

Leveraging Innovation to Influence Tourists' Destination Selection: An Empirical Assessment of Binh Thuan Province, Vietnam

Dinh Hoang Anh Tuan¹, Le Ngo Ngoc Thu², Ho Thi Thu Hoa³

¹ Ho Chi Minh City University of Technology and Education – HUTECH University

² HUTECH University

³ International University, Vietnam National University - Ho Chi Minh City

tuandha@hcmute.edu.vn, dhatuan22nqt@hutech.edu.vn, htthoa@hcmiu.edu.vn

Abstract. This study explores the impact of innovation on tourists' destination choices in Binh Thuan province, Vietnam. Despite underutilized potential for tourism, Binh Thuan faces challenges attracting visitors. Through a mixed methods approach combining expert interviews and surveys, the influence of product, process, organizational and other innovations on tourists' intentions is analyzed. Structural equation modeling determines relationships between innovation activities, perceived destination image, and intentions to choose Binh Thuan. Results indicate significant positive effects of innovation initiatives, creative environments, staff training and tourist orientation on destination choice mediated by destination image and innovation behavior. Practical and policy implications are discussed, emphasizing innovation's crucial role in positioning Binh Thuan as a leading Vietnamese tourism locale by 2025.

Keywords: Tourism, innovation, tourists' intentions, exploratory factor analysis, regression analysis

1. Introduction

Despite tourism being a significant contributor to Vietnam's developing economy, Binh Thuan faces challenges in attracting international tourists, ranking 11th among provinces/cities nationwide in terms of international visitor numbers (Vietnam National Administration of Tourism, 2019). In response, Binh Thuan has implemented strategic plans, including investing in tourist routes and attractions. With the goal of becoming a key economic sector by 2025, Binh Thuan aims to align with wellness tourism trends and connect trade and tourism businesses in key markets.

Innovation is a crucial factor for businesses and tourism organizations in enhancing customer satisfaction (Lin et al., 2018). However, there remains a significant gap in research concerning innovation within both the accommodation and destination sectors (Lyu et al., 2023; Zach, 2012). Despite its importance, there is insufficient exploration into the impact of innovation on tourist destination choices, with existing literature relying largely on exploratory cases and qualitative research (Lin et al., 2018; Shriedeh, 2019).

This paper aims to address these gaps by: (1) Introducing CFA and SEM analysis techniques to verify complex relationships between components in the study of innovation, destination image, and intention to choose a tourist destination; (2) Expanding the scope of investigation beyond innovation to include innovative behavior, creativity, and the intention to choose a tourist destination; (3) Considering various forms of innovation and its impact on tourists' choice intentions, emphasizing the importance of understanding the role of innovation in attracting tourists and ensuring effective operation in the tourism industry; (4) Proposing that the lack of empirical results supporting a positive relationship between innovation, destination image, and tourists' destination choice intentions in tourism businesses calls for expanding research, specifically in the context of Binh Thuan province.

2. Literature Review and Research Model

2.1. Theoretical basis

The theoretical basis of this article is related to the topics: Innovation, Creativity and Creative tourism, Destination, Destination image and Tourist's intentions. And some background theories that the paper uses include: The theory of stakeholders, Innovation amplification theory from Everett Rogers (1981), Behavioral theory, Theory of Reasoned Action and Theory of Planned Behavior.

According to Schumpeter (2008), Hjalager (2009), Abdullah et al (2016), Divisekera and Nguyen (2018) and Gachara (2018) innovation plays a vital role in economic change through processes like creative destruction, addressing new issues, and developing and applying new technologies, materials, and methods, Kleysen and Street (2001, p. 285) defined "innovative behavior as all individual actions directed at creating, introducing and/or applying beneficial novelty at any organizational level".

Creativity is defined as finding solutions to problems that others have not found and applying combined knowledge to new problem areas" (Nijs & Peters, 2002). Creative tourism has been seen as an extension of cultural tourism – and an optimal complement and support activity for popular forms of cultural tourism and mass cultural reproduction (Richards & Wilson, 2006).

