The level of utility and trustiness of the statistical data provided by tourism authorities to the stakeholders of tourism industry

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Abstract:

When destination management organizations (DMO) are about to create (or adopt) a monitoring system for a continuous assessment of tourism performance in terms of sustainability and competitiveness, they face some crucial questions, such as: (1) *what are the most relevant indicators in terms of its utility for tourism management?*; (2) *how many indicators have to be included to ensure a satisfactory coverage of all relevant aspects of tourism activity?*; (3) *what are the appropriate measures for each indicator and how get the necessary information?*; (4) *what are the pertinent sources of information?* These and other related questions are considered as a preliminary step when introducing the monitoring system in tourism destinations.

Aiming to get knowledge on this matter and to anchorage the empirical model of the Tourism Observatory of Center of Portugal (TOCP), a team of affiliated researchers of NID carried out a qualitative survey with a group of 40 tourism experts asking them a set of questions concerning the level of utility and trustiness of the statistical data are provided by tourism authorities to the stakeholders of tourism industry. Data analysis allowed us to identify the most relevant gaps regarding the quality of tourism information that has been provided to tourism decision makers, as well as to give some useful cues to improve the set of relevant indicators to be considered in the TOCP monitoring system.

Keywords: quality of information, utility of statistical data, monitoring system, trustiness of the statistical data.

1. Introduction

Nowadays and increasingly, tourism is a sector of great significance all over the world, being an important source of local and regional development. Additionally, it plays a crucial role in promoting the image of a country, region or place (Dupeyras & MacCallum, 2013). Due to its importance, some of the challenges this sector faces are related to competitiveness and sustainability, two main key-points when speaking about tourist destinations. In a highly globalized and competitive world, it is a challenge for destination management organizations (DMOs) to develop tools and mechanisms that allow them to adapt to this new reality and consolidate their destination brands as a main component in the destination choice process by tourists/visitors.

This paper aims to highlight the importance of the introduction of monitoring system to assess the performance of tourism destinations, based on a set of pertinent indicators, as a factor of sustainable development. The understanding of the dimensions of the competitiveness of a destination becomes an important consideration for policy makers and a major challenge for professionals in providing evidence to inform decision-making (Dupeyras & MacCallum, 2013).

Thus, this paper is divided into different sequential points. Firstly, a set of concepts, fundamental to a correct theoretical framework, was identified and studied, in order to understand, analyze and sustain the importance of monitoring for the sustainable development of tourism destinations. On the other hand, there was an attempt to understand the current gaps at this level and the importance of creating and using a system of multi-disciplinary, multi-sectoral and cohesive indicators that allow the monitoring of tourism activity in a holistic way.

The goal is to propose a complete and adequate system of indicators to monitor the tourism activity of a particular region, the tourism region of Central Portugal, which can contribute to the sustainable and competitive development of the region, by giving the necessary tools to support the decision-making process that the different stakeholders in the tourism industry have to go through.

2. Competitiveness and sustainability of tourism destinations

Tourism markets are nowadays highly competitive, and according to Buhalis (2000: 99-10) to succeed in the challenge of achieving competitiveness, four key generic strategic objectives, that relate competitiveness with sustainability, should be addressed by DMOs:

- Enhance the long-term prosperity of local people
- Delight visitors by maximizing their satisfaction
- Maximize profitability of local enterprises and maximize multiplier effects
- Optimize tourism impacts by ensuring a sustainable balance between economic benefits and socio-cultural and environmental costs.

It means that destination management organization (DMOs) have to ensure the interdependence of the two crucial goals of tourism development: competitiveness and sustainability. In this context, an important question arises: how do DMOs should measure their achievements in terms of competitiveness and sustainability? As Magliulo (2013: 12) states "if you can't measure it, you can't manage it…science is measurement". Bearing in mind this idea, a sine qua non condition to DMO's go further to ensure a satisfactory basis for monitoring destination competitiveness and sustainability is to define a set of pertinent indicators.

However, as Table 1 shows, there is not consensus regarding the criteria to approach the concept of destination competitiveness in the empirical studies. Authors that use primary data in their studies usually approach the concept of destination competitiveness from the demand side, and are mostly focused on the aspects of consumer behavior that determine the destination choice.

