Chapter 14
Key Factors in the Process of Acceptance and Implementation of Artificial Intelligence in the Hotel Sector

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ABSTRACT

Artificial intelligence is one of the most innovative and trending technologies in the hotel sector. It is transforming the hotel sector into a novel environment in business-client relationships. For this reason, this study seeks to find, through a literary review and a causal study carried out by experts in technologies and hotels, using the methodology of fuzzy cognitive maps, what the determining factors in the decision of hotels to accept and implement artificial intelligence in their hotels and in their services are. The list obtained is made up of the following factors (in order of relevance in this decision): top management support, perceived reliability of the technology, security, relative advantage, support from information systems providers, technological organizational readiness, government pressure or incentives, compatibility, business partner pressure, customer pressure, complexity, pressure from competitors, perceived cost, characteristics of the leader or manager, and size of the company.

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INTRODUCTION

Technologies have made organizations change the way they manage and provide services, so much so that their use in these functions within organizations has become almost essential. The same has also been observed in the hotel sector.

In the hotel sector, there are many technologies that have been successfully incorporated and have been a great revolution in the sector, but this study will focus only on one of them, Artificial Intelligence. One of the most innovative and trending technologies in this field, which is currently causing a great significant change in the hotel industry.

The term Artificial Intelligence was coined in 1956 by the computer scientist John McCarthy, who defined it as "the science and ingenuity of making intelligent machines" (Sosa Sierra, 2011), and today it is an interesting tool that is progressively transforming the hotel sector in a novel environment in company-client relations. This transformation focuses on digital interaction and greatly facilitates customer service with a great marketing strategy.

This application of Artificial Intelligence in the hotel sector aims to satisfy customer demand (the main axis of hotel management), especially with regard to the experience of guests during their stay and the automation of reservation processes. Among the services where this Artificial Intelligence can be observed and that could be carried out exclusively by this technology in the future are: check-in, check-out, reception, valet parking, chatbots or chat blogs for direct communication with the customer and service of rooms directly through the mobile device, among others.

Those hotels that seek to build an innovative and somewhat futuristic brand image, choose to implement the use of robots, improving efficiency, productivity and facilitating that staff can focus their attention on the customer experience. It does not mean that in the short term customers think of a robot as a bellboy or a receptionist, but the truth is that innovation and new technological projects help to improve performance, efficiency and productivity, and will make a difference to achieve success (Tecnohotel, 2018).

Applying a new resource to this environment can have both positive and negative points of view. Among the positives, the following stand out: benefits such as speed and precision, reductions in manual work, optimizations of personnel according to the workload, security improvements, energy savings through the monitoring of facilities, availability 24 hours a day and cost savings (for being cheaper). And among the negatives, the following stand out: lack of empathy and emotions essential to meet customer needs, technical failures that can lead to incorrect or misleading information, failures in data systems security, expensive and complex investment, and risks of requiring personnel for certain types of positions (Entorno turístico, 2020). Even so, it seems that the positive points of view are prevailing over the negative ones, since there are many hotels that are opting for its implantation.

For this reason, and in order to know which are the determining factors in the decision of hotels to accept and implement Artificial Intelligence in their hotels and in their services, this study is going to carry out a literary review that allows exposing a list of the factors that influence the adoption of Artificial Intelligence in the hotel sector and will develop a causal map of the system with them, in which experts in technologies and hotels will quantify and analyze the most influential factors when it comes to its acceptance by these hotels.

In the data capture (for the construction of the causal map) the interview will be used as an instrument, a causal map will be made for each of the interviewees and later a global causal map will be made with the average assessment of the experts, which will allow its analysis through the FCMappers tool,