

## CHOOSING ADVENTURE TOURISM DESTINATION: THE CASE OF QUANG BINH, VIETNAM

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**Abstract:** The purpose of this study is to examine the factors and their level of influence on the choice of adventure tourism destinations in Quang Binh, Vietnam. The author has synthesized prominent studies related to adventure tourism, combined with the search for underlying theories to build a research model. SPSS 20 software was used to analyze based on the survey results of 260 tourists including domestic and foreign tourists, to verify the relationship of these factors to the choice of adventure tourism destinations. The results show that there are 5 factors influencing the choice of Quang Binh as an adventure tourism destination, arranged in the following order: (1) Travel costs; (2) Cultural experience, people of the destination; (3) Communication and advertising; (4) Tour guide capacity; (5) Brand of the operating company. Based on the research results, the author has made some recommendations to help develop adventure tourism in Quang Binh better.

**Keywords:** adventure tourism, destination selection, tourists, Quang Binh, Vietnam

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### INTRODUCTION

With many potentials and advantages, Quang Binh is striving to truly become one of the attractively adventurous and experienced tourism centers of the region and the world. Quang Binh is a locality with many potentials and advantages to develop tourism, especially exploration, adventure and experience tourism. Quang Binh's outstanding tourism resource for adventure tourism is the World Natural Heritage Phong Nha-Ke Bang National Park. With natural conditions of terrain and habitat, Phong Nha-Ke Bang area is hiding many beautiful natural landscapes that are still wild and mysterious. These are the system of rivers, streams, underground rivers, rocky beaches, waterfalls, valleys, tropical primeval forests, grasslands, and especially the cave system. Since 1990, the British Cave Research Association (BCRA) expedition team led by Mr. Howard Limbert in collaboration with the University of Natural Sciences, Vietnam National University, Hanoi has conducted nearly 20 surveys, explorations and published important information.

The explorers believe that the Phong Nha-Ke Bang cave area has hundreds to thousands of large and small caves. The team has surveyed and explored over 350 caves with a total length of 223 km. Among them, there are special caves, such as: Khe Ry cave is the longest water cave in the world (18,902m), Vom cave is 16km long, Phong Nha cave is the cave with the longest underground river (7,729m), Thien Duong cave is the dry cave with the most unique and majestic stalactite system and length (over 7km), etc. In particular, on April 22, 2009, the British Royal Cave Association surveyed Son Doong cave and confirmed that this is the largest cave in the world with a width of 200m, a length of 9km, a height of over 150m and a volume of 38.5 million. Son Doong cave surpasses Deer cave in Gunnung Mulu National Park of Malaysia to become the largest cave in the world. Explorers assess that Phong Nha-Ke Bang area can be considered the "kingdom" of caves in the world. The diversity and uniqueness of geology, topography, and geomorphology are prerequisites for other unique features, which are beautiful, fascinating, and wild landscapes. In particular, primeval, pure forests, such as: Gao forest (over 10 hectares), green cypress forests on limestone mountains,

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Sinh Ton valley have favorable conditions for organizing types of tourism, such as: eco-tourism, natural discovery experience tourism and especially adventure tourism to explore caves or underground rivers.

In Quang Binh, there are currently 25 tourism products as destinations for tourists who want to experience, explore and choose many attractive types of tourism, such as: discovery tourism, adventure tourism, experiential tourism, resort tourism, cultural and historical sightseeing tourism, spiritual tourism, community tourism, etc. Among the tourism products as destinations, there are 15 discovery, experience or adventure tourism destinations organized in the Phong Nha-Ke Bang area. From the survey results of the British Royal Caving Association, Quang Binh has focused on developing cave exploration tourism products, turning this type of tourism into a typical tourism product of the province, affirming the brand of Quang Binh tourism on the world map. This type is divided into two main segments as follows: Popular experience products, visiting the beauty of caves, entertainment: Phong Nha cave, Tien Son cave, Thien Duong cave, water games in Chay river - Dark cave, Mooc stream and so on. Cave exploration and exploration products: exploring and exploring Va cave - Nuoc Nut cave; exploring and exploring Tu Lan cave system - Tien cave; exploring Rao Thuong - En cave; exploring Ma Da valley - Tra Ang cave, exploring Vom cave, Gieng Vooc cave, En cave, Pygmy cave, Dai A cave, Over cave, etc. The most special thing is the product of exploring and exploring Son Doong cave, the largest cave in the world with the most experiences with adventure tourism.

