to present this destination in a campaign to get demand, since it is still unknown.
- **Antártica Isla Rey Jorge:** In the list of tourist destination is in the category Emergent. In this study was not found any post related with the area defined by SERNATUR.

6.2. Differences among the Chilean and Argentinian Patagonia which can be used either to take advantage or as a challenge to attract more visitors.

In the point 5 it was explained the preferences of the visitors in the Patagonia on both sides through the posts uploaded on the social network Instagram. They were found certain similarities in the preferences according to the posts uploaded by the users on both sides of the Patagonia, getting similar number of posts, as it is the case of the mountains which have caught the attention heavily in Chile and Argentina being the object most photographed on both sides, represented in this study by the subcategory “Mountains” in the category Landscape and Posing. The difference among the Chilean and Argentinian side is the only one post, obtaining the Chilean Patagonia 75 posts and the Argentinian side 76, which is the 19% out of the total of the sample on both cases. In turn, in the category Human Activity, which is mostly based on sport activities as it was explained in the point 5.1.4 of this research, both sides have almost the same amount of posts, having a difference of only one post among them, the Chilean Patagonia got 48 posts the Argentinian side 47, which is around 12% on both sides of the Patagonia. Other category of less relevance got similar results on both sides as is the case of Accommodation, getting 11 posts in Chile and 9 in Argentina.

However, there is an important difference in the subcategory Glacier among the Chilean and Argentinian Patagonia, since is the second most photographed object on the Argentinian Patagonia only with a slightly difference regarding to the subcategory Mountain of 3 posts, getting in total 73 posts, which represent the 18% out of total of the Argentinian sample. On the other hand, this subcategory on the Chilean Patagonia has gotten 28 posts which mean the 7% out of the Chilean sample behind of other subcategories such as Lake, River and Forest. Thus, according to the sample studied, tourists do not seem to be enchanted with glaciers in the Chilean territory as they do on the Argentine side, this difference attracts attention, since Chile concentrates more than 80% of the glaciers of Latino America in its territory according to the information provided by the official website to promote Chile as a tourist destination (<https://chile.travel/glaciares-la-patagonia-los-mejores-paisajes-chile>). Therefore, Chile has a huge potential to promote and create the necessary tourist environment in order to attract tourist to visit this natural resource which is highly attractive for the tourist who visit the Patagonia as it was demonstrated on the Argentinian side. For instance, on the website to promote Chile in the

international market are described four glaciers to visit them, although they have not obtained the same attention from visitors as the Argentine glaciers. They are:

- Grey Glacier: This glacier is located in Torres del Paine National Park, it occupied a total area of 270 km². In this study has gotten 5 photos where it was the main object.
- Balmaceda y Serrano Glaciers: These glaciers are located in the biggest national park in Chile which is Bernardo O'Higgins National Park. According to the results they have gotten 4 posts related.
- Explorador Glacier: The name of this glacier means "Explorer" dedicated to its particularity that it can be explored unlike other glaciers. This Glacier has only gotten 3 posts, which reveals that is still unknown among visitors.
- Ventisquero Colgante (hanging snowdrift): This glacier located in Queulat National Park is unusual since it is a huge hanging snowdrift, which makes it attractive. Although highlight in comparison with the others presented previously since it has gotten 9 posts associated, it is still few in comparison with the most photographed in Argentina which is Perito Moreno Glacier with 59 posts, widely surpassing the Chilean glacier.

Although more studies are needed to identify which are the reasons of this huge difference among both sides of the Patagonia in terms of glaciers preferences, it is clear that there is a vast challenge of the Chilean stakeholders to positioning the Chilean glaciers as one of the main attractions in the markets which are looking for glaciers as a motivation to visit a destination.

Other advantage of Argentina is how they associated its tourist destinations as the southernmost places in the world. This fact, attract visitors, in total Ushuaia counts with 66 posts being one of the most important attraction of the Argentinian Patagonia, where this city is heavily related with the southernmost city in the world. On the other hand, the Chilean city Puerto Williams which is located farther south than Ushuaia only got 4 posts, showing the potential that this city has whether the Chilean authorities invest strongly in Puerto Williams as a tourist destination using a slogan which expose that this city it the southernmost in the world.

On the other hand, the findings have shown a relevant difference in the category Biodiversity, getting the Chilean side almost the double than the Argentinian Patagonia as it was explained in the point 5.1.3 of this study. This is not an accident, some governmental institution and ONGs have been working for years to preserve and recover the wildlife in the Chilean Patagonia through the creation of national

parks and the promotion of the nature-based tourism as consequence of the conservation. The Tompkins Conservation Foundation one of the leader of the preservation of the Chilean Patagonia has delivered figures on its website (<https://www.rutadelosparques.org/quienes-somos/>) about the current biodiversity in the Chilean Patagonia which says that there are 140 bird species, 46 marine and terrestrial mammal species, 24 conserved ecosystem and 7 native forest types conserved. Thus, there is a clear advantage which Chile should take into consideration to make a difference among the Chilean and Argentinian Patagonia on the promotion to attract visitors.

