

The Determinants of Innovation in Tourist Companies: The Case of Tourist Accommodation Establishments in Morocco

Fatima Bouabd^{1*}, Mounir Jerry¹, Zakaria Bennani²

 ¹ Faculty of Economics and Management, Ibn Tofail University, Kenitra, Morocco ORCID: 0009-0006-5730-1922; 0000-0002-4199-1758
² ENCG, Abdelmalek Essaâdi University, Tangier, Morocco ORCID: 0009-0008-4846-1697

bouabd.fatima@gmail.com, jemounir@yahoo.fr, bennanizakaria@gmail.com *Corresponding author

Received: September 27, 2023; Accepted: October 29, 2023; Published: November 01, 2023

Abstract

This article analyzes the determinants of innovation in Moroccan tourist accommodation companies. By considering the evolution of innovation theory, from Schumpeter's individual-centered approach to Freeman's systemic and integrated paradigm, and then highlighting collaboration and the integration of external knowledge in Chesbrough's open innovation framework, we propose a conceptual model to explain innovation through innovation inputs and institutional factors. Through a narrative literature review and a logistic regression model, our study deepens the understanding of innovation in tourism, particularly in the Moroccan context, and extends existing research by integrating quantitative data from a field survey. The results provide essential strategic directions for managers of tourist accommodation in tourism in Morocco. Future research could explore other tourist activities such as travel agencies, tourist carriers, etc.

Keywords: Innovation, determinant of innovation, Tourist accommodation company, hotel

1. Introduction

Innovation, a vital driver of economic growth, business competitiveness, and social progress (OECD, 2015), remains a central concern for academics, public authorities, and business

managers. It is a significant factor in maintaining the sustainability of businesses and acquiring a competitive edge (Voss, 1994; Bettis and Hitt, 1995; Boly V, 2004). Innovation can also help businesses reduce costs by optimizing their resource utilization (Hamel and Prahalad, 1990).

Indeed, innovation is a research topic with a broad tradition. However, for a long time, innovation was approached through the lens of industry and goods production, focusing on manufactured products (Garcia & Calantone, 2002; Hauser et al., 2006). Research on innovation began to attract the interest of researchers in the late 1980s (Tether and Howells, 2007) in the service industry in general and the tourism sector in particular, following its growing role in creating employment and wealth.

Empirical research on innovation in tourism is still relatively limited, particularly from a quantitative perspective (Alsos et al, 2014; Deegan, 2012; Hjalager, 2010; Sundbo et al, 2007; Divisekera and Nguyen, 2018 (a)). Although progress has been made in the past decade with an increase in empirical studies on innovation in tourism, they often remain descriptive and analytical, thus highlighting the need for empirical research and quantitative evidence (Divisekera and Nguyen, 2018 (a)). As Hjalager (1994) points out, the study of tourist innovation has often been approached in a fragmented and case-by-case manner.

This gap in empirical research on the innovation process in tourism constitutes a major obstacle to developing appropriate strategies and policies for the tourism sector (Divisekera and Nguyen, 2018 (a)). To this end, it is crucial to acquire solid empirical evidence to better understand the determinants of innovation in tourism (Clausen & Madsen, 2014; Hall & Williams, 2008; Hjalager, 2010; Divisekera and Nguyen, 2018 (a)). Thus, in this study, we identify these factors and explore their relationship with innovation in tourist companies.

In the remainder of this article, we will explore the determinants of innovation within tourist companies, starting with an in-depth review of the literature on innovation in the tourism sector, with a particular focus on the determinants of innovation in these companies. This step will be followed by the presentation of the conceptual framework, which forms the theoretical foundation of our study.

The following section will detail the modeling strategy, the econometric methods used, as well as the data mobilized for our analysis. We will then examine the empirical results, engage in an in-depth discussion, and conclude by summarizing significant findings. Finally, we will examine the policy implications arising from our study and highlight the limitations we have identified.

2. Literature Review and Conceptual Model

2.1. Innovation in Tourism

Innovation, as an economic concept, was initially introduced by Schumpeter (1934), a pioneer who introduced the idea of "creative destruction" (Schumpeter 1911), considering innovation as the engine of a new economic cycle, a process that simultaneously eliminates old methods and technologies while opening new opportunities for entrepreneurs. Schumpeter centered the concept of innovation on individual efforts, emphasizing the role of the entrepreneur in economic transformation through the introduction of new technologies and methods. The evolution of innovation theories shows a shift from the focus on the innovative entrepreneur (Schumpeter, 1911) to a more systemic perspective (Freeman, 1982), highlighting the importance of interactions between the company and its environment. Finally, open innovation, has highlighted collaboration and the integration of external knowledge (Chesbrough, 2003), thus marking a shift towards a more holistic and interconnected understanding of innovation.