In 2018, over 800 guests registered and successfully conquered Son Doong cave exploration and conquest. With the above potentials and advantages, Quang Binh is expected to become one of the leading centers for adventure tourism and natural exploration not only in the region but also in the world. With the above characteristics, studying the factors affecting the choice of Quang Binh as an adventure tourism destination is very practical, this will help managers come up with solutions to increase the number of tourists and improve the quality of tourism services.

### LITERATURE REVIEW AND RESEARCH HYPOTHESES

Adventure tourism has recently received a lot of attention, and some researchers have studied the decisions of individuals when choosing this form of tourism (Lin et al., 2020). Through experiments on individual technological behavior when choosing a form of tourism, adventure, the results show that participants tend to seek adventure based on their own decisions, and they will also be interested in destinations with high safety and clear advertising (Lin et al., 2020). Mawarni et al. (2022) conducted a review of data on economic, social, political, healthy and natural conditions of more than 191 economies, which will affect the development of the adventure tourism index in these countries. The results show that adventure tourism will develop based on the innovation of economies. If a country has a higher innovation index, it will have an advantage. Cultural diversity as well as high per capita medical expenses will also be factors affecting the choice of that country for adventure tours. Wang et al. (2024) stated that operators play a very important role in adventure tours, they play a role in designing conditions to ensure that adventure tours are safe such as escape conditions, or predicting the impact of adventure tours on natural environmental conditions. Tour guides play a very important role in adventure tourism experiences, almost whether the experience of tourists when choosing adventure tourism is highly satisfying or not largely depends on the health and emotions of the tour guide (Mackenzie and Raymond, 2020).

This shows that there is a need to pay attention to the health, emotions and satisfaction of tour guides when wanting to develop the adventure tourism sector. Most tourists make decisions to choose adventure tourism destinations when it is associated with a reputable brand, which means that the choice of adventure tourism destinations is often associated with brands of reputable companies in this sector (Karagiorgos et al., 2023). When mentioning these brands, tourists will feel secure and make quick decisions for their experiences. Pop et al. (2023) stated that adventure tourism is a viable form of tourism for young people after the pandemic, which will help young people regain balance in their lives and explore more positive travel experiences. Furthermore, the factors that influence young people's choice of adventure tourism are reducing stress in life, helping them to be self-aware, seeking new life experiences and interacting more with the surrounding society. In addition to choosing adventure tourism services influenced by the factor of seeking new sensations, people with personality and a love of adventure will be very proactive in choosing destinations with adventure tourism characteristics (Torres et al., 2022). Jin et al. (2019) stated that tourists' motivations, personalities, and destination characteristics will affect their choice of adventure tourism activities. Tourists tend to choose tourist destinations that are branded and ensure safety, quality of accompanying services such as tour guides, and guaranteed infrastructure.

Xiao et al. (2024) stated that it is important to identify the location of adventure tourists, which increases safety in travel as well as increases customers' trust when choosing travel experiences, which shows the importance of adventure tour operators. Phạm (2019) stated that factors such as tourism and entertainment activities; tourism environment; service capacity; infrastructure; safety and staff capacity will affect the level of satisfaction of tourists when they participate in some marine ecotourism activities. Vietnam tourism is a prominent destination in terms of culture, pristine nature, and hospitality. The image of Vietnam tourism is also diverse according to different tourist groups. Besides, Vietnam has many other resources that are assessed by experts as having great potential but have not been highly appreciated by international tourists. The study pointed out the strengths and weaknesses of Vietnamese tourism from the perspective of international tourists and made suggestions for developing the image, brand and products of Vietnamese tourism (Phạm, 2012).

