

Elements and indicators for swot analysis

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Abstract

The anteroom of this chapter begins with an analysis, which is carried out in three stages. As a result of this analysis, 2610 indicators were obtained from 30 institutions or bodies and 496 from different sources, including the 44 Competitiveness Agendas (CAs) of the priority tourist destinations (PTD) and the 83 Competitive Agendas of the Magical Towns (MV) . The representation of these indicators is structured in a matrix where each one of the indicators is grouped in the new components denominated like this, by the Secretary of Tourism (Sectur). The matrix presents a classification with a hierarchical depth of component, subcomponent, factor, subfactor and indicator. This classification is due to the nature of the indicator and the sources that feed it. In principle, it is composed of eight components and the project team 242853 proposes the ninth called Environment.

In this chapter the matrix of the 2610 indicators is taken up to make a reduction, through an affinity analysis or correspondence of SWOT of the AC of tourist destinations and magical towns and 2610 indicators. This allows us to construct the elements for the SWOT analysis, which are related to the matrix of indicators. The result of this analysis reveals a reduction of 65% of indicators, that is 906 indicators, which allow observing the level of development, competitiveness and sustainability of priority tourist destinations and magical towns. It is important to mention that these indicators are available in priority tourist destinations, only in Magical Towns or both.

Introduction

SWOT analysis is an analytical tool for defining positive internal factors through strengths, negative internal factors in weaknesses, positive external factors with opportunities, and negative external factors with the threats of DTP and PM (Ciarmiello Andrea, 2016). In this paper, the proposed elements are presented, so that a SWOT analysis can be carried out in the future, allowing for the adoption of measures and decisions in Priority Tourist Destinations (DTP). These elements are obtained from the classification of 2610 indicators and the identification of important factors that are found in the Competitiveness Agendas (CAs) and PMs. In addition to identifying those factors that could make the destination competitive and sustainable. This analysis tool, allows more debugging the large number of indicators to 906 indicators.

Methodology

It is necessary to obtain a set of indicators from the universe of 2610 indicators classified in a hierarchy of component, subcomponent, factor, subfactor and indicator, which are intended to come in the work called Compendium of tourist indicators of priority tourist destinations And magical Towns. In order to make the decrease, without affecting the components of the tourism system, a study on the SWOT analysis of the CAs of the DTP and PM is carried out taking into account the competitiveness and tourist sustainability and the classification of 2610 indicators.

This is achieved with the J-K affinity diagram, a technique developed by the anthropologist (Kawakita Jiro) and considered one of the seven management and planning tools (Vilar Barrio José Francisco, 1997), (Guillermina, 2012). The use of this tool in the present work has the purpose of reducing and selecting indicators, a considerable number of information relevant to the DGGD, which is useful in decision making (FME, 2013).

The stages that are used to elaborate the affinity diagram are the following, taken from (Vilar Barrio José Francisco, 1997):

1. Gather the team (people) who should carry out this work
2. Brainstorm the problem

3. Record ideas
4. Group ideas and create headers
5. Transcribing the affinity diagram

Gather the team

For the purpose of this paper, a group with knowledge in Business Management and Tourism is assembled, who carry out the brainstorming with regard to the analysis of the CAF's SWOT. Table 1 presents the strengths, weaknesses, opportunities and threats of the Morelia CA, which are used to show an example of the construction of the affinity diagram for Project 242853.