Furthermore, Chile and Argentina have a concentration of the preferences in one National Park respectively, according to the results based on this study. The visitors on the Chilean side heavily focus their posts in Torres del Paine National Park getting a 34.3% out of the total sample, as is shown in the **Error! Reference source not found.**, secondly by General Carrera Lake and Coyhaique both with a 7.5% out of total. Therefore, Torres del Paine NP vastly overcoming to the other location within the Chilean Patagonia. On the other hand, on the Argentinian side, most of the posts are concentrated in Los Glaciares National Park (46.3%), followed by Ushuaia with a 16.5% and El Calafate with a 7.5% out of the Argentinian sample. Torres del Paine NP and Los Glaciares NP count with attractions such as mountains, glaciers and lakes, although with a different rating. In the case of Torres del Paine by far the preferences are focus on the mountains and in Los Glaciares is spread among glaciers and mountains. It is clear that on both side of Patagonia they must work to consolidate more destinations, in order to avoid the massification of these national parks and consequently share the demand with more nature-based destination. In the Table 6 and Table 7 exposed in the chapter 3.1.1 were presented the amount of foreigner visitors in the protected areas of Patagonia in 2018. The statistic showed that 90.8% of them went to the protected areas located in Magallanes y de la Antártica Chilena Region, where Torres del Paine is the main NP getting a 64% out of the region, and on the other hand, Aysén Region only got a 9.2% out of total foreigner visitors in Patagonia. This huge difference is not sustainable since if the number of visitors keep increasing the environment could suffer for the excess of visitors, and as well as, it is necessary to develop the Patagonia to expand the distribution of the positive effects of the development of tourism activity (Subsecretería de Turismo, 2015).

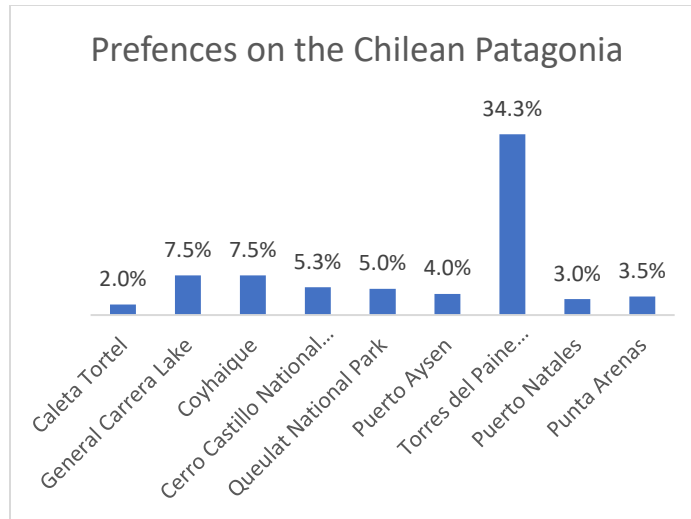


Chart 14 Preferences by location on the Chilean Patagonia

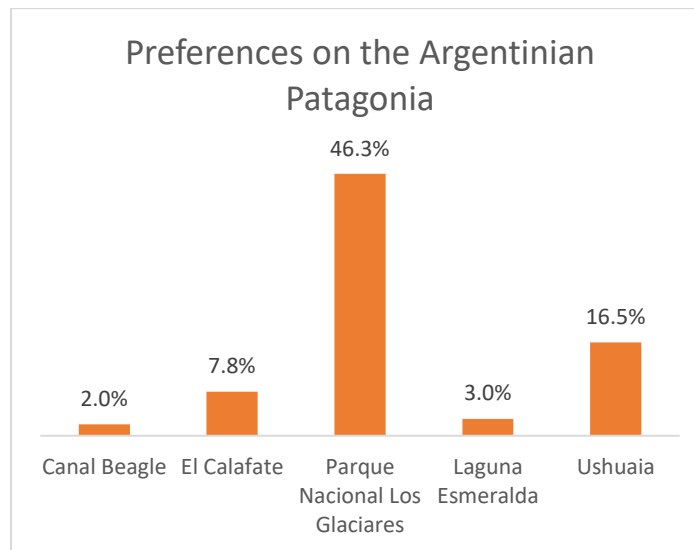


Chart 15 Preferences by location on the Argentinian Patagonia

7. Conclusions

Chile has a huge potential in its Patagonian territory thanks to its stunning natural attractions that developing in a sustainable way can help to protect and preserve this marvelous land which is home of wide biodiversity which included endangered species and, as well as, bring economic benefits to more than 60 communities. This study has contributed in that regard, providing findings the tourist's preferences in the Chilean Patagonia what is critical to understand for tourism planning and marketing. Furthermore, during the discussion the current study has given value to the preferences, collected by the posts uploaded on Instagram, comparing these preferences with the content display on the website to promote Chile in the international market in its section to the area "Patagonia and Antarctica". On the other hand, comparing the tourist's preference register on the Chilean and Argentinian Patagonia, which share similarities in terms of natural resources.

