



Analysis of the Relationship Between Tourists Experience, Knowledge, Digital Strategic Decisions of Tourism Site Managers and Tourism Business Sustainability

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Abstract

The aim of this research is to propose a tourism observatory design to support strategic decision-making in tourist destinations. The proposed methodology uses input-output analysis. We propose the destination survey as a model for randomly selecting visitors at tourist attractions. The research results reveal that the observatory concept serves as a viable tool for tourism policy, addressing the information gaps at the destination level, where national statistical operations fall short. Observatories act as management tools that generate and concentrate scientific and statistical information, becoming the main source of official tourist data about a destination. However, in almost provinces, existing information does not fully meet the needs of users. Therefore, this research suggests a tourism observatory model to enhance the availability of systematic and timely information for decision-making at the provincial level. We hope that provinces and territorial units on a sub-national scale, lacking a complete tourism information system, will find the proposed model useful. We expect them to implement tourism observatory projects as a means to address specific needs, resolve local issues by uniting various tourism system participants, and address deficiencies in their current tourism statistics system. In this regard, provincial tourism observatories are expected to play a decisive role in the development of indicators and the calculation of trends, and the results obtained will provide feedback on the actions taken in relation to tourism policy.

Keywords: Tourism, Statistics, Destination Management.

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1. Introduction

Increased interest in tourism has created new challenges in measuring its overall impact, both from an economic and social perspective. One of the main problems faced is the lack of adequate and timely information to evaluate the behavior of the tourism sector. However, new technologies applied to tourism have brought about significant changes in this regard [1]. With the advent of new technologies, such as big data, data analytics, and artificial intelligence, the tourism sector now has access to large amounts of data. This data can provide valuable insights into tourist behavior, their preferences, travel trends, and the economic and social impacts of tourism. However, the biggest challenge is how to manage this data effectively [2]. A proper data processing process is required to distinguish relevant and useful information from just raw data. This requires collaboration between government, the private sector, and academia to develop frameworks that can guide effective data collection, processing, and analysis. Apart from that, it is also important to integrate data from various sources, including economic, social, cultural, and environmental data. This will help in understanding the impact of tourism holistically and developing more effective strategies to manage and develop the tourism sector sustainably. We hope that the tourism sector can develop sustainably, taking into account the resulting economic, social, cultural, and environmental impacts, by utilizing new technology and effectively managing data [3].

Effective management in the tourism sector requires reliable and relevant statistical data. In this context, it is important to have a system that can provide effective statistical information to support rational decision-making. First of all, it is important to identify relevant statistical indicators for the tourism sector. This includes data on the number of tourists visiting, type of tourist, length of stay, expenditure, and the resulting economic impact. In addition, data regarding tourism infrastructure, service availability, and environmental sustainability are also important to consider [4]. Then, we need a system that can effectively collect, manage, and analyze statistical data. This system must be able to provide accurate and up-to-date information to decision-makers in the tourism sector, both from the public and private sectors. The use of sophisticated information and communication technology can help manage data more efficiently. Collaboration between government, the private sector, and

academia is essential to ensuring the reliability and relevance of statistical data used for decision-making. Establishing institutions or organizations specifically tasked with collecting and analyzing tourism statistical data can accomplish this. By having a system that provides effective statistical information and ensures its reliability and relevance, it is hoped that decision-makers in the tourism sector can make better decisions to improve competitiveness and sectoral public policies in tourism development [5].

The use of observatories as a permanent and systematic data collection tool in the tourism sector can provide many benefits. We can interpret the evolution of the economic and social magnitude of this sector and evaluate the efficiency of administrative decisions with the help of tourism-related statistical data. Tourism observatories, as a relatively new policy instrument, can be an invaluable source of data for policymakers. They can provide more detailed information on tourism trends, tourist preferences, social and environmental impacts, and overall tourism sector performance [6]. By using it, policymakers can access more complete and accurate data to support better decision-making. They can use this data to plan more effective tourism development strategies, identify opportunities and challenges, and evaluate the impact of implemented policies. Apart from that, it can also be a tool to increase transparency and accountability in tourism management. By having data that is open and accessible to the public, it can help ensure that decisions are based on accurate and accountable information. Thus, its use in collecting tourism-related statistical data can help improve our understanding of the tourism sector as well as support better and more efficient decision-making in managing and developing tourism in a sustainable manner [7].