Similarity, tourist destinations are certain territorial units (Herrero-Prieto & Gomez-Vega, 2017), but they are also considered tourism products because consumers can recommend and repurchase them (Yoon & Uysal, 2005). Destination image, defined by Iordanova (2017), encompasses impressions, expectations, and emotional thoughts about a place. Tourist intentions, a complex behavior, are influenced by various factors, with motivation, the driving force behind actions, being crucial (Fodness, 2004).

Besides, the research presented in this paper is also related to the The theory of stakeholders. Collaboration among stakeholders is seen as beneficial, helping avoid conflicts, positively impacting operations, and enhancing policy coordination. The text also introduces theories such as Innovation Amplification, Behavioral Theory, Theory of Reasoned Action, and Theory of Planned Behavior, which

are applied to analyze human behavior in tourism-related contexts, considering factors like attitudes, subjective norms, and behavioral intentions.

2.2. Literature review

The literature review identifies gaps in existing studies on innovation in the context of tourist destination choice. Most research utilizes qualitative and quantitative methods but lacks the use of advanced analysis techniques like CFA and SEM. Studies primarily focus on innovation without exploring related components such as innovative behavior, creativity, and tourists' destination choice intentions. Innovation is observed to impact enterprise results through product, process, and organizational/management system innovations. However, few studies connect innovation to tourists' intention to choose a destination. The literature also highlights the diverse forms innovation can take in the travel industry, emphasizing its crucial role in attracting tourists and ensuring effective operation. Despite debates on the direct impact of innovation on firm performance, the relationship between innovation, destination image, and tourists' destination choice intentions is an emerging field, necessitating further empirical research, especially in the context of tourism businesses in Binh Thuan province. The literature review result is presented in Table 1.

Table 1. Literature review result

Research \ Component		Product innovation	Process innovation	Organizational/management innovation	Creative	Staff qualifications and training	Government support	Customer orientation
Innovation	Ottensbacher and Gnoth (2005)	x	x	x		x		x
	Hjalager (2009)			x			x	
	Alderbert et al (2011)				x			
	Najda-Janoszka and Kopera (2014)	x	x	x		x	x	
	Cabral (2015)	x	x			x	x	
	López-Fernandez et al (2016)			x		x		x
	Nieves and Diaz-Meneses (2016)					x		x
	Sandybayev (2016)					x		x
	Gachara (2018)					x	x	
	Divisekera and Nguyen (2018)					x		
Innovative behavior	Li et al (2022)							x
	Li et al (2022)	x						x

Research \ Component		Product innovation	Process innovation	Organizational/management innovation	Creative	Staff qualifications and training	Government support	Customer orientation
	Domi et al (2019)	x						
Creative	Heunks (2008)	x	x		x	x		
Other	Ling and Nasurdin (2010)	x	x	x		x		
	Lopez-Torres and Guzman (2015)					x		
	Abdullah et al (2016)	x	x	x		x	x	x

3. Research Methodology

The research method of the study combines both qualitative and quantitative methods. The research process is presented at Figure 1. In the qualitative phase, the author will use the method of gathering expert opinions to adjust the proposed research model. The goal of this stage is to gain a deeper understanding of experts' views on the research model and related issues. Specifically, the author plans to conduct in-depth interviews with 4 experts who are scientists and 6 experts who are tourism industry managers, business owners, and tour guides to ask for opinions. The author will supplement and edit the original questionnaire based on information collected from these interviews.

The quantitative research phase will follow the qualitative phase, with the goal of testing and standardizing the refined research model. The preliminary questionnaire will be distributed to tourists who have traveled to destinations in Binh Thuan province or intend to choose Binh Thuan to travel in the near future to collect data. The data collection method used is non-probability, with convenience sampling and a sample size of 100. After collection, the data will be coded and noise filtered; then processed using SPSS software. Here, analyzes will be conducted, including descriptive statistics, scale evaluation, and factor analysis to explore the official scale. With this research method, the author hopes to be able to properly and fully dissect all aspects of the research topic.