Table 1: Criteria and type of data used in the studies of destination competitiveness

Author	Type of data	Criteria
Pearce, 1997	secondary	market, access, attractions, accommodation supply, prices, development processes
Seaton, 1996	secondary	tourist arrivals, number of overnight stays, tourism receipts, occupancy trends, seasonality trends, balance of tourism payment trends, portion of tourism in GDP, market dependence trends, tourism employment trends and marketing expenditure trends
Briguglios & Vella, 1995	secondary	political factors, exchange rates, marketing, development of new products, human resources, hygiene and environmental factors, tourist services
Bray, 1996	secondary	prices, exchange rates, market, access
Edwards, 1993	secondary	exchange rates, prices
Javalgi, Thomas & Rao, 1992	primary	tourist perceptions of several destination attributes
Calantone, Benedetto, Hakem & Bojanic, 1989	primary	tourist perceptions of several destination attributes (shopping facilities, hospitality, safety, food, culture, tourist attractions, tourist facilities, nightlife and entertainment, scenery, beaches and water sports)
Haahti & Yavas 1983; Haahti, 1986	primary	tourist perceptions of 12 European countries on value for money, accessibility, sport facilities and other activities, nightlife and entertainment, peaceful and quietness, hospitality, wilderness, tracking and camping, cultural experience, scenery, change from the usual destinations
Woodside & Lysonski, 1989	primary	developing a destination set where any destination is chosen among alternatives
Faulkner, Oppermann & Fredline, 1999	primary	analysis of travel agents' perceptions of core tourist attractions
Botha, Crompton & Kim, 1999	primary	tourist motivations and tourist perceptions of entertainment, infrastructure, physical environment and wildlife

Source: authors

Indeed, the competitiveness of destinations depends on how they are perceived by visitors, whether they are potential visitors or actual visitors. The way the quality of the destination is perceived by tourists is a critical success factor in the context of competition between destinations (Kozak & Rimmington, 1999; Woodside & Lysonski, 1989; Leung & Baloglu, 2013; Dias & Cardoso, 2017).

In turn, these authors that use secondary data in their studies adopt the perspective of the market and consider a large amount of distinct criteria. These studies measure the quantitative performance of destination by looking at figures such as annual numbers of tourist arrivals, amount of annual tourism receipts, level of expenditure per tourist, length of overnight stays, etc.

Basically, as the Table 1 shows, researchers use two completely different approaches to assess destination performance in terms of their competitiveness: opinion-based (subjective) and data-centric (objective) approaches. Exactly the same situation occurs in the monitoring of the destination sustainability (Mikulic, Kozic & Kresic, 2015).

3. Destination Management Organizations (DMOs)

Regarding the global management of a tourism system at local or regional level, it is not enough to look at the tourism supply and demand and for all stakeholders involved in this process, it is also necessary to take into account organizations that do not directly associate with the tourism industry, such as hospitals, police, fire brigades, service stations, etc.. These organizations, by being present in the areas of destination, condition through their performance, the performance itself of the tourism where they are located (Grängsjö, 2003).

Being a destination area an extremely complex system, no organization can independently assume the tourism development of a destination by itself (Jamal & Getz, 1995). Destination management/marketing organizations are concerned with the synergic cooperation of all stakeholders, with the aim of achieving a governance model with common objectives and goals, with a focus on sustainable development and promotion of destinations, which benefits all these stakeholders.

In this context, the first DMOs began to appear about a century ago (Morrison, 2013). They can be considered the organizations responsible for the management and/or marketing of destinations and are generally categorized as follows (World Tourism Organization, 2007):

- National Tourism Management Organizations, responsible for national level management;
- Regional Tourism Management Organizations, responsible for the management of a geographic region previously delimited for this purpose;
- Local Tourism Management Organizations, responsible for a smaller geographic area, corresponding mostly to cities, towns or villages (municipalities and parishes).

DMOs may also have different legal status:

- Public administration (government, regional public organizations, municipalities)
- Private administration (private sector)
- Mixed administration (public private partnerships - PPP)

It is evident that for each of these types of administration there are inherent advantages and disadvantages to each of them.

