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# Tourism Observatories for measuring the Covid-19 impact on tourism

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**Abstract:** Coronavirus pandemic (Covid-19) began at the end of 2019 and since then has led to a period of global transformations and changes for all aspects of the economy, tourism included. A fundamental action to mitigate the socio-economic impacts of Covid-19 and accelerate recovery is the setup of local sustainable tourism observatories (UNWTO, 2020). This paper proposes a system theory-based framework for measuring the Covid-19 impact on tourism at regional and local level, using a mixed qualitative and quantitative methodology combined with the UNWTO and United Nations' recommendations for Covid-19 Tourism Recovery.

**Keywords:** Covid-19, destination management, impact measurement, recovery, tourism observatories, tourism system.

## 1. Introduction

In Tourism, accurate, relevant, and real-time information is fundamental not only for successful development but for the vitality of destinations and organisations. The development of efficient tools to collect, manage and make available data and information about the supply and the demand, is crucial for the development of marketing strategies, the evaluation of the management performance and the measurement of impact on the destination economy in general (IRTS, 2008).

The Covid-19 pandemic has affected large-scale changes and affected the travel and hospitality tourism industry, turning it into the most affected area (Kalyankar, 2020). According to the World Tourism Organisation (UNWTO, 2020), a fundamental action to mitigate the socioeconomic impacts of Covid-19 and

accelerate recovery is the setup of national and local sustainable tourism observatories to measure all dimensions of tourism (UNWTO, 2020, p.6), as “evidence based decisions and strategies are key, particularly in moments of crisis. Invest in data, analysis and partnerships that allow for close, short-term monitoring of tourism development and impact”.

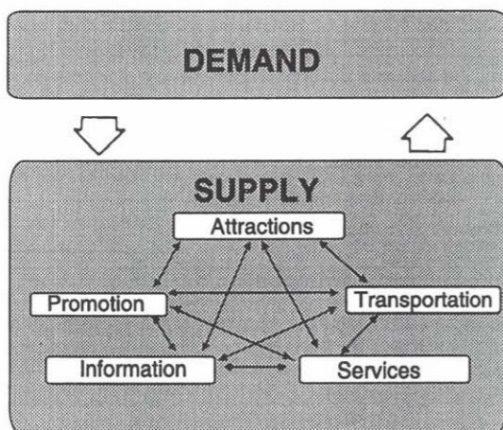
Moreover, several tourism academics (Brando, 2007; Nacca et al., 2010) emphasize the importance of establishing Tourism Observatories at regional and local levels, citing (i) a lack of statistical data, mainly on a regional level; (ii) an uneven distribution of updated information in the field, resulting in a lack of reliable material for investors to analyze, particularly SMEs; (iii) the need for more data regarding competition i.e., of the competitiveness and systematic evolution of all market sectors;

(iv) and, lastly, the difficulty of visualizing the interactions between the various tourism subsectors (Scuttari et al. 2020).

## 2. Methods

Tourism Observatories at regional and local level should be designed to support policy makers, businesses, and researchers to recover from Covid-19 crisis by: (a) analysing the impact of the Covid-19 pandemic in tourism, examining both tourists and tourism professionals over time, (b) providing reliable, comparable, and up-to-date data about tourism flows, expenditures, and travel behavior (tourism demand); (c) identifying trends and developments in the tourism related sectors (tourism supply); and (d) facilitating evidence-based policy making in tourism via a web-based application and a Data Warehouse (DW) management system.

Figure 1. Tourism System



Source: Gunn (1972).

The approach of the measurements proposed should follow a mixed qualitative and quantitative methodology consisted of the most advanced and internationally accepted conceptual and methodological frameworks (TSA: RMF, 2008; IRTS, 2008) for measuring and monitoring tourism, combined with the UNWTO's recommendations for Covid-19 Tourism

Recovery (2020) and the UN Secretary-General's report on Responding to the socio-economic impacts of Covid-19 (2020).

The framework must follow methodologically the system theory in tourism (Gunn, 1972), as observed in Figure 1, that proposes that Demand and Supply objects or elements in a tourism system interact with each other to achieve a specific goal.

## 3. Results

Several analyses should be conducted to better gather the data, both from the demand (i.e., visitors and their activities) and supply side, to measure the impacts of Covid-19 on tourism.

### *Analysis of COVID-19 impact on Tourism Supply*

This concerns the regular selection of data from administrative registers, aiming at an analytical recording and monitoring of establishments of the region of analyses, which will be classified according to their relation to tourism (i.e., enterprises engaged in tourism characteristic activities, tourism connected activities and other activities). The objective is to obtain an overall view of the local economic activity, highlighting the tourism related supply (i.e., accommodation establishments per type and related room-bed capacity, food and beverage serving services, rental services of vehicles, travel agencies, retail trade) as well as local peculiarities. The database will provide a quantitative analysis at the most possible disaggregated level (i.e., per code of economic activity) in terms of a) the structure of local economic activity, b) the per economic activity evolution over time, monitoring modifications and trends corresponding to demand variations and general market conditions (i.e., lock downs) regarding the opening (of new) and closure of enterprises as well as shifts in activities, and c) the legal form of enterprises.