Table 3 SWOT Indicators Tourist Offer. Competitive Agendas of Tourist Destinations, December 2013 Morelia, Michoacán, p. 75

Strengths
<ol style="list-style-type: none"> 1. Morelia counts with the declaration of City Patrimony of the Humanity since the year 1991. 2. It has 1,670 monuments and historical sites and cultural activities. 3. It offers diversified lodging and sufficient to attend the visit of tourists. 4. It has boutique hotels with high standards of quality, architecture and service. 5. Important cultural agenda of events that they contemplate fairs, festivals, and festivities International, state and local. 6. Destination of greater influx of tourists and pours of the state.
Opportunities
<ol style="list-style-type: none"> 1. Improve and / or create infrastructure for tourism businesses, congresses and conventions countries. 2. Attraction of events, congresses and conventions thematic (medical, social, artistic, academics). 3. Reversing Morelia's position in the media national and international: negative image versus single product. 4. Morelia has natural and cultural resources in their holdings that can be incorporated into the offer tourism. E.g. crafts of Capula and ecotourism in Umécuaro).
Weaknesses
<ol style="list-style-type: none"> 1. The number of food establishments and Registered beverages has been decreasing in the last decade. 2. Museums have important exhibition but its presentation is not attractive and is accessible in accordance with the needs of the tourist. 3. The museographic offer is limited. 4. Operate alleged tour guides of non-certified tourists That encourage unfair competition to the detriment of the quality and satisfaction of the tourist. 5. Number of limited cultural festivals and events Regarding the capacity of the destination and Scheduled in the second half of the year, Primarily. 6. Limited thematization of the tourist routes in which Participates: Rout de Morelos, Hidalgo Centro, Don Basque and Health.
Threats
<ol style="list-style-type: none"> 1. High diversification of supply and activities tourist destinations such as Querétaro, San Miguel de Allende, Guanajuato, Puebla and others cities that are direct competition of Morelia. 2. Extortion to tourist establishments. 3. Informal trade. 4. Insufficient resources for investment and development of the tourist offer. 5. Unattractive destination for attracting foreign investments. 6. Proliferation of non-certified tourist guides.

Brainstorm the problem

Figure 3 shows the strengths of the CA of Morelia, where the important aspects of each fort are emphasized. These aspects are associated with a name, through a brainstorm. This process is also carried out with the weaknesses, opportunities and threats that are present in the SWOT.

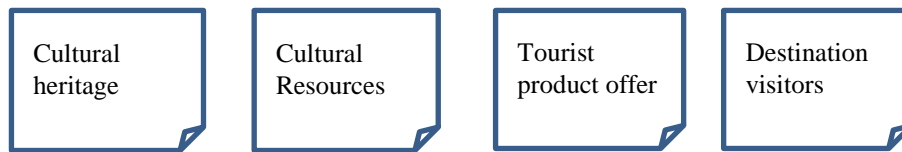
Figure 3 Brainstorm of the strengths present in the CA's

Rain of ideas	
Strengths	
Morelia It has been declared a <u>World Heritage City</u> since 1991. ←	Cultural heritage
It has 1,670 <u>monuments and historical and cultural sites</u> . ←	Natural resources
It has a diversified and sufficient <u>lodging to attend</u> the visit of tourists. ←	Tourist product offer
It has <u>boutique hotels</u> with high standards of quality, architecture and service. ←	
Important cultural agenda of events that contemplate fairs, <u>festivals and festivals</u> of international, state and local level. ←	Natural resources
Destination of greater <u>tourist influx</u> and economic pumping of the state. ←	Destination visitors

Record ideas

In Figure 3.1, six fortresses are presented, for each one of them, the information that is identified as fortress of destiny is emphasized, and it is given a name through the brainstorming; Which are recorded on ballot papers. In figure 2, some ideas are presented, which for the object of study are called SWOT elements, because they are a fundamental resource for a SWOT analysis later with the indicators that result from the universe of the 2610. That is, in relation to The classification of the 2610 indicators and the natural grouping of the identifiers, four elements are obtained: 1) Tourism products offer, 2) Cultural heritage, 3) Infrastructure of events and 4) Infrastructure of services. As a result, 80 elements are obtained.

Figure 3.1 Ballots with ideas



Group the cards and create the header cards

The next step is to collect the ballots and group the ideas into cards. For this, the following parts are used:

- The ballots shown in figure 3.2
- Classification of the matrix of the 2610 indicators. Figure 3.2 shows an example of the depth of stratification in the indicator matrix and the tourist demand component.