In relation to public sector management, Morrison (2013) suggests that it provides a greater awareness of a destination due to a broad knowledge of the various sectors in the destination. But in another perspective there may rise an excess of bureaucracy and slowness in data processing, and politic influences can also be a major constraint for the acceptance of territorial strategies by some stakeholders.

Regarding the DMOs with private administration, Morrison (2003) indicates that it facilitates a greater fluidity and speed of the organizational processes, good implementation of strategies in short term, and presenting, as a rule, many skills in the field of marketing and sales. But as a rule, they don't ensure a sufficient basis for long-term planning, jeopardizing the future sustainable development. On the other hand, its strong profit orientation can lead to constraints on local communities if the division of economic and social benefits does not agree with a relational proportion of mutual benefits.

In regard to PPPs, Kim *et al*. (2005) says that this model is based on the combination of the best of two worlds, combining the previously mentioned advantages, and minimizing the individual disadvantages existing in the previous models. On the other hand, there may be a loss of control of the public sector, which may jeopardize the very sustainable development of local communities or even political risks and problems in the application of management, due to the lack of familiarity that many

governments still have with cooperating with the private sector (Kim *et al*., 2005). In spite of these possible constraints, in this theoretical model, this PPP model is presented as the best management model for this type of organization (Almeida, 2014).

a. Objectives and management models of DMOs

Within each tourist destination, there are different stakeholders and organizations that interact with each other, each with specific interests, which in many cases, end up being conflicting.

DMOs should devise strategies that will lead to the understanding of all actors involved in the destination, ensuring that all of them "move to the same side" and become true emissaries of the message to be promoted (Magnete & Minghetti, 2006).

For Gartrell (1994), the main objectives of a DMO are the following:

- Coordination of the most diverse constituent elements of the local tourist system, thus ensuring the transmission of messages "with one voice";
- Filling the role of tourism leader and lawyer to local communities and their tourism service providers. It is crucial that the DMOs are visible and recognized by the various local actors, allowing them to perceive the significance of the local tourism industry;
- Ensure assistance in the development of a set of infrastructures, events and programs that will maximize the potential of the different local tourist attractions;
- Assistance to visitors, for the provision of services related to the delivery of information, in the moments prior to the trip, as well as in the destination itself;
- Serve as connection element with external stakeholders such as travel agencies, tour operators, ensuring that the message of the destination transmitted by them meets the territorial marketing strategies previously defined by DMO.

In this sense we can verify the complexity of the central role that the DMOs have in order to be able to deal with the most different aspects of the tourist surroundings of a destination.

The determination of the degree of success of a DMO at a particular destination is also assumed to be a very complex process and difficult to measure. The success of a DMO, especially in a first phase, may not be entirely dependent on the success of the tourist destination that represents, but in long term, the tourism performance of that destination will always have to be one of the criteria to evaluate the success of a DMO.

b. DMOs in Portugal

In Continental Portugal, the vast majority of Destination Management Organizations are public, from where we can highlight, from a national perspective, Turismo de Portugal. At a regional level, there are 5 entities, which resulted from two successive restructuring processes. The first one occurred in 2008. It consisted in the creation of a map with 11 regions, having as basis the previous 19 regional entities. In 2013, these 11 regions were merged into the current 5 regional entities, namely the Tourism Regions of North, Center, Lisbon and Tejo Valley, Alentejo and Algarve (Almeida, 2014).

At a local and municipal level, the municipalities eventually assume the role of DMOs, taking ownership of a regional identity developed by the 5 Regional Tourism management bodies, as well as by the various national and regional strategic development plans (PENT, PNPOT, PROT, etc.), but promoting their identities and resources individually.