The OECD, a global reference on innovation issues, defines innovation in the third version of the Oslo Manual as "the implementation of a new or significantly improved product, process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations" (OECD, 2005. p, 46).

We observe that Schumpeter's definition, initially focused on manufacturing innovation, has evolved to be adapted to service industries, including tourism (Carvalho & Costa, 2011; OECD, 2013). Indeed, initially focused on technological evolution, the OECD definition has expanded to include innovation in the service sector and to recognize four types of innovation within companies. These are product innovation, corresponding to the introduction of a new or significantly improved product in terms of its characteristics or use; process innovation, referring to innovations behind the scenes corresponding to the implementation of a new or significantly improved method of production or distribution; organizational innovation, corresponding to the implementation, or external relations of the company; and finally, marketing innovation, which is defined as the implementation of new marketing methods involving significant changes in the design or packaging, placement, promotion, or pricing of a product (OECD, 2005).

The tourism industry, evolving in space and time, has established itself as a crucial sector of the global economy (Coccomo and Solonandrasana, 2006). It offers substantial growth and employment opportunities, playing a vital role in the economic development of territories (Isik

et al., 2018; Leroux & Pupion, 2014). The World Tourism Organization (UNWTO) has defined tourism innovation as the introduction of new or improved elements, aiming to bring tangible and intangible benefits to tourism actors and the community. This innovation aims to enrich the value of the tourist experience and to strengthen the fundamental competencies of the industry, thus increasing the competitiveness and sustainability of tourism (UNWTO, 2019).

Despite its importance, empirical research on innovation in tourism remains limited, particularly from a quantitative perspective. However, we have noted some exceptions, including:

- The study by Orfila-Sintes et al., (2005) on 331 hotels in the Balearic Islands in Spain.
- The study of Vila et al., (2011) on chain hotels in Spain.
- The work of López Fernández et al., (2011) on internal factors that encourage hotels to innovate.
- The exploratory work by Tejada and Moreno (2013) on non-qualitative technological factors of innovation in small and medium-sized enterprises (SMEs).
- The study by Martinez-Roman et al., (2015) on the relationship between innovation capacity, contextual factors, environment, and product and process innovation.
- Research by Razumova et al., (2015) on factors influencing environmental innovations.
- The work of Backman et al., (2017) on innovation in the hospitality industry.
- The work of Divisekera and Nguyen (2018(a)) on the determinants of service and marketing innovation in the tourism sector.
- The study by Divisekera and Nguyen (2018(b)) exploring the determinants of three types of innovation: product innovation, process innovation, and organizational innovation, generated by Australian tourism companies.

In the following, we will try to analyze these studies to determine the various factors influencing innovation in tourism companies.

2.2. The Determinants of Innovation in Tourist Companies

Given the lack of an established conceptual framework for studying the innovative behavior of tourist companies, we rely on the model by Crépon, Duguet, and Mairesse (1998), known as the CDM model, to develop the conceptual framework of our study. This model, commonly used to model the innovative behavior of companies, particularly in manufacturing sectors, serves as a reference in the field of tourism (Deegan, 2012). It establishes a link between a company's decision to innovate, its innovative activities and outcomes, as well as economic

performance. Following the decision to innovate, the next step is to identify the factors that stimulate innovation or the determinants of innovative activities, which we can group into two main categories: the inputs of innovation (factors that have a direct impact on innovative activities/projects) and institutional factors (market and company characteristics) that influence the propensity to undertake innovative activities (Divisekera and Nguyen, 2018 (a); Divisekera and Nguyen, 2018 (b)).

2.2.1. The Inputs of Innovation

2.2.1.1. Collaboration:

Collaboration is a crucial determinant of innovation (OECD, 2011), allowing companies to share ideas, knowledge, and resources to maximize performance outcomes (OECD, 2015). Collaboration ensures an adequate supply of qualified personnel, considered a key factor in innovation in the tourism and hospitality sector (Gokovali & Avci, 2012). Thus, the rate of innovation in tourism is closely linked to the sector's ability to develop and maintain collaboration networks (Carlsen et al., 2010; Divisekera and Nguyen, 2018 (a); Divisekera and Nguyen, 2018 (b)).