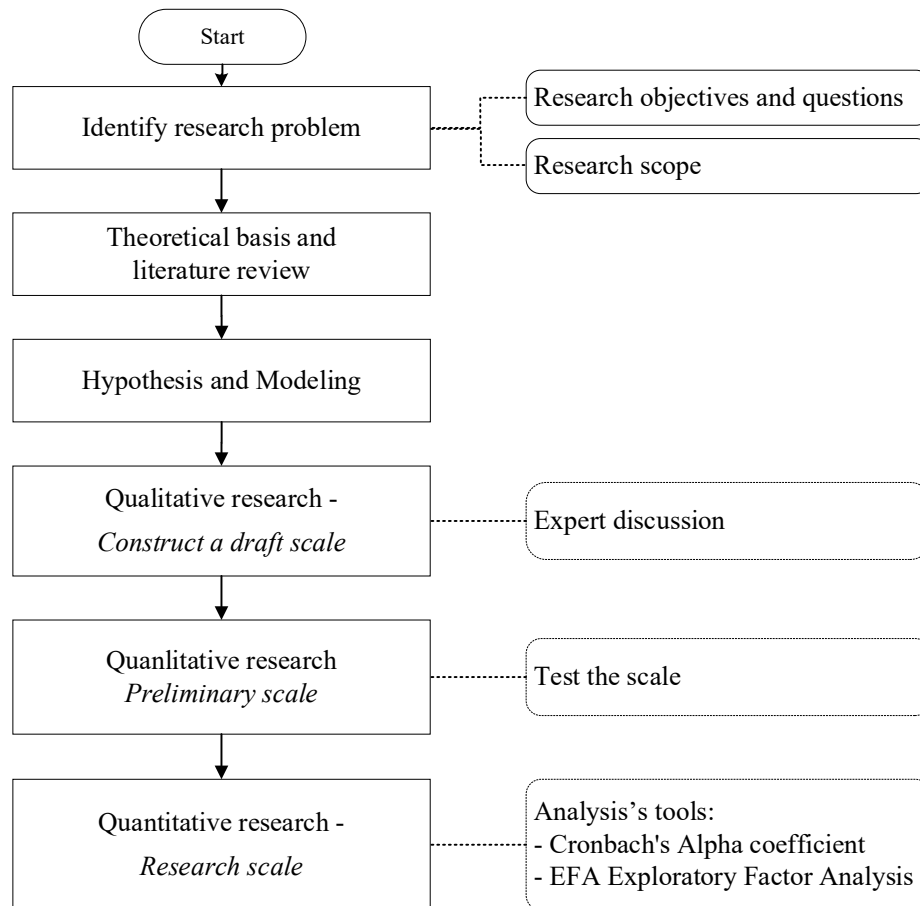


Fig.1.: Research process

3.1 Qualitative research method

Qualitative research is a method of filtering information from surveys and observations; is an approach to compare, describe and analyze the characteristics of innovation, destination image and intention to choose a destination. In this topic, qualitative research method was used by the author as follows: *Firstly*, in the stage of building the theoretical framework as well as designing the questionnaire, the author applies the method of in-depth interviews with experts, who are scientists and tourism industry managers and tour guides, to identify impact of innovation on tourists' intention to choose destination: a case study of Binh Thuan province. The collected results help the author determine the theoretical framework, complete the questionnaire and identify variables in the quantitative model. *Secondly*, after collecting secondary data, the author applies methods such as comparison and analysis to identify impact of innovation on tourists' intention to choose destination: a case study of Binh Thuan province. *Thirdly*, the author conducts descriptive statistics on demographic characteristics such as age, gender, occupation, living area, ethnicity, etc. as well as compare the demand of consumers in the above groups to see if there is any difference. Finally, interpret and discuss the research findings.