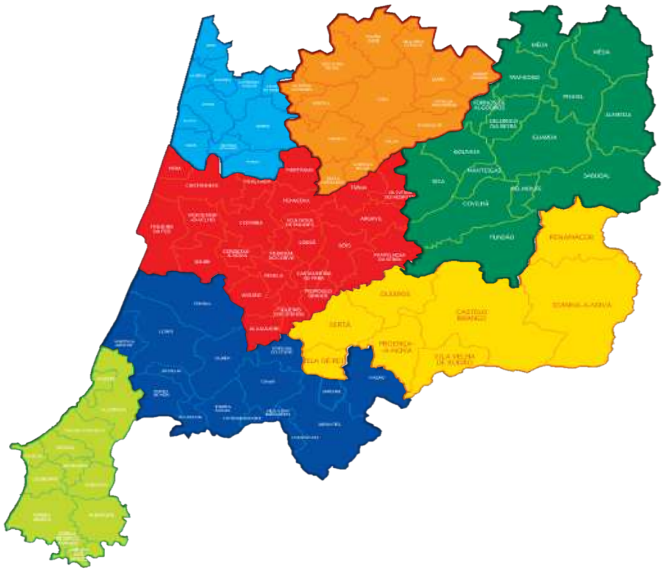
c. Tourism of Central Portugal – as a new DMO

The previous restructurings also brought changes in the organization of the regional entity of Central Portugal, which is the case study of this investigation.

The last big change was the addition of three new poles to this regional entity: the tourist development poles of Serra da Estrela, Leiria-Fatima and Oeste, which meant a larger territorial area to cover.

Nowadays, this regional entity counts with 7 intermunicipal communities, that results in a total of 100 municipalities.

Image 1: Region of Central Portugal



Source: Turismo do Centro

This relatively large territorial coverage gives the region an enormous diversity of sub-regions, with enormous potential in terms of landscapes, natural and cultural heritage.

These two factors - a recent constitution and enormous heterogeneity of sub-regions - are a major challenge for the organization of destination management, which requires the development of adequate mechanisms and processes to maintain cohesion and equity between the different territories of the region and all the participants in the tourist industry.

Table 2. Intermunicipal communities of the Regional Entity of Central Portugal

Intermunicipal community	Municipalities
Castelo Branco	Castelo Branco, Idanha-A-Nova, Oleiros, Penamacor, Proença-A-Nova, Sertã, Vila de Rei, Vila Velha de Rodão
Coimbra	Alvaiázere, Ansião, Arganil, Cantanhede, Castanheira de Pêra, Coimbra, Condeixa-A-Nova, Figueira da Foz, Figueiró dos Vinhos, Góis, Lousã, Mealhada, Mira, Miranda do Corvo, Montemor-O-Velho, Mortágua, Oliveira do Hospital, Pampilhosa da Serra, Pedrogão Grande, Penacova, Penela, Soure, Tábua, Vila Nova de Poiares
Leiria.Fátima.Tomar	Abrantes, Alcanena. Batalha, Constância, Entroncamento, Ferreira do Zêzere, Leiria, Mação, Marinha Grande, Ourém, Pombal, Porto de Mós, Sardoal, Tomar, Torres Novas, Vila Nova da Barquinha
Oeste	Alcobaça, Alenquer, Arruda dos Vinhos, Bombarral, Cadaval, Caldas da Rainha, Lourinhã, Nazaré, Óbidos, Peniche, Sobral de Monte Agraço, Torres Vedras
Ria de Aveiro	Águeda, Albergaria-A-Velha, Anadia, Aveiro, Estarreja, Ílhavo, Murtosa, Oliveira do Bairro, Ovar, Sever do Vouga, Vagos
Serra da Estrela	Almeida, Belmonte, Celorico da Beira, Covilhã, Figueira de Castelo, Rodrigo, Fundão, Fornos de Algodres, Gouveia, Guarda, Sabugal, Manteigas, Meda, Pinhel, Seia, Trancoso
Viseu.Dão-Lafões	Aguiar da Beira, Carregal do Sal, Castro Daire, Mangualde, Nelas, Oliveira de Frades, Penalva do Castelo, Santa Comba Dão, São Pedro do Sul, Satão, Tondela, Vila Nova de Paiva, Viseu, Vouzela

Source: authors

4. Monitoring Tourism Activity

In recent years, tourism has become a highly competitive market, which is why destinations need to be able to measure their competitiveness in order to identify their strengths and weaknesses and thereby develop their future strategies (Keller and Smeral, 1997). In order to increase its

competitiveness, the existence of processes for collecting and producing information in the tourism industry becomes an important competitive advantage (Brandão, 2007).