Schmidt Rojas et al. (2024) affirmed that adventure tourism companies need to take necessary measures with nature, local people, and preserve ecosystems to move towards regeneration in adventure tourism, towards developing a sustainable adventure tourism environment. Loan and Thanh (2014) explored the factors affecting tourist attraction in Binh Dinh province and the results showed that there are eight factors affecting tourist attractions arranged in order of importance: Natural resources; Culture, history and art; Tourism environment; Accessibility; Food, shopping and

entertainment services; Infrastructure; Accommodation facilities; Prices of services. Janowski et al. (2021) compiled many documents related to adventure tourism, thereby providing 22 aspects related to adventure tourism, thereby helping to form a multi-dimensional perspective on this field. Among the aspects related to adventure tourism, issues related to risk and danger, thrill and excitement as well as facing challenges, increasing physical activities, having the opportunity to explore more about the natural environment are considered as core aspects in the field of adventure tourism. Rohman (2020) conducted a study on determining tourist loyalty when participating in adventure tourism services through tourist satisfaction and quality of life. The results showed that perceived value did not affect loyalty, but tourist satisfaction and quality of life had a significant impact on tourist loyalty. In addition, a mediating relationship was also found between satisfaction and quality of life affecting loyalty through the perceived value factor.

There have not been many studies on personality traits, motivations, and socio-demographic factors affecting the choice of adventure tourism. Gross et al. (2023) analyzed demographic aspects when tourists chose mild or strong adventure tourism. The results showed that gender and age of tourists were descriptive characteristics that influenced the choice. In addition, extroversion and self-discovery are also characteristics of tourists who choose strong forms of adventure tourism. Developing adventure tourism will cause certain impacts on the environment, but it is also an opportunity to develop livelihoods for people in the area where adventure tourism services are exploited (Chakrabarty and Sadhukhan, 2019). Therefore, in order to develop sustainable adventure tourism, managers need to pay attention to how it affects the surrounding living environment, it is necessary to have truly scientific planning to ensure harmony with nature but also create livelihood conditions for local people. The gender characteristics of tour guides when they are female will have certain impacts on adventure tourism, which helps tourism service operators have some considerations when choosing female adventure tour guides (Mackenzie et al., 2020).

It is understandable that there are barriers for female adventure tour guides, such as health issues, interactions with customers or even with co-guides. Nasution et al. (2023) through their study on adventure tourist satisfaction recommended that light adventure tours should add more challenges to increase customer satisfaction, avoiding boredom when participating in simple challenges in adventure tours. Alemshet and Legese (2019) affirmed that destinations with diverse tourism products, high adventure as well as combined with majestic natural landscapes will be the top choice for tourists who are passionate about adventure tourism. Realizing tourists' ideals when participating in adventure tourism is very necessary, they need to be based on basic factors such as interacting with the natural environment, increasing physical activities, self-discovery, independence in many situations, unexpected challenges and careful preparation (Ponte et al., 2021). Lötter and Welthagen (2020) stated that the development of adventure tourism will help people develop both physical health and mental health very well. This is an opportunity for tourists to improve their emotions and enhance their quality of life by experiencing the cultures at adventure tourism destinations. Carvache-Franco et al. (2022) have identified a number of factors that influence the increase in motivation to participate in adventure tourism, including experiential learning, social interaction, travel safety, relaxation, and mastery of life skills.

These are the factors that adventure tour managers and operators need to develop in the process of communicating and marketing tourism products as well as developing a variety of adventure tourism products. The wildness of the destination as well as the difficulty of the challenges in adventure tours will have a very positive impact on tourists' perceptions when participating in adventure tours, in addition, the mastery and interaction skills when participating in these tours also have a similar positive trend (Tsaour et al., 2020). Based on the synthesis of the above studies, the research hypotheses in the proposed research model are as follows:

**H1:** Guide competence (GUID) positively influences (+) the choice of adventure tourism destination (ADTO)

**H2:** Communication and advertising (COMM) positively influences (+) the choice of adventure tourism destination (ADTO)

**H3:** Attractiveness of adventure tourism product (PROD) positively influences (+) the choice of adventure tourism destination (ADTO)

**H4:** Brand of operating company (BRAND) positively influence (+) the choice of adventure tourism destination (ADTO)

**H5:** Cultural experience, people of the destination (EXPE) positively influences (+) the choice of adventure tourism destination (ADTO)

**H6:** Travel cost (COST) positively influences (+) the choice of adventure tourism destination (ADTO)

## METHODOLOGY

The main method of this study is a mixed method, in which the author uses a qualitative method combined with a quantitative method. The steps are as follows:

**Step 1:** Identify the problem and research objectives. The research problem of the study is determined on the basis of analyzing the current theoretical and practical context in the world in general and in Vietnam in particular regarding adventure tourism. The author finds that there is a need for studies to measure the level of perception of tourists towards choosing Quang Binh as an adventure tourism destination, thereby proposing appropriate strategies to develop this form of tourism in Quang Binh. Based on the above research problem, the study identifies general research objectives and specific research objectives. Research questions are also raised to clarify specific research objectives.