2.2.1.2. Human Capital:

Comprising the knowledge, skills, and abilities of individuals, human capital is considered an influential factor in the innovation capacity of tourist companies and an essential component in the creation of knowledge to foster innovation (Gokovali and Avci, 2012; Grissemann et al., 2013; Orfila-Sintes & Mattsson, 2009; Schneider et al., 2010). A skilled workforce is more likely to identify new market opportunities and have a deep understanding of the company's products and organization. Thus, a company's innovation capacity relies on its human capital and its ability to mobilize these resources to generate innovations (López-Cabrales et al., 2006; Martín-de Castro et al., 2013). Moreover, educated and skilled employees are also likely to propose innovative ideas and adapt to new technological and organizational developments (Bornay-Barrachina et al., 2012).

2.2.1.3. Information and Communication Technologies (ICT):

ICT is considered an essential element in promoting the creation and adaptation of innovation in the tourism sector (OECD, 2015). They are described as "the most powerful driving force of changes in tourism" (Sevrani & Elmazi, 2008, p. 22). ICT offers opportunities for coordination and communication both within internal organizational environments and externally. They facilitate the restructuring of operations, encompassing backstage activities, online reservations, and e-commerce (Stamboulis and Skayannis, 2003). Having become the backbone

of process innovation in the tourism sector, ICT is lauded for its ability to organize and transmit information and knowledge beyond geographical borders and user limits (Buhalis and Law, 2008; O'Connor et al., 2008; Sigala et al., 2007). These technologies improve passenger mobility, alleviate the burden of travel, and increase efficiency for both tourist companies and tourists (Deegan, 2012).

2.2.1.4. Financing:

Investing in innovation activities is a risky and costly affair. Thus, access to financing is a crucial factor affecting the innovation capacities of companies (Savignac, 2008). This is particularly the case given that most Moroccan tourist companies are small-sized with limited access to their financing. Consequently, the need for external funding to encourage tourist companies to engage in innovative activities has been highlighted (Hall & Williams, 2008). Among the various sources of funding, governmental funding through grants or other means appears to be the most effective form of support to stimulate innovation within the tourism industry.

2.2.2. The Characteristics of the Company and the Market

The characteristics of the company and the market are known to influence a company's propensity to innovate. These include the size of the company, ownership status, market competition, and environmental factors (Divisekera and Nguyen, 2018 (a); Divisekera and Nguyen, 2018 (b)) (table 1).

2.2.2.1. Company Size:

From a resource-based perspective, larger companies are more likely to innovate compared to smaller ones, due to material advantages, extended resources, and easier access to financing (Hewitt-Dundas, 2006; Mel et al., 2009). The size of the company is recognized as an important factor influencing the propensity to innovate (Mel et al., 2009; Soames et al., 2011). Specifically, larger companies show a higher propensity to innovate.

2.2.2.2. Ownership Model:

The ownership pattern is presumed to influence the propensity to innovate (Castellani & Zanfei, 2004). Foreign-owned companies are more inclined to innovate than their domestic counterparts (Balcet & Evangelista, 2005). Furthermore, foreign-owned companies are known to have an advantage in making product and process innovations and adopting more foreign technologies than domestic companies (Castellani and Zanfei, 2004; Thomas and Guadalupe, 2012).

2.2.2.3. Market Competition:

Regarding market characteristics, competition is recognized as an incentivizing factor for companies to innovate (OECD, 2006). Companies operating in competitive environments feel constant pressure to reduce costs and introduce new products to maintain their competitive edge in the market. This pressure stimulates increased innovation efforts in companies (Soames et al., 2011). Pirnar et al., (2012) also highlight that innovation contributes to increasing operational efficiency, meeting customer needs, and creating greater flexibility to cope with demand, thus facilitating companies' ability to gain a competitive advantage.

2.2.2.4. Environmental Factors:

The tourism industry is largely based on the environment, and to maintain the competitiveness of destinations, there is an incentive for tourist companies to innovate. The environment significantly affects the provision of tourist services and impacts the innovative behavior of tourist companies (Du Cluzeau, 2006; Dwyer & Edwards, 2009; Razumova et al., 2015). Indeed, adverse environmental effects deter companies from engaging in risky innovations.