3.2 Quantitative research method

Through the qualitative research above, the author has identified influencing variables as well as necessary information for research. The next step is to conduct quantitative research. Quantitative research method is essentially a method of collecting specific numerical data, applying econometric models to quantify the influence of factors on consumer demand. Within the scope of this topic, the author uses quantitative research methods as follows: *Firstly*, build a questionnaire and measurement scale. *Secondly*, test the reliability of the scale (CA coefficient). *Thirdly*, exploratory factor analysis

(EFA). Finally, conclude findings and limitations of the research.

4. Hypothesis and Research Model

The research hypotheses proposed by the author are as follows:

- *Hypothesis H1: Tourism products innovation positively impacts destination innovation.*
- *Hypothesis H2: Tourism process innovation positively impacts destination innovation.*
- *Hypothesis H3: Tourism organizational innovation positively impacts destination innovation.*
- *Hypothesis H4: Creative tourism activities have a positive impact on destination innovation.*
- *Hypothesis H5: Tourism staff qualifications and training have a positive impact on destination innovation.*
- *Hypothesis H6: Government support has a positive impact on destination innovation.*
- *Hypothesis H7: Innovation activities positively impact the intention to choose a destination.*
- *Hypothesis H8: Tourist orientation positively impacts destination creative activities.*
- *Hypothesis H9: Tourist orientation positively impacts destination innovation.*
- *Hypothesis H10: Product innovation positively impacts destination innovation behavior.*
- *Hypothesis H11: Tourist orientation positively impacts destination innovation behavior.*
- *Hypothesis H12: Innovation activities positively impact the innovation behavior of the destination.*
- *Hypothesis H13: Innovative behavior positively impacts intention to choose a destination.*
- *Hypothesis H14: Innovation activities positively impact the image of the accommodation destination.*
- *Hypothesis H15: Innovative behavior has a positive impact on accommodation destination image.*
- *Hypothesis H16: Accommodation destination image positively impacts the intention to choose a destination.*

Based on arguments about research gaps along with identified hypotheses, the author proposes a model to study the impact of innovation on tourists' intention to choose a destination for Binh Thuan tourism as presented in Figure 2.