Figure 3.2 Stratification of the matrix of indicators

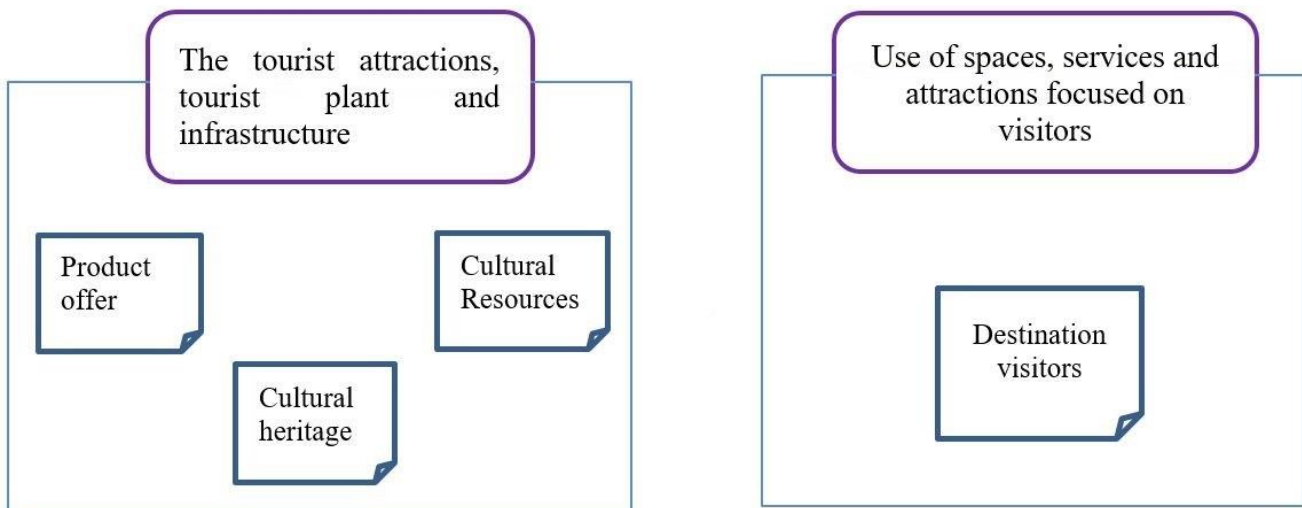
Tourist demand (component)

- Tourist flow (subcomponent)
 - Tourist influx (factor)
 - Tourist competition (subfactor)
 - Indicators
- Indicators related to stratification. In figure 3.3, some indicators of tourist demand are present

Figure 3.3 Indicators related to Tourism Concurrence

Total annual visitors
Annual visitor arrival rate
Number of local visitors
Number of national visitors
Number of international visitors
Diversification of tourists and visitors
Index of diversification of international markets
United States market share index of Tourists by air.

In figure 3.4, the cards are presented, where the ideas are grouped according to the object of study. The ideas related to what the DTP and PM offer, are grouped in the figure on the left side; the idea that refers to visitors is related to the figure on the right side.

Figure 3.4 Grouping of ideas

Then, the headers are obtained by relating the stratification of the matrix of indicators and the cards. In the figure, it is observed that the card on the left side is associated with the *tourist offer* component, because the ideas are grouped in factors that the destination has and are attractive for the visitor. On the right side of the figure, visitors are associated with the *tourism demand* component; in addition to presenting a natural relationship with the indicators that refer to visitor.

With this affinity analysis, we arrive at a new stratification that includes the tourist component, subcomponent, factor and the indicators related to its element for the SWOT analysis. In table 3.1, the anterior stratification is presented on the left side, and the new classification is shown on the right side.