Variable	References				
Collaboration	OECD, 2011; OECD,2015; Carlsen et al; 2010; Gokovali and Avci, 2012; Divisekera and Nguyen, 2018 (a); Divisekera and Nguyen, 2018 (b).				
Human capital	Gokovali and Avci, 2012; Grissemann et al., 201 Orfila-Sintes and Mattsson, 2009; Schneider et a 2010; López-Cabrales et al., 2006; Martín-de Castro al., 2013; Bornay-Barrachina et al., 2012.				
Information and Communication Technologies (ICT)	OCDE, 2015; Buhalis and Law, 2008; Deegan, 2012; Sevrani and Elmazi, 2008; Stamboulis and Skayannis, 2003; O'Connor et al., 2008; Sigala et al., 2007.				
Financing	Hall and Williams, 2008; Savignac, 2008				
Company size	Hewitt-Dundas, 2006; Mel et al., 2009; Soames et al 2011; Divisekera and Nguyen, 2018 (a); Divisekera an Nguyen, 2018 (b).				
Ownership Model	Castellani & Zanfei, 2004; Balcet & Evangelista, 2005 Castellani and Zanfei, 2004; Thomas and Guadalupe 2012.				
Market Competition	OCDE, 2006; Soames et al., 2011; Pirnar, Bulut and Eris, 2012; Divisekera and Nguyen, 2018 (a); Divisekera and Nguyen, 2018 (b).				
Environmental Factors	Du Cluzeau, 2006; Dwyer & Edwards, 2009; Razumova et al., 2015.				

Table 1. Summary of the Literature Review on the Determinants of Innovation in Tourist Companies

* *This table was developed by the authors.*

2.2.3. The Conceptual Model

In the absence of an established conceptual framework for examining the innovative behavior of tourist companies, the CDM model by Crépon, Duguet, and Mairesse (1998) is adopted as

the basis for developing the conceptual framework for studying the determinants of innovation in tourist companies (Divisekera and Nguyen, 2018 (a), Divisekera and Nguyen, 2018(b)). The CDM model, frequently used to model the innovative behavior of companies in various sectors, especially in manufacturing, has become the reference in this type of analysis (Deegan, 2012). It is also the most used in many empirical studies on innovation, thus establishing itself as the standard for such work (Lööf et al., 2017).

The CDM specifies the relationships between companies' decisions to innovate, the outcomes of innovation, and their impacts on the company's productivity. A version of this model, specifying the relationship between various determinants and the outcome of innovation, is summarized in Figure 1, distinguishing two types of determinants: the inputs of innovation (collaboration, human capital, ICT, and financing) and institutional factors (company size, ownership model, competition, environment).



Figure 1. Conceptual Framework of the Determinants of Innovation in the Tourist Company (Divisekera and Nguyen, 2018(a), Divisekera and Nguyen, 2018(b))

In this conceptual framework, the innovation activities of tourist companies are represented as a two-step process. The first step concerns the company's decision-making to engage in an innovation process, meaning the process leading the company to choose to conduct or invest in innovative activities (Divisekera and Nguyen, 2018 (a), Divisekera and Nguyen, 2018(b)).

As stipulated by the model, it is assumed that institutional factors influence the decisions to engage in innovative activities. Once the decision to innovate is made, the next phase is to actively participate in the innovation process.

3. Data and Methodology

3.1. Presentation of the Database

Our survey was conducted on a sample of 73 tourist accommodation establishments across Morocco. These include hotels (1, 2, 3, 4, 5 stars, and luxury), hotel residences, club hotels, guest houses, lodges, inns, etc. Before estimating the empirical model, some predictions about the likely impact of the main inputs on the probability of innovation can be made using the data from table 2.

For the variable Collaboration, it is noteworthy that out of 35 companies engaged in collaborative efforts for innovation, a significant majority (24 out of 35, or 69%) succeeded in introducing an innovation. This trend suggests that collaboration in innovation is a driving factor for innovation. Human capital, estimated through investment in staff training, shows that 61% (25 out of 41) of the companies made such investments.

Regarding ICT, 28 of the innovative companies have increased their ICT expenses to a medium or higher level, representing 62% (28 out of 45) of the innovative companies. This indicates that increasing ICT expenses is an encouraging factor for innovation. In terms of access to financing, 28 of the innovative companies received funding ranging from satisfactory to very satisfactory, representing 57% (28 out of 49) of them. This suggests that financing is a significant lever for innovation.

Regarding company size, larger and very large companies seem to have an advantage in innovation, with 60% (18 out of 30) of them innovating. This observation suggests a potential link between company size and its propensity to innovate. As for the ownership model, 10 chain-owned companies innovated, compared to 24 independent establishments. However, given the predominance of independent establishments in the market, it is difficult to conclude the impact of the ownership model on the capacity to innovate at this stage.