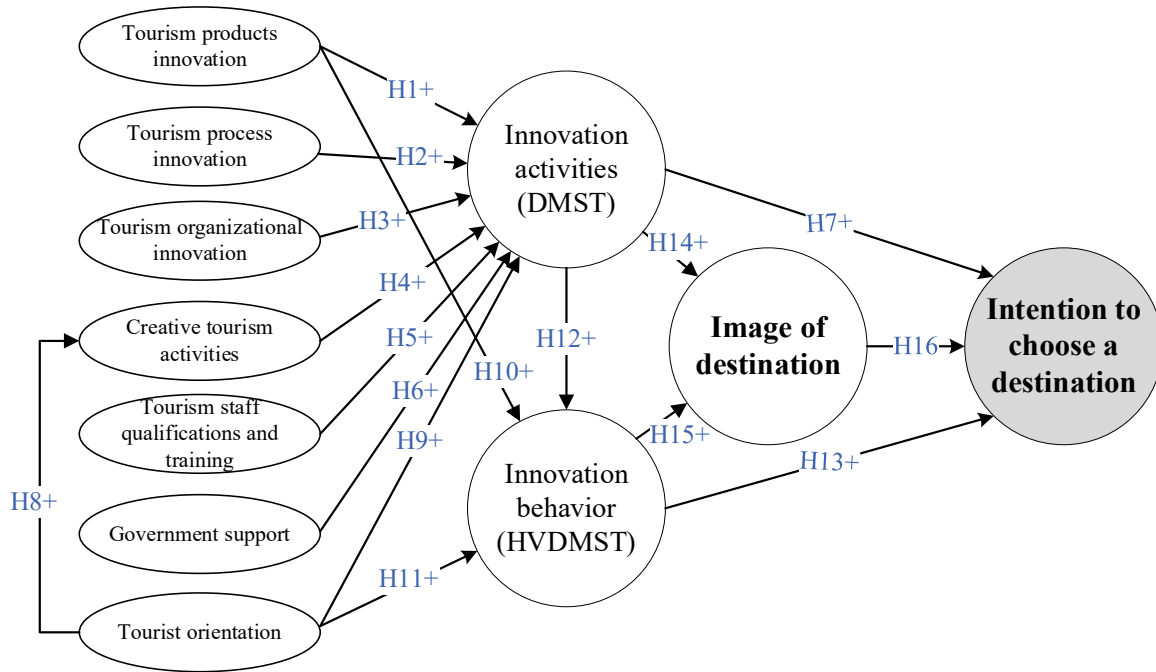


Fig.2: Model of destination choice intention of tourists in Binh Thuan province

5. Research results

5.1. Data collection and scales forming

The sample size is 100 with observed variables including: Age, educational level, gender, family status, income. The author conducted a combination of face-to-face and online surveys; Accordingly, 50% of the preliminary sample (50 subjects) will be approached directly to conduct the survey and the remaining 50% (50 subjects) will be collected through the Google Forms tool. Based on testing and expert opinions, scale used in this study was identified and adjusted to fit the Vietnamese context. The result is presented in Table 2 as below.

Table 2. Proposed research scale content

Code	Scale content
SP	Product Innovation Scale
SP1	Binh Thuan travel companies often introduce new types of tourism
SP2	Travel companies repackage different types of tourism into existing products
SP3	Typical cases of new ways of packaging tourism services in Binh Thuan include spa tourism, dental tourism, health tourism, sustainable tourism, educational tourism, and green tourism.
QT	Process Innovation Scale
QT1	At the destination, the application of advanced technology (mobile ordering, reservation systems...) in food service allows for better food preparation
QT2	At the destination, the application of advanced technology (mobile ordering, reservation systems...) in food service allows faster food distribution
QT3	At the destination, applying advanced technology saves operating costs
QT4	The application of advanced technology helps save visitors time
TC	Organizational Innovation Scale

Code	Scale content
TC1	Travel companies boldly eliminate traditional processes that are no longer suitable for modern travelers
TC2	Travel companies proactively implement new ideas
TC3	Travel companies proactively implement new ideas
TC4	Travel companies flexibly change to complete specific tasks and goals
ST	Creativity Scale
ST1	Binh Thuan tourism itself has become a creative environment
ST2	At destinations in Binh Thuan, creative content is integrated into tourism products
ST3	Binh Thuan tourism industry has a strategic combination of tangible and intangible cultural resources
TD	Scale of employee qualifications and training
TD1	Employees have professional qualifications appropriate to the assigned work
TD2	Employees participate in periodic training courses to improve their professional capacity
TD3	Employees are trained in general skills
TD4	Communication skills are focused on training for employees
DH	Tourist Orientation Scale
DH1	The travel company's business motto focuses on tourist satisfaction
DH2	The travel company is committed to meeting the legitimate needs of tourists
DH3	Travel companies have many solutions to meet the legitimate needs of tourists
DH4	Chất lượng điểm đến tương xứng với những giá trị du khách đã bỏ ra
DMST	Innovation Scale
DMST1	Tourist destinations all have new experiential activities for visitors to freely enjoy
DMST2	Each tourist destination in Binh Thuan is allocated advertising space to attract tourists
DMST3	Tourism activities at destinations stimulate interaction and feedback from visitors
HVDM	Innovative Behavior Scale
HVDM1	The destination's check-in, check-in or check-out system is effectively set up
HVDM2	The destination possesses outstanding architectural designs
HVDM3	Coming to Binh Thuan, visitors will have memorable experiences
HADD	Destination Image Scale
HADD1	Destination information in Binh Thuan appears through geography books, television reports or magazine articles...
HADD2	Tourists are impressed by destination brochures or electronic information pages about vacations in Binh Thuan
HADD3	Impressions of a destination are accumulated through visitors' direct experiences
YDLT	Destination Intention Scale
YDLT1	Travelers have a desire to escape, rest, prestige, adventure or social interaction with destination Binh Thuan
YDLT2	Tourists are attracted by the beaches, entertainment facilities, cultural attractions, mountains or beautiful scenery at the destination Binh Thuan
YDLT3	Tourists will introduce Binh Thuan destination to their acquaintances