Table 3.1 Stratification of indicators

Previous Classification	New Classification
<ul style="list-style-type: none"> • Component <ul style="list-style-type: none"> • Subcomponent (eg Tourism Vocation) • Factor (eg Tourist Resources) • Subfactor (eg Tourist Inventory) • Indicator (eg Existence of Tourist Inventory) 	<ul style="list-style-type: none"> • Component <ul style="list-style-type: none"> • Subcomponent (eg Tourism Vocation) Factor (eg Tourist Resources) • Indicator (Eg Existence of Tourist Inventory)

Development

80 important elements for the SWOT analysis are constructed distributed in the nine tourist components and fed by their corresponding indicators. These elements aligned with the tourist indicators, allow to observe important characteristics of the destinations. Below are some elements with their justification of the components Tourist Offer and Tourist Demand.

- **Component tourist offer**

Offer of tourist products. Serving the alignment in axis 2 related to Innovation and Competitiveness and Sector 1.1.2, 1.1.3, 1.2.3 and PND-O.E.4.11.2.LA2.

Protected natural areas. "Are an instrument of public policy, created with the purpose of ensuring the protection of a natural space whose environmental characteristics have not been significantly altered by human activity" (Monroy Ojeda).

Natural heritage. The National Commission of Natural Protected Areas (CONANP) considers that "it is constituted by natural monuments (biological physical formations or groups of these), with an exceptional universal value from the aesthetic or scientific point of view. In addition to the geological and physiographic formations, natural sites and delimited areas, which are the habitat of endangered species of flora and fauna, which have an outstanding universal value from the point of view of science, conservation, or Natural beauty "(CONANP).

Mixed heritage. It covers partially or totally the concepts of Cultural and Natural Heritage. (CONANP).

Cultural heritage. According to Rafael Tovar and Teresa are "material goods with a particular meaning or value of archaeological, historical or artistic type. It also covers languages, music, customs, expressions of popular cultures, traditions, artisan practices, intellectual, film and photographic collections among other cultural manifestations "(Teresa, December 1994 to January 1995), (Ávila Ortiz, 2000).

Cultural resources. The 2015 Travel and Tourism Competitiveness Report via WEF positions Mexico 30th out of 141 countries, highlighting the country's natural and cultural resources (Staff, 2015).

Natural resources. Idem.

Tourist perception. In this element, are grouped the indicators that measure the idea or appreciation of the tourist in the destination.

Service infrastructure. It refers to the infrastructure that the destination has in the services of lodging and accommodation, food and drink, recreation, types of transport, services of sun and beach and gastronomy.

- **Tourist demand component**

Visitors of the destination. "It is related to the number of people traveling to a main destination other than where it resides, for a duration of less than one year, whether for leisure, business or other personal reasons. UNWTO placed Mexico in 10th place in terms of international tourist arrivals "(ONWTO, 2017).

The reason of the visit. The WTO defines it as "the motive without which the journey would not have taken place" (WTO, 2005-2007).

Transportation used to reach the destination. It refers to the type of transport that the tourist used to reach the place (CAPUFE, 2000-2014).