ISSN: 2820-7521

Table 2. Descriptive Summary of the Sample

Variables		Innovation	
Collaboration	No	Yes	Total
No	28	10	38
Yes	11	24	35
Total	39	34	73
Human capital	No 14	Yes	Total
(Very little) 1 (Little) 2	9	2	21
(Medium 3	16	22	11
(Satisfactory) 4	0	22	38
(Very satisfactory) 5	0	1	2
Total	39	34	1 73
ICT	No	Ves	Total
(Very little) 1	12	2	14
(Little) 2	10	4	14
(Medium 3	12	19	31
(Satisfactory) 4	5	2	7
(Very satisfactory) 5	0	7	7
Total	39	34	73
Financing	No	Yes	Total
(Very little) 1	2	1	3
(Little) 2	3	0	3
(Medium 3	13	5	18
(Satisfactory) 4	9	9	18
(Very satisfactory) 5	12	19	31
Total	39	34	73
Size Small (capacity less than 50	No	Yes	Total
beds) 1	13	10	23
Medium (between 50 and 100	14	6	20
Large (between 100 and 200	14	0	20
beds) 3	5	10	15
beds) 4	7	8	15
Total	39	34	73
Ownership model	No	Yes	Total
Individual	33	24	57
Chain	6	10	16
Total	39	34	73
Competition	No	Yes	Total
(One to two competitors) 2	9	7	16
(Two to four competitors) 3	8	7	15
(More than four competitors) 4	7	7	14
Tatal	15	13	28
1 Otal Environment	59 No	54 Vos	73 Totol
No	15	6	21
Ves	24	28	52
	24	20	52
Total	39	34	73

* This table was developed by the authors.

For competition, 46% (13 out of 28) of the companies subjected to strong competition innovated, suggesting that competitive pressure can stimulate innovation. Finally, in terms of environmental impact, 54% (28 out of 52) of the establishments affected by environmental factors innovated, indicating that environmental challenges can also be a driver of innovation.

3.2. Methodology

In this study, we aim to quantify the relationship between the outcomes of innovation (y) and the input factors (x). Generally, multiple regression models of the following form can be used to examine the predicted relationship:

(1) Y = b0 + b1x1 + b2x2 + ... + bqxq

Where b0 is the intercept term, b1 to bq are coefficients, and x1 to xq are explanatory variables.

In the case of our study, the dependent variable representing the outcome of innovation is a binary dichotomous variable and takes only two values: whether the company has implemented an innovation or not (yes/no).

Given the binary nature of the dependent variable, we use logistic regression, proposed as an appropriate method to estimate the model (Divisekera and Nguyen, 2018 (a); Divisekera and Nguyen, 2018 (b)).

The logit transformation of equation (1) yields the following:

$$Log\left(\frac{\rho^{\wedge}}{1-\rho^{\wedge}}\right)$$

= $\beta 0 + \beta 1$ collaboration + $\beta 2$ capitalhumain + $\beta 3$ TIC
+ $\beta 4$ financement + $\beta 5$ taille + $\beta 6$ modèleproprité
+ $\beta 7$ concurrence + $\beta 8$ environnement + ε

Where ρ is the measure of the probability of introducing an innovation, (β 0, β 1, β 2, β 3, β 4, β 5, β 6, β 7, β 8) are the parameters to be estimated, and ε is an error term. The model estimation is performed using IBM SPSS V26, and the results are reported in Table 3.

4. Empirical Results

4.1. Model Adjustment

Our Omnibus test indicates that our logistic regression model is statistically significant. Indeed, with a chi-square value of 31.393 and a p-value of 0.000, we can conclude that the model significantly improves over the null model (which does not include any of the independent

variables). In practical terms, this means that the chosen independent variables make a significant contribution to the prediction of the dependent variable in our model.

		Chi-square	df	Sig.
Step 1	Step	31.393	8	.000
	Block	31.393	8	.000
	Model	31.393	8	.000

Table 3. Omnibus Tests of Model Coefficients

Based on the relative log-likelihood (Log Likelihood), we conclude that the model is globally significant (table 4). This means that there is at least one significant independent variable. In our model, the selected variables explained more than 46% of the variation in the dependent variable.

Table 4. Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	69.464ª	.350	.467

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

4.2. Model Estimation

Analyzing Table 5, the results reveal that:

- Collaboration has a B coefficient of 1.266, with a significance of 0.047. This indicates a significant positive relationship between collaboration and innovation. The odds ratios associated with the collaboration predictor indicate that, holding other variables constant, the odds of introducing a product innovation are 3.5 times higher for companies collaborating for innovation purposes.
- The ICT variable shows a significant positive relationship with innovation, with a B coefficient of 1.080 and a significance of 0.011. Companies that invest in ICT are about 2.95 times more likely to innovate.
- Access to financing has a positive coefficient of 0.690 and a significance of 0.033. Companies with greater access to financing for innovation purposes are about 1.99 times more likely to innovate.
- Among the institutional factors, the environment seems to have a significant impact on the decisions to innovate at a 10% threshold. Companies negatively impacted by the environment are more likely to innovate (4 times more likely).