The implementation of an information system that articulates a national statistical system with information needs for regional decision-making can have a significant impact on the management of a tourist destination. By designing tourism observatories on a sub-national scale, we can strengthen the tourism planning and management process in these destinations [7]. First of all, by combining information systems that combine national statistical data with local information, we can obtain a more complete and detailed picture of tourism activities in the destination. This allows decision-makers to have a better understanding of tourism trends, tourist preferences, and the economic and social impacts of the tourism industry at the local level. Second, all stakeholders are involved in the decision-making process. By providing relevant and accurate data to related parties, it can help ensure that decisions are based on correct and accountable information. Finally, the implementation of an information system that aligns the national statistical system with local information needs can help identify unique opportunities and challenges for the tourist destination. This can help in designing more effective and sustainable tourism development strategies, as well as increasing the competitiveness of these destinations in the global tourism market [8].

In recent years, economics has made a valuable contribution to tourism activities. However, an aspect that is less considered is information. Information is the most important intangible asset that any organization, whether government or business, can have, because sound decision-making and firm planning depend on it. One of the primary challenges in managing the tourism sector is rational decision-making, as any field of development necessitates the use of statistical numbers and indicators [8]. The World Tourism Organization highlights the importance of reliable statistics for policymakers to make effective decisions. Likewise, obtaining statistical data related to this sector makes it possible to interpret the evolution of its economic and social magnitude and also evaluate the efficiency of administrative decisions. In this context, tourism observatories play an important role in collecting, managing, and providing the necessary information for decision-makers in the tourism sector. By providing relevant, accurate, and up-to-date data, observatories can help improve the effectiveness of decision-making, increase competitiveness, and ensure the sustainability of the tourism sector [9]. Countries in the tourism sector carry out statistical work, but important information gaps prevent careful analysis of the problems and potential associated with this sector, especially at the local level. The information theory aspect is the responsibility of the tourism observatory in producing the necessary information. Observories can bridge information gaps in the tourism sector by preparing reports that provide comprehensive supply and demand information, consider the most relevant realities in the region, and gather information from the various actors involved. Production of this information requires high costs, the organization that receives the information certainly has an advantage. In this context, tourism observatories significantly contribute to filling in information gaps by generating data and reports that various stakeholders can utilize to enhance their decision-making processes. Thus, it can be an effective instrument in improving understanding and management of tourism, especially at the local level [10].

The tourism observatory is an instrument that aims to carry out in-depth analysis of various aspects of tourism phenomena. Its function is to transform statistical data into useful and relevant information for the management processes of public and private entities. The resulting information helps managers and decision-makers be more proactive and responsive to everyday problems and situations [10]. We have successfully addressed the identified information gaps and distributed tourism sector statistics to all relevant agencies. In this context, it becomes very important to provide the necessary information for various parties involved in tourism management [11]. By conducting in-depth analysis, it can help increase understanding of tourism dynamics,

thereby enabling decision-makers to take more effective and efficient steps in managing tourist destinations. It can also help identify opportunities and challenges faced by the tourism sector, thereby enabling decision-makers to formulate better strategies for sustainable tourism development.

2. Research Methods

The proposed methodology uses input-output analysis to measure regional tourism spending and evaluate its direct, indirect, and induced impacts, as well as to determine its sectoral disaggregation. We propose the destination survey as a model to randomly select visitors at major tourist attractions in cities, airports, train stations, and/or bus terminals. We will distribute data collection throughout the year, estimating the volume of visitors to interview based on tourist flows at any time and fixations, while maintaining a minimum confidence level of 95%. We can request such information via an online form to minimize the initial cost of this statistical operation. We propose using input-output models to conduct studies on the direct and indirect impacts of tourism in the medium term. The direct impact will be measured by the tourist consumption generated by visitors during their stay, data for which can be obtained from the demand survey. The demand survey also provides the number of visitors, which is necessary to estimate the impact. We will use the input-output model to determine the indirect impact of tourism, specifically its impact on other economic activities, by dividing expenditure by activity.

3. Results and Discussion

The exponential growth of tourism in recent decades has brought challenges in increasing resource use, confronting the degradation of natural and cultural heritage, and dealing with negative social impacts. This emphasizes the need for a paradigm shift in tourism management. The sector still faces a major challenge in overcoming the lack of reliable data at the tourism destination level. Digitalization in the tourism sector provides opportunities to improve non-traditional measurement methods. Digital technology enables more efficient and accurate data collection, enhancing the understanding of tourism impacts and facilitating more informed decisions to uphold the sustainability of the tourism sector. Complementing existing traditional data sources in the tourism sector supports evidence-based decision-making and more responsible management. This will assist various actors at the destination level in taking steps focused on accelerating change towards a more sustainable pattern.