To accomplish this, the management of tourist destinations has a greater significance at a regional and local level, rather than at a global level. According to the World Tourism Organization (2005), local-based destinations are fundamental points to assess tourism activity, to intervene with local actors, and to implement tourism policies. The local authorities responsible for regions, districts, cities, towns, rural areas or tourist attractions have also been increasingly involved in the process of tourism development and management (Brandão, 2007). In fact, are the local authorities who have a more in-depth knowledge of the territory and the most appropriate solutions for it.

In this context, it is important to focus on the importance of producing statistical data as one of the fundamental competences of Destination Management Organizations, which should be an input to the policy, planning and development of the industry.

To achieve this, it is extremely important to think about a monitoring system of tourism activity and how it should be structured, in terms of the organizations involved and the main statistical indicators, variables and studies to be produced. The goal is that the produced data can meet the information needs of stakeholders in the tourism industry, positioning itself as an instrument that supports the destination and industry management process, increasing its competitiveness (Brandão, 2007).

Tourism observatories assume an appropriate role for the compilation, production and reflection of pertinent information to facilitate the decision-making process in the field of tourism (Franch & Contreras, 2013). These observatories will allow the increase of the destination competitiveness, through a single source that allows to know what is really happening (Franch & Contreras, 2013).

From a perspective of sustainability, the dynamic growth of the "*tourism sector urges us to deal with the theme of possible preservation of tourism sources for future generations. Because tourism is an open system, everyone has a freedom to enter it as well as share its benefits. However this openness of the system may cause negative effects that need to be restricted*" (Zuzana & Zuzana, 2015).

Monitoring is one of the main tools to support the implementation of sustainable tourism policies, as it transmits information of impacts in the territory and allows rethinking strategies in the course of tourism management.

However, according to Brandão (2007), there are still some concerns regarding the existence of adequate monitoring mechanisms, which provide reliable information on the industry, serving as support for the management and decision-making process in the destinations. As well as with regard to the production of studies of a qualitative nature (especially behavior, needs and visitor satisfaction), where qualitative studies of visitor characterization are considered most necessary for the destination management process and the companies of the region.

Considering the previous assumptions, it is concluded that monitoring tourism activity is crucial. The information and statistical data are essential tools for the management, planning, creation and implementation of policies and access to fundings.

However, the information produced does not often respond to the needs of local actors in the industry and therefore does not constitute an effective tool for management support, and consequently to the creation and maintenance of the destinations competitiveness (Brandão, 2007). In this sense, the need for an adequate monitoring system, composed of a large number of cohesive, composite and comprehensive indicators, is imperative to meet the current needs of the tourism industry.

Sometimes monitoring tourism in a given area may involve monitoring the broader functional contexts in which tourism is embedded. Tourism destinations integrate distinct types of stakeholders with different motivations, leading to a complex system of relationships. In consequence, in a society and its economy, to differentiate between tourism and no-tourism domains becomes impossible or at least very difficult. Consequently, even for analytical proposals, it is difficult to draw inside a given city or region a demarcation line to isolating the contribution of tourism for its economy, since all its resources and services, both the usual or the tourist ones, are confused with the other economic activities, as well as the visitors are confused with the residents in modern patterns of tourist behavior. Due to this situation, it can be difficult to measure the impacts of tourism with clarity.

The development of a monitoring system must adapt to the needs and specificities of a given region or city. In this sense, the information needs of the different stakeholders should be evaluated, as well as, the current use of information and the perceptions of the effectiveness of information production, in order to prioritize information needs and define roles in the data collection process.

There is a varied set of information that DMOs must collect, interpret, understand and use in order to maintain a destination information management system that allows it to remain competitive and focus on a sustainable development. This information is based on statistical data obtained through an adequate system of indicators.

According to Wöber (2000), there are several reasons for the production of tourism statistics, such as:

a) The need to assess the impact of tourism on the destination;
b) Determine the contribution of tourists to the economy of destination;
c) Support the planning process of tourism infrastructures;
d) Facilitate promotion and marketing.

This information is also extremely important when it comes to understanding and analyzing all the pillars of destination sustainability (environmental, economic and social).