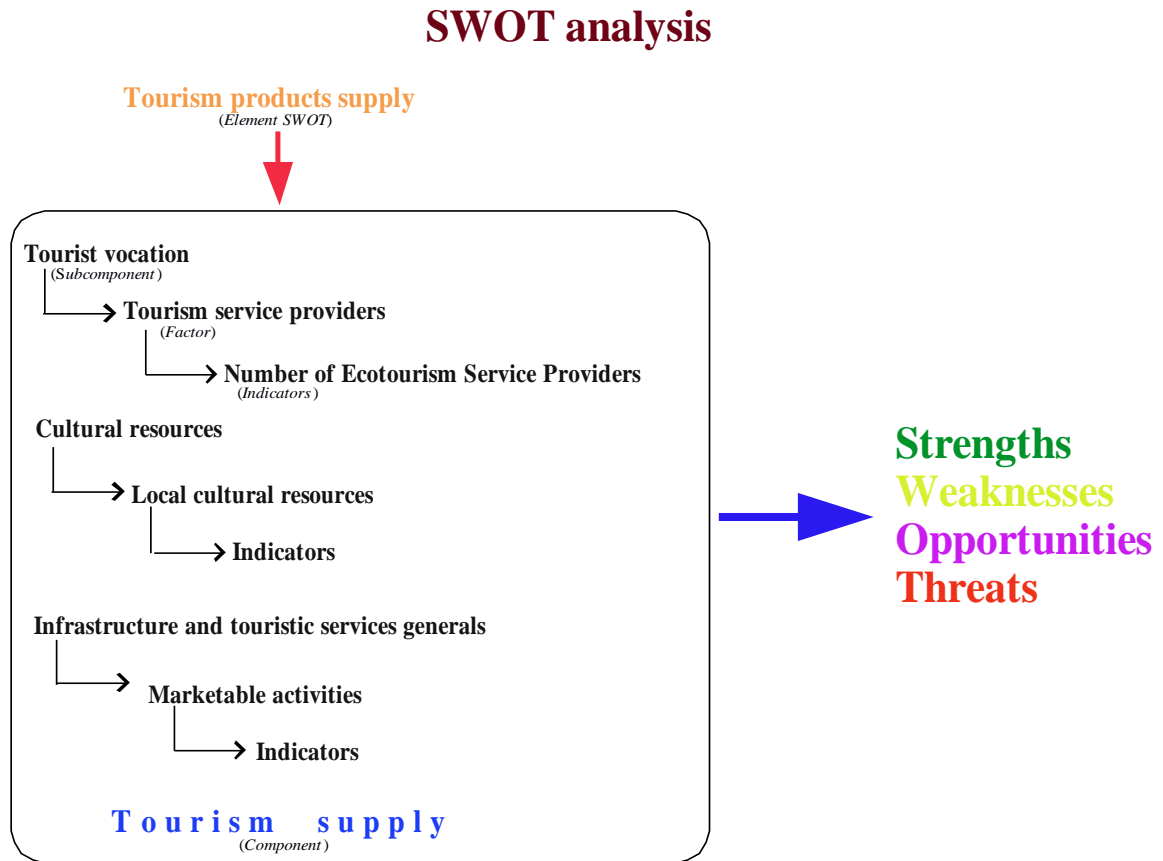
Average expenditure. "Tourist spending refers to the amount paid for the acquisition of goods and services of consumption, and of valuable objects, for own use or to give away, during the tourist trips and for the same ones" (OMT, 2005-2007).

Satisfaction of visitors. Knowing the profile of the tourist is useful for the tourism sector because it provides elements for the best planning and development of products and specialized services to meet the needs of the visiting population. National Institute of Statistics and Geography (INEGI) Integral Analysis of Tourism (DATATUR). [Http://www.concanaco.com.mx/wp-content/uploads/2016/boletines/Turismo-Enero-2016.pdf](http://www.concanaco.com.mx/wp-content/uploads/2016/boletines/Turismo-Enero-2016.pdf)

The relationship of the elements that allow the observation of the strengths, weaknesses or opportunities of the DTP and PM with the tourist indicators, allow to observe the general study of tourism in these places, in order to support in the decision making according to the functions Of the Secretary of Tourism, to provide follow-up and attention to destinations with major deficiencies. Figure 1 shows graphically one of the elements, as a result of the SWOT analysis, Tourism product offer, which is identified in the Tourism Offering component, where the relationship with several subcomponents, factors and indicators is observed.

According to the values by indicator and historical data, the evaluation is intended to be carried out as follows: A strength is evaluated with 3 points, a weakness with 1 point, an opportunity with 3 and a threat will have a value of 0.