Most tourism observatories rely on sections on the websites of the tourism administration or the university to which they belong to disseminate information about their activities. Only about 10% have their own website. Meanwhile, about 20% of observatories do not have an online portal, perhaps because their implementation has only just begun. However, all observatories have an obligation to produce and share annual reports explaining their monitoring activities, results, and lessons learned. Apart from using the website, they also hold regular workshops as a way to disseminate information. This workshop further strengthens the participatory approach to disseminating information. Each year, workshop participants have the opportunity to discuss aspects related to measurement progress and organizational aspects of each observatory, as well as other issues. This shows the observatory's efforts to engage various parties and disseminate their information widely to improve understanding and effectiveness of their work. Almost all observatories, to varying degrees, adhere to monitoring at least one of the three pillars of sustainability, namely economic, social, or environmental, which is an essential requirement for being part of the network. Many observatories have developed indicators that are more sophisticated and adapted to their local realities. Despite the fact that many countries only have one observatory in this network, we hope that the efforts we undertake will inspire the deployment of many more across their areas of influence. The long-term goal is to promote efforts to implement more sustainable tourism activities and help build more observatories in each country through the exchange of experiences, learning, and best practices.

In establishing a tourism observatory, selecting the right territorial unit is very important to achieve the objectives of tourist destination management. According to the literature, a sub-national scale that complements the work of the territorial economic system will be very useful in managing tourist destinations. Depending on the territorial organizational structure, practitioners often install tourism observatories at the regional, provincial, or state level. They generally work together with the territorial economic system, which is a framework that considers the economic aspects of a region and focuses on regional economic development by utilizing local resources and strengthening cooperation between stakeholders. In some cases, large cities with significant tourist activity or specific problems to overcome, such as load capacity, also choose to have them. However, such initiatives tend to be more isolated and may not have strong links to regional or provincial territorial economic systems. Therefore, when choosing a territorial unit for a tourism observatory, it's crucial to take into account the current territorial organizational structure and the objectives for managing tourism destinations. A successful tourism observatory will be able to utilize the data and information collected to help make more effective and sustainable decisions in managing tourist destinations.

The configuration at the sub-national level makes it possible to improve the information deficit and also lays the foundation for data collection in smaller territorial units by establishing a common methodology and statistical operations. If the establishment is considered in the long term, it will be easier to agree on medium-scale regional divisions, such as provinces or states, and each collect information synchronously and according to the same methodology. However, cities lose this rigor when they establish their own methodology for carrying out statistical operations. While the results can provide valuable support for local management, implementing this initiative on a larger scale in the future may pose adaptation challenges. Therefore, we recommend starting these initiatives at the state or provincial level, from which we can derive guidelines for smaller-scale tourist destinations. In addition, it can play a role in collecting consistent data and information from various tourist destinations at the sub-national level. This can help in gaining a better understanding of local tourism trends and enable easier comparisons between different destinations, thereby supporting better decision-making in destination management.

Tourism observatories can emerge through government, private, or mixed initiatives. They can be located within the local general tourism administration or under the framework of a local university. This is because academic institutions tend to ensure continuity over time without depending on changes in public organizations and also facilitate access to valuable information. The human resources available at academic institutions, such as researchers, teachers, and students, can provide a good level of quality in data collection and analysis as well as access to advanced computer systems. Although private initiatives also exist, they are less frequent. It should be a meeting forum between various stakeholders involved in tourism activities. We recommend that observatories become independent entities in their management, involving actors from the public sector, government, private sector, and academic sector, despite the often difficult practical implementation. Ideally, we could implement a mixed formula that includes members from all three sectors and organizations that represent societal interests, like trade associations.

In the development of tourism observatories, it is important to carefully consider initiatives from local tourism administrations and universities. The first step is to define the functional areas of the observatory, such as data collection, analysis, research, and reporting, which must be appropriate to local objectives and need to make a significant contribution to tourism management. Next, ensure the availability of qualified human resources to carry out these tasks, including trained researchers, scholarship holders, and administrative personnel who can lead effective information processing. Other organizations, such as local tourism administrations or universities, can also establish observatories, and good cooperation with these organizations is crucial for efficient and effective management. Observatories can have autonomy in their implementation by forming a work team consisting of representatives from all fields involved in tourism activities. This ensures that all parties have a voice and voting rights in the activities carried out. Involving all relevant parties in determining the type of information the observatory needs to collect is crucial to ensure its relevance and usefulness for tourism management decision-making. By following these steps, we can develop the tourism observatory effectively and significantly contribute to the area's tourism management.