In summary, collaboration, the use of ICT, and access to financing are significant factors promoting innovation in the model. At a 10% threshold, environmental impact is also

significant, while other variables such as human capital, company size, foreign ownership, and competition may have a non-significant or marginal influence in the context of our study.

Variables in the Equation							
		В	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª F Env	Collaboration (1)	1.266	.637	3.951	1	.047	3.545
	Human Capital	426	.445	.916	1	.338	.653
	ICT	1.080	.423	6.525	1	.011	2.945
	Access to Funding	.690	.324	4.541	1	.033	1.994
	Size	350	.361	.935	1	.333	.705
	Property model (1)	1.264	.988	1.638	1	.201	3.540
	Competition	375	.272	1.906	1	.167	.687
	Environmental impact (1)	1.366	.788	3.000	1	.083	3.918
	Consistent	-4.927	1.660	8.807	1	.003	.007

^a Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

5. Discussion

Our results confirm the importance of collaboration, a crucial determinant of innovation identified by the OECD (2011, 2015). Collaboration positively influences innovation, validating the idea that sharing ideas and resources increases innovative performance. Indeed, engaging in collaboration with various partners allows tourism businesses to gather information facilitating the sharing of knowledge and experience, which are ways of generating innovative ideas for new tourist products. In the collaborative network, businesses can also learn from each other, and share resources and risks, allowing them to leverage their advantages to improve the efficiency of their operations and management activities.

In line with the work of the OECD (2015) and Sevrani & Elmazi (2008), our results indicate a positive impact of ICT on innovation. This underscores their role as a driver of change and facilitative tool in the tourism industry. Indeed, information and communication technology are a key factor facilitating the implementation of operational processes and organizational innovation. ICTs provide a powerful tool that can bring benefits to improve and strengthen tourist business operations. This finding confirms the view of Deegan (2012) that investments in ICTs have been the anchor of dominant process innovation.

The importance of financing in innovation, emphasized by Savignac (2008) and Hall & Williams (2008), is corroborated by our results. Access to financing appears as a crucial factor, especially for small Moroccan tourism businesses. Indeed, external financing facilitates the

innovation efforts of tourism businesses, given that innovation activities require significant financial investments that most micro and small tourism businesses cannot obtain.

For environmental factors, our results suggest a positive trend of environmental considerations on innovation, aligned with the work of Cluzeau (2006) and Dwyer & Edwards (2009), highlighting the impact of the environment on innovation in tourist accommodation businesses.

Conclusion

Focusing on the determinants of innovation in Moroccan tourism companies, our study was based on a sample of 73 companies. This study has highlighted key factors influencing innovation, in alignment with existing theories in the literature. We found that collaboration and ICT play a significant role in promoting innovation, thus confirming the importance of these elements as drivers of change in tourism. Similarly, access to financing proved to be a crucial factor, underscoring the importance of financial resources in supporting innovative initiatives, especially for small and medium enterprises. Also, our results suggest a positive trend of environmental considerations and their evident impact on innovation in tourist accommodation businesses.

Although human capital did not show statistical significance in our model, its role is widely recognized in the literature, suggesting the need for more nuanced measurement methods.

Our study enriches the understanding of the innovation ecosystem in the tourist accommodation sector and highlights the interdependence of internal and external factors in promoting innovation. It contributes significantly to the literature on innovation in tourism. These results could help identify key areas where businesses can focus to foster innovation and guide the development of public strategies to enhance the innovation capacity of businesses in the tourism sector.

Our study focused on a sample of Moroccan tourist accommodation businesses, which may limit the generalization of the results to other geographical contexts or different segments of tourism (Travel agencies, tourist transport companies, etc.). Also, the sample size, although sufficient for significant statistical analysis, could be expanded in future studies to include a wider spectrum of tourism businesses.

Moreover, the integration of additional variables, such as organizational culture or the regulatory environment, could provide deeper insights into the factors influencing innovation in tourism.