Figure 3.6 SWOT analysis on tourism components. Own elaboration



Below are the SWOT elements related to the Professionalization and Certification component and the indicators to be used in the evaluation (see table 3.2, table 3.3, table 3.4 and table 3.5). On the left side of the table are the indicators related to the element that corresponds to the SWOT analysis, which are presented on the right side of the table. According to the values that the indicators show, they will be classified in strengths, weaknesses, opportunities and threats.

Table 3.2 Professionalization and certification SWOT elements. Own elaboration

FODA Profesionalización y Certificación				
Indicator name	Strength	Weakness	Opportunity	Threat
Number of public upper secondary educational institutions	Educational offer in the destination of careers in tourism from technical, undergraduate, master's and doctoral levels (SWOT Element)			
Number of privately-owned upper secondary tourism educational institutions				
Number of public upper-level tourism educational institutions				
Number of private higher educational tourism institutions				
Total number of basic education enrollment	Behavior of the education sector (SWOT Element)			
Total number of upper secondary education				
Total number of higher education enrollment				
Total number of graduate students				
Average schooling				
Illiterate population number				

Table 3.3 Cont ... SWOT Elements of Professionalization and certification. *Own elaboration*

Indicator name	Strength	Weakness	Opportunity	Threat
Total workers in the tourism sector with basic level studies	Staff with a higher education level than the national average(SWOT Element)			
Total number of workers in the tourism sector with higher education				
Total number of workers in the tourism sector with higher education				
Total number of workers in the tourism sector with postgraduate studies				
Percentage of destination staff with tourism education				
Number of tourism culture programs	Tourist culture of inhabitants and tourists (SWOT Element)			
Number of training programs and professionalization for the creation of new companies and MIPyMES				
Number of tourism training programs	Tourism Training Plans (SWOT Element)			
Perception of quality in tourism training plans through a general review of their content				
Number of tourist education institutions				
Training programs to encourage the development of new businesses				
Qualified human resources to serve the tourism sector				
Degree of schooling (Degree of schooling of management positions)	Certified human resources (managerial positions) (SWOT Element)			
Number of workers certification in the tourism sector	Qualified human resources (SWOT Element)			

Table 3.4 Environmental certifications (SWOT Element)

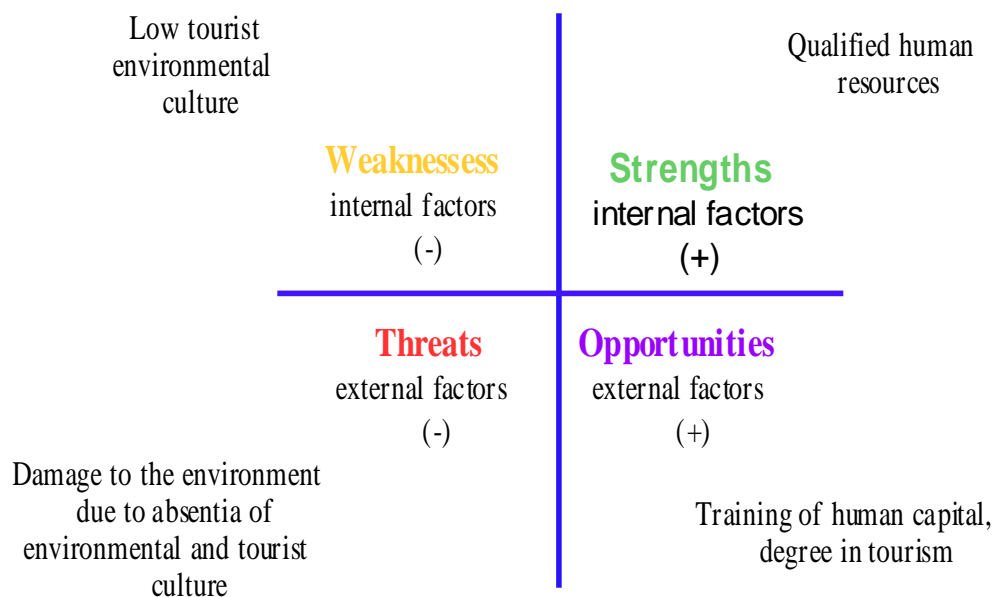
Indicators	Strength	Weakness	Opportunity	Threat
Number of workers with experience from 1 to 12 months	Comprehensive diagnosis that identifies the human resources needs in the tourism sector (SWOT Element)			
Number of workers with experience from 1 to 3 years				
Number of workers with experience of more than 3 years				
Number of workers without tourism studies				
Number of workers with tourism studies				
Number of companies participating in institutional competitiveness programs	Institutions offer the diploma of formation of general guides (SWOT Element)			
Number of certified tour guides	Certified tourist guides (SWOT Element)			
Number of establishments with the mark (H)	Establishments certified with the "H" (SWOT Element)			
Number of establishments in the process of obtaining the badge (H)				
Number of establishments with the mark (M)	Companies certified with the "M" (SWOT Element)			
Number of establishments in process of obtaining the badge (M)				