Funding is an important aspect that influences the quality and continuity of operations. Detailed information regarding funding sources is often difficult to find, but it is possible to seek funding from various sources, including public administration, private organizations, and institutions related to the tourism sector, by diversifying funding sources. In addition, establishing strategic alliances with various organizations related to the tourism sector, especially the private sector, can help obtain additional funding contributions and open up opportunities for collaboration in data collection and research. We can also implement membership models, where relevant institutions or stakeholders pay a monthly membership fee to access data with a higher level of disaggregation and specialized research, all while supporting sustainability. Observatories based at universities can take advantage of university resources, including researchers, teachers, and students, as well as access to advanced computer equipment. Such partnerships can strengthen observatory capacities in data collection and analysis. Having autonomy in its implementation and management can form work teams consisting of various stakeholders in tourism activities, giving all parties a voice and voting rights in the activities carried out and the type of information required for collection. This, in turn, can increase participation and financial support. With the right approach to managing funding, it can be easier to maintain its sustainability and make a meaningful contribution to the management of sustainable tourism destinations.

Upon a detailed review of the statistical operations conducted at the national level, it becomes evident that subnational tourism information is often scarce, insufficient, and outdated in approximately 60% of cases. Similarly, the operational review reveals a lack of coordination between the provincial statistical area and the provincial tourism area. Out of the 60% of detected cases of information asymmetry, seven provinces lacked an initiative from either the Directorate of the Provincial Statistics Office or the Provincial Tourism Office to gather statistical data on the state of provincial tourism, potentially due to budgetary constraints. Funding difficulties are usually the main reason why statistical operations in the public sector are stopped because it is impossible to cover the costs of human resources to carry out field work or technological infrastructure to carry out data

processing properly. Therefore, a certain articulation is needed between public and private actors to launch this kind of initiative and guarantee its operation in the long term. These provinces represent an opportunity to launch future tourism observatory projects that serve as support for management mechanisms.

4. Conclusion

In relation to this aspect, we present the observatory concept as a valid tourism policy tool to reduce the information deficit at the destination level, where national statistical operations fail to cover everyday information gaps. Having a continuous flow of statistical information allows us to build knowledge about reality and determine strategies and action plans to improve activities. To answer the question of how observatories can help with managing a tourist destination, looking at what has happened in other countries reveals that tourist observatories are tools that can connect national statistical systems with local information needs by getting people from different tourism-related fields to work together. Its role involves the continuous and methodical gathering of data from diverse sources, transforming this data into knowledge, and promoting evidence-based decision-making. Observatories act as management tools that generate and concentrate scientific and statistical information, becoming the main source of official tourist data about a destination. These entities offer significant value as they function as inter-agency platforms, facilitating efficient and cost-effective information exchange between government and private tourism sector participants. However, in almost 60% of other provinces, existing information does not fully meet the needs of users. The methodology employed is inconsistent, the data is incomplete and outdated, and breaks in the time series have been found.

This research produces recommendations that can be implemented by various related sectors in the tourism industry, for the public sector, it is recommended to bring together representatives from all sectors related to provincial tourism in order to create an interaction space that makes it possible to identify specific information needs and establish joint action plans. In addition, implementing training programs on the importance of statistics in tourism can help unify the criteria for data collection and processing. We should also promote strategic alliances with other tourism observatories at provincial, regional, and international levels to exchange information on best practices. Finally, the development of an online platform that promotes the dissemination of tourist observatory products and scientific production related to the areas they manage is also very necessary. For the private sector, it is recommended to share information generated during daily activities with other actors to generate knowledge that contributes to local tourism development. For the academic sector, it is important to establish agreements with the public or private sector so that students can contribute to primary data collection and gain experience in the field of tourism research. Encouraging young tourism professionals to carry out technical tasks within observatories can also help promote job placements in other areas of the tourism sector. Formulating research projects according to current problems, with the support of the public and private sectors, is also necessary so that academic scientific production is aligned with the goals of provincial observatories and with solving the specific needs of the region being studied.

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