Code	Scale content
YDLT4	Tourists intend to come to Binh Thuan for future trips

5.2. Scale reliability analysis result

All scales have Cronbach's Alpha coefficients ranging from 0.881 to 0.945 showing a good level of reliability, along with total variable correlation coefficients greater than 0.3, showing that the correlation level of component variables with the whole is guaranteed. The result is presented in Table 3.

Table 3. Results of analysis of preliminary scale reliability values

Cronbach's Alpha	Variable	Variable-total correlation	Cronbach's Alpha	Variable	Variable-total correlation
SP: 0.884	SP1	.819	QT: 0.886	QT1	.869
	SP2	.654		QT2	.733
	SP3	.863		QT3	.754
				QT4	.672
TC: 0.883	TC1	.752	ST: 0.881	ST1	.760
	TC2	.769		ST2	.729
	TC3	.717		ST3	.824
	TC4	.743			
TD: 0.941	TD1	.875	DH: 0.875	DH1	.766
	TD2	.890		DH2	.726
	TD3	.833		DH3	.697
	TD4	.840		DH4	.740
DMST: 0.903	DMST1	.790	HVDM: 0.936	HVDM1	.839
	DMST2	.838		HVDM2	.883
	DMST3	.796		HVDM3	.886
HADD: 0.846	HADD1	.689	YDLT: 0.945	YDLT1	.851
	HADD2	.722		YDLT2	.824
	HADD3	.733		YDLT3	.878

5.3. Analyze convergent validity and discriminant validity of the scale

The results of EFA exploratory factor analysis are presented in Tables 3.6 to 3.8. The result of the KMO coefficient reached 0.699 and the result of the Bartlett test reached the Sig value reaching 0.000 (Table 4) shows that the data is suitable for factor analysis.

Table 4. Results of KMO coefficient and Bartlett's test

KMO coefficient			.699
Bartlett's Test	Approx. Chi-Square	2709.301	
	df	595	
	Sig.	.000	

With all 35 measured variables, factor analysis helped extract 10 factors with eigenvalues greater than 1 and at the same time explained 82.4% of the information of the original data (Table 5).

Table 5. Eigen value results and variance extracted

Factor	Initial eigenvalues			Extracted results			Factor rotation results		
	Total	% Variance	Accumulation %	Total	% Variance	Accumulation %	Total	% Variance	Accumulation %
1	5.540	15.828	15.828	5.540	15.828	15.828	3.509	10.026	10.026
2	4.407	12.591	28.419	4.407	12.591	28.419	3.504	10.011	20.038

3	3.411	9.745	38.164	3.411	9.745	38.164	3.063	8.752	28.790
4	3.030	8.658	46.821	3.030	8.658	46.821	3.042	8.691	37.481
5	2.783	7.951	54.773	2.783	7.951	54.773	3.019	8.626	46.106
6	2.424	6.925	61.698	2.424	6.925	61.698	2.733	7.809	53.916
7	2.312	6.606	68.304	2.312	6.606	68.304	2.609	7.453	61.369
8	1.923	5.494	73.798	1.923	5.494	73.798	2.502	7.149	68.518
9	1.644	4.697	78.495	1.644	4.697	78.495	2.498	7.137	75.654
10	1.381	3.947	82.442	1.381	3.947	82.442	2.376	6.787	82.442
11	.715	2.043	84.484						
...	...	...	...						
35	.041	.116	100.000						

The factor matrix shown in Table 6 shows that all loading factors are greater than 0.5, so the scale has convergent validity, along with all loading factor values being high on a single factor. (the remaining hidden loading factors have values less than 0.3), so the scale achieves the necessary discriminant value.