References

- Alsos, G. A., Eide, D., & Madsen, E. L. (Eds.). (2014). Handbook of research on innovation in tourism industries. Edward Elgar Publishing.
- Backman, M., Klaesson, J., & Öner, Ö. (2017). Innovation in the hospitality industry: Firm or location?. Tourism Economics, 23(8), 1591-1614.
- Balcet, G., & Evangelista, R. (2004). Global technology: Innovative strategies of multinational affiliates in Italy.
- Bettis, R. A., & Hitt, M. A. (1995). The new competitive landscape. Strategic management journal, 16(S1), 7-19.
- Boly, V. (2004). Ingénierie de l'Innovation-Organisation et méthodologies des entreprises innovantes (pp. 188-p). Lavoisier.
- Bornay-Barrachina, M., De la Rosa-Navarro, D., López-Cabrales, A., & Valle-Cabrera, R. (2012). Employment relationships and firm innovation: the double role of human capital. British Journal of Management, 23(2), 223-240.
- Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. Tourism management, 29(4), 609-623.
- Caccomo, J. L., & Solonandrasana, B. (2006). L'innovation dans l'industrie touristique: enjeux et stratégies. Tourismes et sociétés.
- Carvalho, L., & Costa, T. (2011). Tourism innovation–a literature review complemented by case study research. Tourism & Management Studies, 23-33.
- Castellani, D., & Zanfei, A. (2004). Multinationals, innovation and productivity. Evidence from Italian manufacturing firms. Urbino: Universita di Urbino.
- Clausen, T. H., & Madsen, E. L. (2014). Innovations, their knowledge sources and their effects in experience-based tourism. Handbook of research on innovation in tourism industries, 113-131.
- Crepon, B., Duguet, E., & Mairesse, J. (1998). Research, innovation, and productivity.
- De Mel, S., McKenzie, D. J., & Woodruff, C. M. (2009). Innovative firms or innovative owners? Determinants of innovation in micro, small, and medium enterprises. Determinants of Innovation in Micro, Small, and Medium Enterprises (May 1, 2009). World Bank Policy Research Working Paper, (4934).
- Deegan, J. (2012). Benchmarking innovation in Irish Tourism: Identification of activity and an agenda for action. Failte Ireland Thematic Grant Project.

- Divisekera, S., & Nguyen, V. K. (2018). Determinants of innovation in tourism evidence from Australia. Tourism Management, 67, 157-167.
- Divisekera, S., & Nguyen, V. K. (2018). Determinants of innovation in tourism evidence from Australia. Tourism Management, 67, 157-167.(a)
- Divisekera, S., & Nguyen, V. K. (2018). Drivers of innovation in tourism: An econometric study. Tourism Economics, 24(8), 998-1014.(b)
- Du Cluzeau, C. O. (2006). Volatile tourism demand in European cities and the role of local populations. Marketing Efficiency in Tourism, 219-230.
- Dwyer, L., & Edwards, D. (2009). Tourism product and service innovation to avoid 'strategic drift'. International Journal of Tourism Research, 11(4), 321-335.
- Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: a literature review. Journal of Product Innovation Management: An international publication of the product development & management association, 19(2), 110-132.
- Gökovalı, U., & Avci, M. (2012). The role of human capital and collaboration with academia for innovation in hospitality sector: the case of Mugla. PASOS Revista de Turismo y Patrimonio Cultural, 10(2), 77-84.
- Grissemann, U., Plank, A., & Brunner-Sperdin, A. (2013). Enhancing business performance of hotels: The role of innovation and customer orientation. International Journal of Hospitality Management, 33, 347-356.
- Hall, C. M., & Williams, A. M. (2019/2008). Tourism and innovation. Routledge.
- Hall, W. J., & Williams, P. T. (2008). Removal of organobromine compounds from the pyrolysis oils of flame retarded plastics using zeolite catalysts. Journal of analytical and applied pyrolysis, 81(2), 139-147.
- Hauser, M. (2006). Moral minds: How nature designed our universal sense of right and wrong. Ecco/HarperCollins Publishers.
- Hewitt-Dundas, N. (2006). Resource and capability constraints to innovation in small and large plants. Small business economics, 26, 257-277.
- Hjalager, A. M. (1994). Dynamic innovation in the tourism industry. Progress in tourism, recreation and hospitality management. Volume 6., 197-224.
- Hjalager, A. M. (2010). A review of innovation research in tourism. Tourism management, 31(1), 1-12.
- Innovation, O. D. D. (2015). Big Data for Growth and Well-Being.