Table 3.5 Cont ... SWOT Elements of Professionalization and Certification. Own elaboration

Indicators	Strength	Weakness	Opportunity	Threat
Number of companies that have the Clean Point certification	Environmental certifications (SWOT Element)			
Number of companies in the process of obtaining the Clean Point certification				
Certification programs Beaches in Regla				
Blue Flag Certification				
Earthcheck Certification				
Number of establishments with Green Globe Certificate				
Number of establishments with certificates of environmental quality tourism (PROFEPA) for companies, facilities and equipment				
Certificate of Municipality clean and / or environmental compliance (PROFEPA)				
Sustainable Distinctive "Distinctive S" (SECTUR)				
Total certifications in force				

Threats can be turned into opportunities and red dots are served, which can be political, economic, social or environmental factors that directly affect destiny. For example, some of the external factors arise when the British Foreign Office and the World Health Organization (WHO) issued the Zika virus alert (WHO, 2015) in the states of Nuevo Leon and Chiapas, where In the latter, in San Cristóbal de las Casas there were cases of the virus.

The US government warned its citizens not to travel to Coahuila, Durango, Zacatecas, Aguascalientes, San Luis Potosí, Nuevo León, Tamaulipas, Jalisco, Colima and Nayarit due to insecurity (State); Contaminated beaches according to Cofepris; Hurricanes Alteration or damage to cultural heritage, whether due to vandalism or negligence of an official, among other factors. Figure 3.7 shows an example of strength, weakness, opportunity and threat that can be observed in Professionalization and Certification.

Figure 3.7 Representation of SWOT in Professionalization and Certification, an example. *Own elaboration*

Results

A new analysis is carried out and the indicators from 2610 to 906 are reduced. In addition, 80 elements are obtained to find the strengths, weaknesses, opportunities and threats in DTP and PM. A new classification is made with a depth of three levels (subcomponent, factor and indicator) for each of the nine components. Figure 3.8 shows the nine components and the number of indicators associated in numeral and percentage.

Figure 3.8 Number and percentage of indicators by tourism component. *Own elaboration*

Component	Indicators (#)	Indicators (%)
Tourism supply	425	46.91
Tourism demand	48	5.30
Accesibility	70	7.73
Receiving community	95	10.49
Marketing	64	7.06
Regulatory framework	63	6.95
Professionalization and certification	45	4.97
Security	57	6.29
Environment	39	4.30