The findings have proved clearly the nature-based tourism in the Chilean Patagonia since the categories most popular are Landscape, Posing, Biodiversity and Human Activity. These categories signify the 94% out of the total sample and all of them are heavily related with the nature. The most popular elements on the posts they were the mountains getting a 19%, followed by biodiversity (16%), lakes (11%), glaciers (7%) and forest (6%). In terms of location, the posts were located in Magallanes y de la Antártica Chilena Region with 47.3% of preferences, then Aysén Region with 44.5% and finally Los Lagos Region with only 5.8% out of total, and the place which concentrates more posts by far is Torres del Paine NP with nearly 34% out of the sample being the favorite place of the visitors in the Chilean Patagonia. The amount of foreigner tourist also reveals the popularity of this National Park since a 64% out of the international visits in the protected area of the Chilean Patagonia in 2018 belongs to Torres del Paine NP. Thus, it is imperative to share the demand with other protected areas, in order to such as Cerro Castillo NP which also has the attribute more valued by visitors in Torres del Paine NP which are the mountains with the turquoise lagoon on the bottom, although aside from the natural attraction is needed the right service infrastructure as it is explained in the point 2.2 of the current study.

Thanks to the tourist's preferences identified this study has revealed through the photo content community of Instagram, the findings have suggested the best images to use in the promotion of the Patagonian destinations based, which in some cases were coherent what it is currently exposed on the content of the official website to promote the Chilean destinations in the international market

(chile.travel) such as the case of the destinations Torres del Paine where the website highlight the mountains of Torres del Paine NP and as well the city landscape of Puerto Natales, as the posts on Instagram suggest. In the Chelanko (General Carrera Lake) destination as well it was found a similitude among the content on the website and the preference revealed by this study which suggest using in the first line an image of the natural attraction marble rocks as chile.travel is doing.

However, in other cases the findings have proposed changes in different degrees, for instance, in the destination “Carretera Austral Tramo P.N. Queulat” is recommended to use in the first line an image of the hanging snowdrift since is the attraction more photographed within this destination, in turn, in “Coyhaique and Puerto Aysén” destination was recommended to use the image of the mountain most photographed along with the turquoise located in Cerro Castillo NP (see Figure 39) what it is not being displayed properly to promote this destination . Through the evidence collected in this study, it was suggested as well include new destination on the website chile.travel such is the case of cities, for instance Punta Arenas and Puerto Williams count with the highest amount of posts in their respective destinations but they do not appear as attractions on the website chile.travel, furthermore, to include attractions which represent unique biodiversity such is Pingüino Rey Park in Tierra del Fuego destination. Lastly, it was detected a huge mistake on the website, since it is missing a relevant destination which is Caleta Tortel which counts with a relevant amount of posts.

In terms of the comparison with the Argentinian Patagonia, they were exposed challenges that Chile must take in order to attract more tourist. For instance, Chile must position the Chilean glaciers as one of the main attractions in the Chilean Patagonia, since Chile concentrates the majority of this natural resource in Latin America, even having the third largest ice field in the world, but in this study only got 7% out of total of the Chilean Sample, on the other hand Argentina got 73 posts in this subcategory, getting more than the double than the Chilean side. Other example to learn from the Argentinian side is how they have positioned some cities such as Ushuaia that using as a slogan that is the southernmost in the world. Although the southernmost city in the world belongs to Chile (Puerto Williams) but so far Chile has not been able to position this city for several reasons.

On the other hand, Chile must use the images of biodiversity, specifically animals such as puma and Guanaco and birds as Condor on its channels of promotion since they have been appreciated on the Chilean side but not in the Argentinian Patagonia. Currently, the website chile.travel displays only guanacos in the section of Torres del Paine NP but not Pumas which is by far the most photographed.

The current study had some limitations. The sample was taken from a specific period which only contemplate from February to May of 2019 which most of that time in Chile is summer. Thus, the results could be affected taking the sample from another season. Instagram only allows to see a certain amount of posts using a hashtag, to get more photos it must be used a software which is paid.

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