- Lööf, H., Mairesse, J., & Mohnen, P. (2017). CDM 20 years after. Economics of Innovation and New Technology, 26(1-2), 1-5.
- Lööf, H., Mairesse, J., & Mohnen, P. (2017). CDM 20 years after. Economics of Innovation and New Technology, 26(1-2), 1-5.
- López Fernández, M. C., Serrano Bedia, A. M., & Gómez López, R. (2011). Patrones de innovación en las empresas hosteleras: el caso español.
- Lopez-Cabrales, A., Valle, R., & Herrero, I. (2006). The contribution of core employees to organizational capabilities and efficiency. Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management, 45(1), 81-109.
- Manual, O. (2005). The measurement of scientific and technological activities. Proposed guidelines for collecting an interpreting technological innovation data, 30(162), 385-395.
- Martín-de Castro, G., Delgado-Verde, M., Navas-López, J. E., & Cruz-González, J. (2013). The moderating role of innovation culture in the relationship between knowledge assets and product innovation. Technological Forecasting and Social Change, 80(2), 351-363.
- Martínez-Román, J. A., Tamayo, J. A., Gamero, J., & Romero, J. E. (2015). Innovativeness and business performances in tourism SMEs. Annals of Tourism Research, 54, 118-135.
- OCDE, (2015) Innovation, O. D. D. (2015). Big Data for Growth and Well-Being.
- OCDE, (2015) Innovation, O. D. D. (2015). Big Data for Growth and Well-Being.
- OCDE, E. (2005). Manuel d'Oslo, principes directeurs proposés pour le recueil et l'interprétation des données sur l'innovation.
- O'Connor, P., Höpken, W., & Gretzel, U. (2008). Information and communication technologies in Tourism 2008. Vienna: Springer.
- OECD, 2015 Innovation, O. D. D. (2015). Big Data for Growth and Well-Being.
- OECD. (2011). Fostering innovation for green growth.
- OECD. (2011). OECD Green Growth Studies. Verlag nicht ermittelbar.
- OECD. (2013). Green innovation in tourism services. OECD Publishing.
- OECD. Centre for Educational Research and Innovation (CERI) Danish Evaluation Institute (EVA). (2006). Improving teaching and learning for adults with basic skill needs through formative assessment: the Danish background report.
- Orfila-Sintes, F., & Mattsson, J. (2009). Innovation behavior in the hotel industry. Omega, 37(2), 380-394.

- Orfila-Sintes, F., Crespi-Cladera, R., & Martínez-Ros, E. (2005). Innovation activity in the hotel industry: Evidence from Balearic Islands. Tourism management, 26(6), 851-865.
- Pirnar, I., Bulut, C., & Eris, E. D. (2012, September). Improving the performance and competitiveness of tourism establishments by means of innovation: trends and applications. In Proceedings of IRAT "Enlightening Tourism "Conference, Naples, Italy (Vol. 211, pp. 133-142).
- Razumova, M., Ibáñez, J. L., & Palmer, J. R. M. (2015). Drivers of environmental innovation in Majorcan hotels. Journal of Sustainable Tourism, 23(10), 1529-1549.
- Razumova, M., Ibáñez, J. L., & Palmer, J. R. M. (2015). Drivers of environmental innovation in Majorcan hotels. Journal of Sustainable Tourism, 23(10), 1529-1549.
- Savignac, F. (2008). Impact of financial constraints on innovation: What can be learned from a direct measure?. Econ. Innov. New Techn., 17(6), 553-569.
- Schneider, L., Günther, J., & Brandenburg, B. (2010). Innovation and skills from a sectoral perspective: a linked employer–employee analysis. Economics of Innovation and New Technology, 19(2), 185-202.
- Schumpeter, J. (1911). The theory of economic development. harvard economic studies. vol. xlvi. The theory of economic development. Harvard Economic Studies. Vol. XLVI.
- Schumpeter, J. A., & Opie, R. (1934). The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle. Harvard University Press.
- Sevrani, K., & Elmazi, L. (2008). Ict and the changing landscape of tourism distribution-a new dimension of tourism in the global conditions. Revista de turism-studii si cercetari in turism, (6), 22-29.
- Sigala, M., Mich, L., & Murphy, J. (2007). Information and communication technologies in tourism 2007 (pp. 1038-1050). New York: Springer.
- Soames, L., Brunker, D., & Talgaswatta, T. (2011). Competition, innovation and productivity in Australian businesses. Productivity Commission and Australian Bureau of Statistics joint research paper, 1.
- Stamboulis, Y., & Skayannis, P. (2003). Innovation strategies and technology for experiencebased tourism. Tourism management, 24(1), 35-43.
- Sundbo, J., Orfila-Sintes, F., & Sørensen, F. (2007). The innovative behaviour of tourism firms—Comparative studies of Denmark and Spain. Research policy, 36(1), 88-106.
- Tejada, P., & Moreno, P. (2013). Patterns of innovation in tourism 'small and medium-size enterprises'. The Service Industries Journal, 33(7-8), 749-758.

- Tether, B., & Howells, J. (2007). Changing understanding of innovation in services. Innovation in Services, 9(9), 21-60.
- Vila, M., Enz, C., & Costa, G. (2012). Innovative practices in the Spanish hotel industry. Cornell Hospitality Quarterly, 53(1), 75-85.
- Voss, C. A. (1994). Significant issues for the future of product innovation. Journal of Product Innovation Management: An international publication of the product development & management association, 11(5), 460-463.