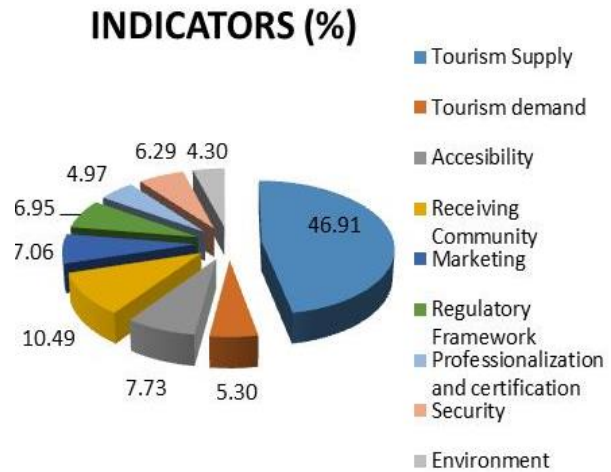


Figure 3.9 represents the 80 SWOT elements that were obtained distributed in each component

Figure 3.9 Numbers and percentages of SWOT elements. *Own elaboration*

Component	# foda element	% foda element
Tourism supply	9	11.25
Tourism demand	5	6.25
Accesibility	15	18.75
Receiving community	7	8.75
Marketing	7	8.75
Regulatory framework	4	5.00
Professionalization and certification	13	16.25
Security	13	16.25
Environment	7	8.75

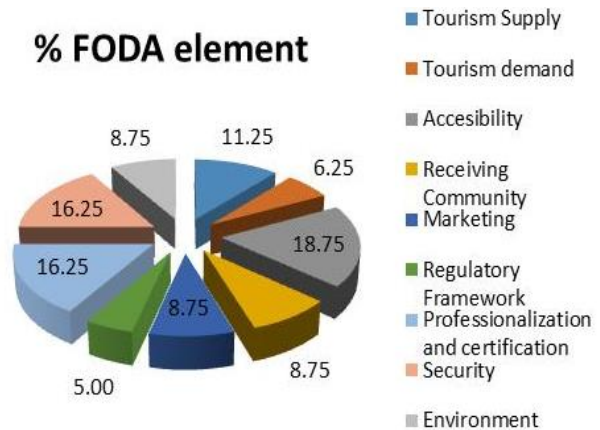
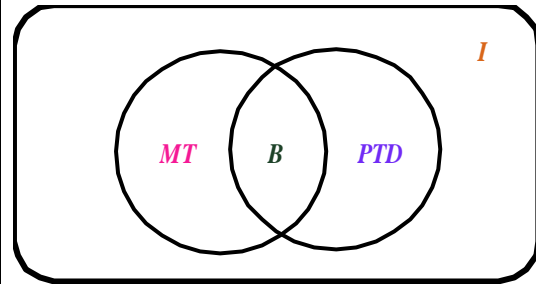


Figure 3.10 shows the 906 indicators (I) where 51 belong to Magic Towns (MT), 26 to priority tourist destinations (PTD) and 829 are in both (B). These sets are denoted as:

$$I = \{MT, PTD, B\}, \quad n(I) = 906 \text{ (Quantity of indicators that has I)}, \quad n(MT) = 51, \quad n(PTD) = 26, \quad n(B) = 829$$

Figure 3.10 Distribution of indicators by component, MT, PTD and B. Own elaboration

Component	Indicators of Magic Town (MT)	Indicators of Priority Tourist Destinations (PTD)	Indicators of both (B)	Total indicators (I)
Tourism Supply	2	0	423	425
Tourism demand	12	1	35	48
Accessibility	0	1	69	70
Receiving Community	20	2	73	95
Marketing	1	2	61	64
Regulatory Framework	6	1	56	63
Professionalization and certification	1	0	44	45
Security	0	19	38	57
Environment	9	0	30	39
Total indicators (I)	51	26	829	906



Conclusions

A first approach is presented to carry out a SWOT analysis in the priority tourist destinations and magical towns; Through the SWOT elements obtained from the classification of the 2610 indicators and the SWOT of the Competitiveness Agendas of the tourist destinations and magical towns.

These elements with the associated indicators allow an assessment to be carried out to observe the DTP and PM in terms of the competitiveness, sustainability and degree of development that the destination presents. Thus, as certain delays seen, through the tourist components; Which allows Sector or the competent body to propose solutions and / or provide economic support if they consider it.

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