INPLASY PROTOCOL

Corresponding author:
Maria João Vaz

mariavictorino7@gmail.com

Author Affiliation:
Instituto de Ciências Sociais, Universidade do Minho (Braga, Portugal).

Support: N/A.

Review Stage at time of this submission: Preliminary searches.

Conflicts of interest: N/A.

Big Data in tourism and challenges to privacy and data protection: A systematic literature review

Vaz, M[1]; Machado, H[2].

Review question / Objective: The debate on privacy and data protection issues has been framed in general and abstract terms. As a result, there is scarce knowledge about addressing privacy and data protection issues in concrete cases. Hence, the following questions arise: Which privacy and data protection challenges emerge with applying Big Data techniques in the tourism sector? How do such challenges relate to diverse stakeholders?

Condition being studied: Big Data plays a role in the transformation of businesses and the way companies analyze markets. Concurrently, challenges related to uneven dissemination of information, privacy, and protection of citizens' data, might compromise businesses and society at large.

INTRODUCTION

Review question / Objective: The debate on privacy and data protection issues has been framed in general and abstract terms. As a result, there is scarce knowledge about addressing privacy and data protection issues in concrete cases. Hence, the following questions arise: Which privacy and data protection challenges emerge with applying Big Data techniques in the tourism sector? How do such challenges relate to diverse stakeholders?

Condition being studied: Big Data plays a role in the transformation of businesses and the way companies analyze markets. Concurrently, challenges related to uneven dissemination of information, privacy, and protection of citizens' data, might

compromise businesses and society at large.

METHODS

Participant or population: The stakeholders (population) registered in the publications, and thus, it was finally constituted the population to be considered in this SLR. Stakeholders such as: consumers (interpreted as tourists in general, or smart tourists and digital travellers' in specific cases); destination management organizations (DMO's), tourism and hospitality organisations (THO's) and smart destinations; tourism workers and tourism companies; social media, service providers, and applicative providers; data experts (also data analysts, data aggregators or big data brokers) and data companies; researchers (e.g., social scientists, tourism scholars); and finally the government, regulators or legislators.

Intervention: N/A.

Comparator: N/A.

Study designs to be included: The authors applied a thematic analysis that followed the PEO (Population, Exposure, Outcome)framework, according to the following elements: the population being studied (i.e., the diverse stakeholders related to the tourism sector); what was this population exposed to (i.e., the particular privacy and data protection challenges associated with each kind of stakeholders); and what were the exposure's results on this population (i.e., how these challenges may compromise the activities of each kind of stakeholders).

Eligibility criteria: As inclusion criteria, it was designated that there would only be used articles in the English language, there would only be used original articles, and the texts had to be related to tourism based on Big Data techniques, privacy, and data protection issues regarding this phenomenon. As exclusion criteria, it was designated that there would not be considered other languages, and it was decided not to place any grey literature (e.g., theses, conference proceedings, book chapters, or books), as they are not systematically peer reviewed.

Information sources: Scopus and web of science.

Main outcome(s): Two types of pronouncements regarding possible strategies for managing privacy and data protection issues were found. On the one hand, it was considered the necessity to: strengthen laws; establish security, privacy, and data protection measures; and penalize all of those that do not take the vital precautions for this. On the other hand, it was considered that there are too many barriers in the use of tourist data, and that only a collaborative data economy, among all the stakeholders may be a sustainable and fruitful solution for the industry.

Quality assessment / Risk of bias analysis: It was found that there are few texts that effectively develop a comprehensive understanding of the privacy and data protection challenges in Big Data in tourism, referring most of the time in a very superficial, general, and abstract way. In fact, when the demand for privacy and data protection challenges is specified, the collection of material becomes more difficult. This lack of studies may imply a set of analysis biases and reaching to different conclusions in relation to those concluded in this SLR.

Strategy of data synthesis: N/A.

Subgroup analysis: N/A.

Sensitivity analysis: N/A.

Country(ies) involved: Portugal (Instituto de Ciências Sociais, Universidade do Minho).

Keywords: Tourism sector; Big Data; stakeholders; privacy; data protection.

Contributions of each author:
Author 1 - Maria João Vaz.
Email: mariavictorino7@gmail.com
Author 2 - Helena Machado.