**Step 2:** Qualitative research. The study has reviewed the documents, including background theories, related studies at home and abroad. Based on the literature review, the author identifies research concepts and the relationships between research concepts and proposes a research model as well as builds an initial scale. Then, through expert group discussions, new factors are discovered, research concepts, research models and scales are adjusted and supplemented to suit practical conditions. The results of the expert group discussions, research models and scales are developed and perfected to become the

official scale for quantitative research. The experts selected to discuss and exchange issues on adventure tourism destinations and destination selection are specialized researchers related to this field; senior managers in tourism enterprises or macro-level managers in the tourism business, this helps the author have more information about the problem being researched, understand more about situations, practical issues related to factors affecting the choice of tourist destinations. From the useful information obtained, the author will redefine the relationship between factors affecting the choice of tourist destinations, and at the same time discover new factors affecting this relationship. Secondary data sources are collected from statistics, reports of state agencies and enterprises, from books, newspapers, magazines, and the internet. This is a preliminary study, helping to determine the optimal research design before conducting quantitative research. Moreover, the expert method is highly reliable and saves time. Therefore, this method can be used for the author to briefly grasp the initial influences of factors influencing the choice of Quang Binh as an adventure tourism destination before carrying out the next research steps.

**Step 3: Quantitative research.** The quantitative research is conducted in 2 steps: preliminary and official. - Preliminary quantitative research: The scales used in this study are inherited from the original scales in foreign studies, then adjusted and completed from the results of qualitative research. Preliminary quantitative research is conducted to preliminarily assess the reliability of the scale using Cronbach's Alpha and EFA factor analysis. The research sample is conducted with a sample size of 80 observations, the sampling method is probability, stratified sampling technique. The results of the preliminary quantitative research on the scale are completed and used to design the official questionnaire for the official quantitative research in the next step. Preliminary quantitative research will help the research check the accuracy and understandability of the survey content, and at the same time evaluate the effectiveness of the survey in collecting and exploiting data. After collecting preliminary research samples, the author used SPSS 20 software to test the research hypothesis. First, Cronbach's Alpha coefficient was used to preliminarily assess the reliability and values of the scale to increase the reliability of the scale. Finally, use EFA to screen and eliminate observed variables that do not meet the standards. From there, the author can adjust the survey to be more reasonable and clear to conduct official quantitative analysis.

Official quantitative research: Sampling research on the whole population is impossible for researchers because time, money and human resources are limited. Therefore, researchers only conduct surveys on a number of units called research samples and based on the characteristics and properties of the survey sample to infer the characteristics and properties of the whole population. The most important issue is that the researcher must ensure that the research sample is capable of representing the general population. Conducted with probability sampling method, stratified sampling technique, the survey subjects include tourists who have traveled to Quang Binh. They are those who directly experienced some tourism activities and can see the potential of adventure tourism, so they understand the issues related to adventure tourism. In business research, researchers use some forms to collect opinions of survey subjects such as direct meetings, mailing (by post, using email, social networks). In the case of direct meetings, if respondents have any questions about the questions, they can be explained on the spot and the researchers can collect completed answers in a short period of time. Mail surveys can reach a wide geographical area and are less expensive than direct meetings but the response rate is lower. Therefore, in this study, the author combines both forms to collect samples. Data were collected using face-to-face and online surveys, questionnaires sent via email and using Microsoft Forms. The purpose of the formal quantitative study was to assess the reliability and validity of the scale, and to test the suitability of the research model and research hypotheses.

**Step 4: Research results and discussion.** The official quantitative research results are presented with contents such as research sample statistics, scale testing results, assessment of multicollinearity, and assessment of regression models of factors affecting the choice of adventure tourism destinations. The author discusses the research results with experts. This step is carried out to collect more comments from experts to contribute to proposing managerial implications in the next step.