Breakdown may be achieved at an 8-digit (CPA, 2008) level. Estimates of corresponding turnover and number of employees per activity may be achieved with top-down approaches in cases where data at the required NUTS (Nomenclature of territorial units for statistics) level is not available. Focus will be given to enterprises engaged in tourism characteristic activities, internationally comparable and destination specific, according to IRTS (2008) and TSA (TSA: RMF, 2008) specifications.

Indicative tourism supply data to measure Covid-19 impact to be collected are: (a) UN Secretary-General's report on Responding to the socio-economic impacts of Covid-19 proposes to start by analysing the health system itself during the Covid-19 crisis. Possible indicators in line with World Tourism Organisation and World Health Organisation could be essential health services, from primary care level to hospital level, post-hospital patient management; (b) the top concerns for businesses are the same for the immediate and long term such

as economic and political uncertainty and travel restrictions, visa regulations, pricing, marketing, and staffing; and (c) the most important action that businesses reported in relation to the global Covid-19 outbreak, such as cancellation policies, improving quality, forming new partnerships, and adjusting marketing and product offering.

#### *Analysis of COVID-19 impact on Tourism Demand*

The goal of the study of demand is to characterize the pattern and behavior of the tourists who visit the destination and estimate crucial aspects of the economic impact their consumption generates. The data obtained will shed light on the travel behavior of the visitors during and after Covid-19, their opinions and perceptions, highlights complaints and suggestions and will identify which tourism destination elements should be modified. It finally will help to determine new travel patterns imposed or arose from the pandemic as well as new or altered demand for products, activities and experiences.

Table 1. Supply and Demand variants of COVID-19 impact on Tourism

| <b>Covid-19 impact on Tourism Supply variants</b>   | <b>Covid-19 impact on Tourism Demand variants</b>                 |
|---|---|
| Number of and structure per legal form of entities  | Numbers/Types of visitors   |
| Number of and structure per economic activities (according to available level of breakdown) | Demographic information of the visitors                           |
| Turnover per economic activity  | Visitors' travel behavior and flows                               |
| Covid-19 supply related data  | Visitors spending behavior and economic impact to local economies |
| Own source.   | Destination perceptions, attitudes, preferences and satisfaction  |
|   | Covid-19 demand related data                                      |

Indicative tourism demand data to measure Covid-19 impact be collected are: 1. numbers and types of visitors (tourists, same-day visitors); 2. demographic information of the visitors (age, nationality, education); 3. visitors' travel behavior and flows (arrivals, overnights, seasonality); 4. visitors spending behavior and economic impact of their visit to local economies (accommodation, food and beverage); 5. destination perceptions, attitudes, preferences and satisfaction; 6. Covid-19 related data (avoiding traveling abroad, traveling with their own vehicle, safety and health issues).

Table 1 summarises the proposed Supply and Demand variants of Covid-19 impact on Tourism.

#### 4. Conclusion

Tourism Observatories that integrate Covid-19 measures will serve as a think-tank which enables the destination tourism stakeholders to sustainably tackle the challenges of Covid-19 crisis and its impacts. In that way such bodies will be a leading authority in delivering information that benefits the whole tourism value chain and, as a result, the industry, so it will greatly contribute to overcome the negative impacts of Covid-19 and to consolidate the destination. Specifically, the Tourism Observatory will positively impact tourism recovery via (a) delivering a clear, actual and regular picture of the impact Covid-19 crisis' on Destination's tourism via gathering and disseminating information generated among stakeholders, and (b) monitoring results of recovery actions that can also support managers in performing successfully towards sustainable tourism.

#### *Implication and Future research*

This is the first study to highlight the importance of integrating Covid-19 measures in Tourism Observatories, that will serve as a think-tank which enables the

decision-making during and after the pandemic. Such Observatories intend to deliver a clear and regular picture of the impact Covid-19 crisis on any destination's tourism via informing and disseminating information generated among stakeholders, providing to the operators support instruments for the qualification, innovation and differentiation of the business, promoting creativity and the promotion of competitive intelligence systems. This approach, however, is subject to several limitations, regarding mainly to the timely availability of secondary data, the degree of cooperation-commitment of data producers and finally due to budget limitations. Future research should incorporate a regression model for the prediction of future visitor flows and impacts, taking into account the Covid status of both visitors' country of origin and destination, based on data from previous years.

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Dr Stavros Hatzimarinakis holds a PhD in Tourism Satellite Accounts (University of Patras). He has research experience in tourism related laboratories of the University of the Aegean (Lidl) and of the University of Patras (La.Re.T.S.A.), as well as in EU funded tourism projects. He teaches courses related to tourism economics in the Hellenic Open University and the University of Piraeus. His current research activities are focused mainly on the measurement of food and beverage tourism consumption structure and the development of tourism monitoring tools.

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