5. Indicators

In the literature, we find a vast variety of indicators, and their definition is equally extensive, depending to a great extent on who uses them, that is, on the entity, company or person who uses this tool and the approach given in its use. The first time this term was used in statistical and economic literature (Gutiérrez-Fernández, Ballester & Ballester, 2012).

According to the World Tourism Organization (WTO, 1995), an indicator is a "quantitative, synthetic instrument that facilitates the analysis and assessment of information in such a way that, when used in combination with other types of instruments, reduces the possibility for stakeholders to, inadvertently, make poor decisions". Indicators are tools that allow to quantify change, identify processes and provide a framework for the establishment of targets and monitoring performance (Torres-Delgado & Palomeque, 2014). Furthermore, according to OECD (1997), the three basic functions of indicators are simplification, quantification and communication.

Due to these definitions we can understand that indicators are extremely important tools for the management of tourist destinations, which give information about the impacts that occur at the destination (negative and/or positive), serving as a support for decision making.

The problem is that there is no list of universally accepted indicators. Moreover, the indicators describe specific processes (not exclusively numerical information), making it difficult to compare, and do not establish a homogeneous and synthetic and global way of doing it between different territories or economies (González et al, 2005).

As tourism is a very comprehensive and complex sector, it requires a holistic vision and assessment. As such, monitoring systems should integrate a set of multidisciplinary and multi-sectorial indicators.

A distinction can be made between two types of indicators: simple and complex indicators (or indices). Simple indicators provide statistics directly from reality or involve simple data processing, and complex indicators are dimensionless measures resulting from the combination of a series of simple indicators through a weighting system that organizes components into a hierarchy (Sanchez & Polido, 2008).

The two types of indicators differ in terms of the information they provide and the use for which they can be put. Simple indicators are useful for detecting specific impacts and applying partial solutions and complex indicators facilitate a more comprehensive and integrated understanding of a system (as in the case of tourism). Between these two types of indicators, there is another intermediate possibility, a system of indicators that is a structured set of simple indicators, the results of which can be interpreted together, creating the possibility to serve different purposes (Torres-Delgado & Saarinen, 2014).

An indicator system is a set of simple indicators that allows the information provided to be more complete than those offered by each of its components. One advantage of an indicator system is that it organizes information so that relationships can be established between variables and facilitate joint interpretation as well as communication (Torres-Delgado & Palomeque, 2014). This also allows the selection of relevant variables in order to address a particular phenomenon, through a sufficiently comprehensive selection to adequately assess the multidimensional nature of the phenomenon, but simple enough to be manageable (Torres-Delgado & Palomeque, 2014).

Nevertheless, there is not yet a complete consensus on the number of indicators that a system should contain and this lack of clarity is a great methodological problem, hence researchers should apply their own subjective criteria to determine how many indicators are "sufficient" to parameterize a phenomenon. Therefore, it is desirable that a system of indicators be verified through participatory processes involving stakeholders in the area and/or experts to respond to multidisciplinary research (Torres-Delgado & Saarinen, 2014).

Moreover, when a monitoring system includes a considerable number of indicators, it's important to define their relative weights as an important issue in the measurement of tourism sustainability. It's critical to be careful when deciding the weighting of indicators, since weights have a significant effect on the rankings of analyzed regions and subsequent policymaking (Likulic *et al.*, 2015). The issue of indicators weighting is of uttermost relevance in our study, since one of the questions we addressed is the *indicators' relevance in terms of its utility for tourism management*. However, as Likulic *et al.* (2015) states, relevant studies have not paid attention to this issue so far.

a. European Tourism Indicators System (ETIS)

Many indicator systems have been developed in the field of tourism management, such as the ETIS, in order to strengthen the sector's competitiveness and promote the development of sustainable, responsible and quality tourism. The European Commission (2010) considers it essential to have a better socio-economic knowledge base on tourism and its relationship with the environment at European level, in order to consolidate the statistics data and analyzes on this complex industry. In this sense, sustainable tourism indicator systems are tools to evaluate the degree of sustainability of a destination in a multidimensional perspective. The indicators used to assess this system can be defined as "the set of measures that provide the information needed to better understand the links between the impact of tourism on the cultural and natural environment in which it occurs and on which it is heavily dependent" (UNWTO, 1996).