**Step 5: Management implications.** This final step is carried out to draw general conclusions of the research and propose managerial implications to help business administrators in the field of adventure tourism business in Quang Binh in particular and Vietnamese enterprises in general to improve the effectiveness of adventure tourism activities at the enterprise. The research process is shown in Figure 1.

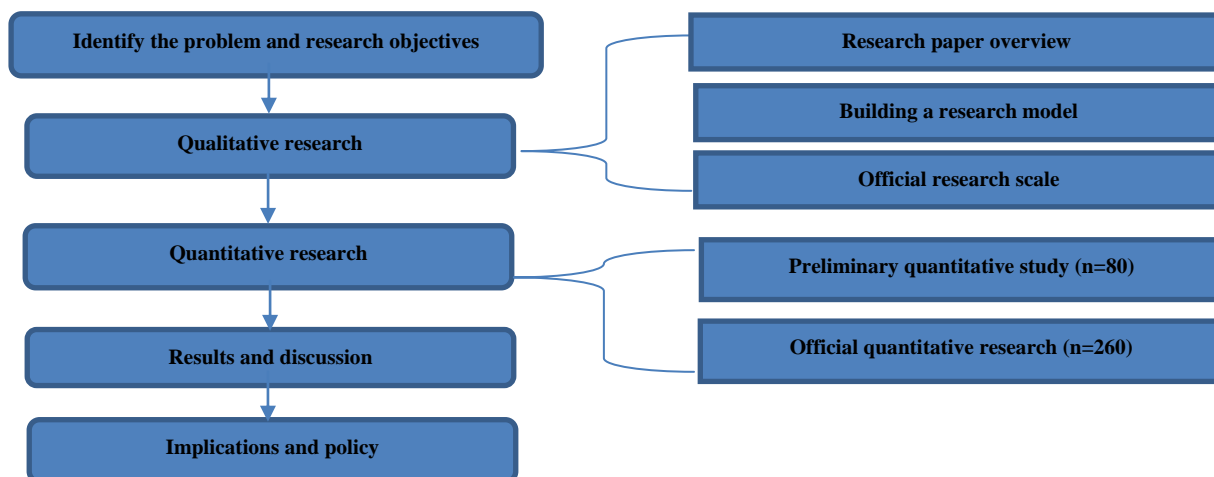


Figure 1. Research process (Source: Author's proposal)

## RESULT AND DISCUSSION

The group conducted a survey on 260 different tourists including domestic and international tourists, of which 90 were domestic tourists and 170 were international tourists (Figure 3), most of them had been to Quang Binh at least once, especially many domestic tourists had been here more than 3 times, this shows that they have researched quite thoroughly about tourism activities, especially specific tourism products such as Phong Nha Cave exploration and other activities here. Among the tourism activities in Quang Binh that tourists choose, most of them are tourism activities related to famous caves of Quang Binh, especially after the movie "Kong: Skull Island" was released, the level of curiosity of tourists has increased. The age of customers when choosing adventure tourism activities in Quang Binh ranges from 20 to over 50, in which the majority are from 20 to 35 years old, accounting for the largest proportion of 48.46%. (Table 1)

Table 1. Descriptive statistics of the basic sample of visitors (Source: The authors collected)

		Frequency	Percent
<b>Number of times traveling to Quang Binh</b>	1-3 times	96	36.92%
	3-5 times	104	40.00%
	>5 times	60	23.08%
	<b>Total</b>	<b>260</b>	<b>100.00%</b>
<b>Tourism activities in Quang Binh</b>	Kayaking/Sup	61	23.46%
	Zipline	56	21.54%
	Sightseeing, Cave Exploration	45	17.31%
	Experience Quang Phu Sand Dunes	30	11.54%
	Adventure Mountain Climbing	26	10.00%
	Visit Spiritual Sites	24	9.23%
	Others	18	6.92%
	<b>Total</b>	<b>260</b>	<b>100.00%</b>
<b>Age of visitors</b>	20-35 years old	126	48.46%
	35-50 years old	84	32.31%
	>50 years old	50	19.23%
	<b>Total</b>	<b>260</b>	<b>100.00%</b>
<b>Average spending for a trip to Quang Binh</b>	<10.000.000 VND	87	33.46%
	10.000.000-20.000.000 VND	91	35.00%
	>20.000.000 VND	82	31.54%
	<b>Total</b>	<b>260</b>	<b>100.00%</b>
<b>Tourists are classified by destination</b>	Other Domestic Tourism	90	34.62%
	Foreign Tourists:	170	65.38%
	+ Western Europe	58	22.31%
	+ Eastern Europe	26	10.00%
	+ Americas	19	7.31%
	+ Northeast Asia	45	17.31%
	+ South Asia	10	3.85%
	+ Other	12	4.62%
<b>Total</b>	<b>260</b>	<b>100.00%</b>	