Table 6. Factor matrix and factor loadings

Variable	Factor									
	1	2	3	4	5	6	7	8	9	10
TD2	.920									
TD3	.908									
TD1	.907									
TD4	.899									
YDLT4		.937								
YDLT2		.905								
YDLT3		.904								
YDLT1		.898								
QT1			.885							
QT3			.836							
QT4			.830							
QT2			.801							
TC1				.872						
TC2				.861						
TC4				.861						
TC3				.826						
DH4					.861					
DH1					.853					
DH2					.837					
DH3					.813					
HVDM3						.933				
HVDM1						.911				
HVDM2						.909				
DMST1							.893			
DMST2							.860			
DMST3							.854			

SP1							.899		
SP3							.868		
SP2							.798		
ST3								.918	
ST1								.884	
ST2								.876	
HADD3									.880
HADD2									.879
HADD1									.817

6. Conclusion

In this article, the author proposed a research model based on inheriting research results from related studies. By implementing quantitative methods and using survey and interview techniques with experts, the author has clarified and adjusted the original research model. The model proposed in the article has the potential to become the basis for further quantitative research, helping to determine the impact of innovation on tourist destination choices of tourists in Binh Thuan. The quantitative analysis tools proposed by the author, including Cronbach's Alpha coefficient and exploratory factor analysis (EFA), are designed to provide detailed and reliable information about the research model. This combination of synergy between the proposed model and quantitative analysis tools opens up potential research avenues in this field. However, the research also has some limitations. The research model is only applied in the Binh Thuan province, so it is necessary to check and confirm the generality of the results in other regions in Vietnam.

References

- Abdullah, M., Zailani, S., Iranmanesh, M., & Jayaraman, K. (2016). Barriers to green innovation initiatives among manufacturers: the Malaysian case. *Review of Managerial Science*, 10(4), 683–709
- Divisekera, Sarath; Nguyen, Van K. (2018). Determinants of innovation in tourism evidence from Australia. *Tourism Management*, 67(2018), 157–167.
- Fodness, D. (2004). Measuring tourist motivation. *Annals of tourism research*, 21(3), 555-581.
- Gachara, H. N. (2018). Innovation challenges encountered by small and medium enterprises in Nairobi, Kenya. *International Journal of Economics, Commerce and Management*, 6(6), 717-738.
- Herrero-Prieto, L. C., & Gomez-Vega, M. (2017). Cultural resources as a factor in cultural tourism attraction: Technical efficiency estimation of regional destinations in Spain. *Tourism Economics*, 23(2), 260-280.
- Hjalager, A. -M. (2009). A review of innovation research in tourism. *Tourism Management*, 31(), 1–12.
- Iordanova, E. (2017). Tourism destination image as an antecedent of destination loyalty: The case of Linz, Austria. *European Journal of Tourism Research*, 16, 214–232.
- Kleysen, R. F., & Street, C. T. (2001). Toward a multi-dimensional measure of individual innovative behavior. *Journal of Intellectual Capital*, 2(3), 284-296.
- Lin, Y., Deng, N., & Gao, H. (2018). Research on technological innovation efficiency of tourist equipment manufacturing enterprises. *Sustainability*, 10(12), 4826.
- Lyu, J., Li, Y., Mao, Z., & Huang, H. (2023). The effect of innovation on tourists' revisit intention

toward tourism destinations. *Tourism Review*, 78(1), 142-158.

Nijs, D., & Peters, F. (2002). *Imagineering. Het creëren van belevingswerelden*. Amsterdam: Boom.

Richards, G., & Wilson, J. (2007). *Tourism, creativity and development*. London: Routledge.

Shriedeh, F. (2019). The impact of medical tourist relationship management dimensions on innovation capabilities. *Business and Economic Research*, 9(3), 70-86.

Vietnam National Administration of Tourism (2020). *Vietnam tourism annual report 2019*. Lao Dong Publishing House.

Yoon, Y., & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. *Tourism management*, 26(1), 45-56.

Zach, F. (2012). Partners and innovation in American destination marketing organizations. *Journal of Travel Research*, 51(4), 412-425.