ETIS is based on the principle of shared responsibility and joint decision-making of destinations in which they work together to gather information and discuss their results to improve the sustainability of the regions (European Commission, 2013). It allows local measurement and monitoring of sustainable development processes and communicates to stakeholders their progress and future performance (Brătucu, Chiţu & Demeter, 2015).

This system should be taken into account and serve as the basis for monitoring in European destinations. However, the exponential growth of tourism and the changes to its paradigm, bring a lot of concerns and difficulties to the managers of the destinations that are not possible to perceive through this system only. In this sense, there is a need to improve existing data, since decisions are made based on them.

Assuming the evolution of information needs and considering the previous assumptions, we can affirm that tourist information systems should provide regular, credible and comparable statistical information (temporal, spatial and other economic activities).

Thus, in order to develop an adequate tourism monitoring system, it is necessary to ensure that gaps are filled at the level of existing information. This could be done by establishing a network of cooperation between enterprises and organizations at local level and with the national tourism administration, involving regional statistical units, representatives of the tourism industry, universities, regional economic research centers, and partners at national and other levels. Determine what statistical infrastructures exist, build a specific development framework for tourism statistics, and promote economic analysis of tourism from a regional perspective (Brandão, 2007).

6. Methodology

With the objective of gaining in-depth knowledge on this subject and anchoring the empirical model of the Tourism Observatory of the Central Portugal (TOCP), we are conducting a qualitative research with a group of 40 tourism experts, asking them a set of questions about the level of utility and reliability of statistical data provided by the tourism authorities to stakeholders in the tourism industry.

In the first phase, in order to understand how monitoring can serve as a factor to improve competitiveness and sustainability in tourist destinations as well as the importance of multidimensional and multi-sectoral indicators system, some literature research was done.

In our study, the ETIS was considered as a supportive tool for the process of development of the system of indicators, which we want to propose. However, ETIS cannot be considered as a global monitoring model, as it is mainly focused on the sustainability issues and doesn't cover satisfactory the important dimensions of destination competitiveness. Furthermore, ETIS doesn't propose the necessary methodologies to surpass the main gaps of the existing statistical collecting procedures even in the accommodation sector. In order to design a more holistic model, although taking the ETIS as the basic element, we decided to go beyond the analysis of accommodation sector, by identifying the full set of economic sectors that are constitutive of the tourism industry (such as restaurants, entertainment, transports, museums and cultural institutions, wine cellars, tourist shops, etc.), and for each of these individual sectors we proposed a set of items of statistical data that can be relevant to complete the ETIS approach in our global model. This global model we designated as Global Monitoring of Tourism Activity (GMTA), and the following table shows the set of indicators that we are proposing in order to complete ETIS, however it is important to mention that this model is still under construction.

Table 3. Set of complementary indicators

Common complementary indicators to all subsectors	Wage and personnel costs (insurances, social security and other taxes) in the reference month
	Number of employees at service in the reference month
	Average cost per employee
	Non-personnel expenses (raw material, suppliers, rental, amortizations, etc.)
	Total revenue in the reference month
	Relative weight of tourist demand in the months of greatest demand, compared to the annual total
	Average daily revenue
Food & Beverages	% of total revenue generated by the sale of beverages
	% of total revenue generated by the sale of cooked food
	Total capacity of the restaurant (number of seats)
	Number of days of the month with close doors
	Average number of meals per day (estimate)
	RevRest - Revenue per available seat
	Average meal price
	% of the revenue coming from tourists and visitors of a day (estimated percentage)
	% of the revenue that comes from tourist groups, by contracting with agencies, operators and other entities
Tourist Recreation	% of total revenue generated specifically from tourist recreation activities (excluding accommodation and other complementary services)
	Number of operating days in the reference month
	RevAT - Revenue per employee at service
	% of the revenue coming from tourists and visitors of a day (estimated percentage)
	% of the revenue that comes from tourist groups, by contracting with agencies, operators and other entities
	RevAVT - Revenue per employee at service
	% revenue from incoming / outgoing
Acommodation	Total number of sold rooms in the reference month
	Total revenue per customer in the reference month
	Accommodation capacity
	Number of available rooms
	Net occupancy rate / Room occupancy rate
	Number of occupied rooms
	Number of overnight stays in the reference month

	Total number of customers
	Payroll to Room Revenue
	RevPAR - Revenue per available room
	Average daily room price
	% of the revenue coming from tourists and visitors of a day (estimated percentage)
Transportation - Buses	% of total revenue from incoming
	% of total revenue from outgoing
	Total capacity (number of seats)
	Number of available buses
	Average daily passenger number (estimate)
	RevTra - Revenue per available seat
	Average price per km
	% of the revenue coming from tourists and visitors of a day (estimated percentage)
	% of the revenue that comes from tourist groups, by contracting with agencies, operators and other entities
Transportation – Rent-a-car	Number of vehicles rented in the reference month
	Total capacity (total number of seats in the fleet)
	Number of available vehicles
	Average number of days of rental
	RevTra - Revenue per vehicle available
	Average daily price per vehicle
	% of the revenue coming from tourists and visitors of a day (estimated percentage)
Attractions & other visitable sites	Total capacity
	Number of days of the month with close doors
	Average number of visitors (estimate)
	RevLocVis – Revenue per visitor
	Average ticket price (if there is a ticket office)
	% of the revenue coming from tourists and visitors of a day (estimated percentage)
	% of the revenue that comes from tourist groups, by contracting with agencies, operators and other entities

This step will allow the definition of a list of structured indicators according to a specific conceptual scheme. The set of indicators is going to be validated and adjusted by carrying out an inquiry to 40 experts from the tourism industry in the Central Portugal Region.

The empirical study aimed to understand, in the view of the different experts, some of the following questions:

- What are the most relevant indicators in terms of its utility for tourism management?
- How many indicators have to be included to ensure a satisfactory coverage of all relevant aspects of tourism activity?
- What are the appropriate measures for each indicator and how get the necessary information?
- What are the pertinent sources of information?

Through the collection of this data, we intend to propose a complete and efficient indicator system, which will provide the managers of the destination and all the stakeholders in the industry, the necessary information to make the most appropriate decisions.

7. Concluding remarks

As a consequence of the tourism development and the increasing complexity of modern tourism industry, there is now a growing need to obtain information, related to the impacts of the tourism

industry at regional and/or local level, so that destination managers are able to make the most appropriate decisions.

As Ramos and Perna (2008) state, "the growing amount of data and information in the tourism industry directly reflects the increasing complexity of the organizations associated with the sector and of society in general. Thus, efficient management of organizations that are dependent on and strongly linked to the tourism industry is only possible when supported by systems that guarantee the information necessary for the development of their activities".

Furthermore, there is a trend towards decentralization of political power and management of national resources to the subnational levels (states, regions and municipalities), leading to the need for integrated regional and local information (Brandão, 2007). Actually, tourism does not only develop in the country as a whole, but in different specific places, and it is necessary to analyse this development and the impacts of tourism at a local level.

In this sense, it is fundamental to develop and use mechanisms that allow destinations to collect and provide real and credible information (indicator systems) on the development of their tourism activity. They are also important sources of knowledge and information for destination managers and industry stakeholders.

"*Tourism is strongly dependent on information and it is a sector where information and communication technologies (ICT) can be used to spark new initiatives and opportunities, optimising the relationship between supply and demand and fostering new development patterns*" (Melo, 2005).

The assumptions identified and explored in this paper allows to better understand the importance of the production of statistical information, based on coherent and cohesive indicators, to improve the competitiveness and sustainable development indexes of tourist destinations. On the other hand, it is still possible to observe that there are some gaps at this level, which can influence the overall performance of the destination.

With the growing phenomena of globalization, inherent to the very development of contemporary societies, there are also relations of greater competitiveness between different territories/destinations, where the tourism industry represents an increasingly significant importance. The results of this study will contribute significantly to draw up a new model for monitoring and assessment of the tourism at regional level. After its validation, this model will be implemented in the region of Central Portugal, using a bottom-up process and engaging all stakeholders of the region.

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