Most of the foreign tourists choose to experience high-level adventure services such as mountain climbing, Zipline, cave exploration and overnight stays. Some other guests choose a service that combines relaxation and tourism, also visiting spiritual sites or kayaking (Figure 2). We see that tourists spend different amounts of money due to different levels of needs, for example, foreign guests are willing to spend a large amount of money on cave exploration tours or adventurous mountain climbing for the day (with a lot of support staff such as guides, assistants) for their adventure tour, not to mention there are guests who are willing to pay a large amount of money in advance to be able to "reserve" a place for an adventurous experience, this is a positive sign for the economic development of Vietnam in general and Quang Binh in particular.

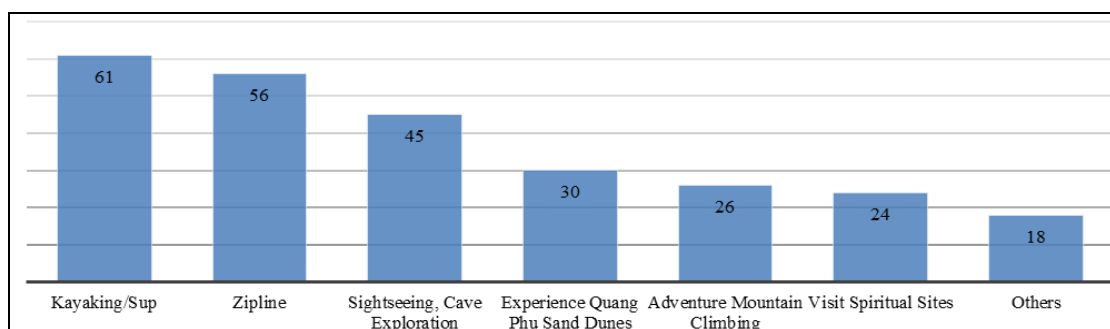


Figure 2. Activities tourists have experienced in Quang Binh (Source: The authors collected)

### Exploratory analysis of independent variables

The scale of 06 independent variables is measured by 24 observed variables. After checking the reliability level by Cronbach's Alpha, it was found that 21 observed variables belonging to 6 independent factors exist in the model, all

ensuring reliability (Table 2). The researchers continue to conduct exploratory analysis of EFA for independent factors. The results are as shown in Table 3, with KMO value of  $0.813 > 0.5$  and Sig value of Bartlett's test of  $0.000 < 0.05$ , showing that the variables are correlated with each other, so the model is suitable for exploratory factor analysis.

Table 2. Reliability according to Cronbach's Alpha coefficient (Source: The authors collected)

Variable	Variable abbreviation	Number of observations	Cronbach's Alpha
Guide competence	GUID	4	0.936
Communication and advertising	COMM	4	0.819
Attractiveness of adventure tourism product	PROD	4	0.898
Brand of operating company	BRAN	4	0.902
Cultural experience, people of the destination	EXPE	4	0.788
Travel cost	COST	4	0.845

Table 3. Exploratory factor analysis EFA of independent factors (Source: The authors collected)

KMO and Bartlett's Test										
Kaiser-Meyer-Olkin Measure of Sampling Adequacy								.813		
Bartlett's Test of Sphericity								Approx. Chi-Square		3529.163
								df		276
								Sig.		.000
Total Variance Explained (Extraction Method: Principal Component Analysis.)										
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	5.024	20.933	20.933	5.024	20.933	20.933	3.118	12.990	12.990	
2	3.405	14.186	35.119	3.405	14.186	35.119	3.114	12.976	25.966	
3	3.219	13.414	48.533	3.219	13.414	48.533	3.086	12.857	38.822	
4	2.330	9.707	58.240	2.330	9.707	58.240	3.063	12.764	51.586	
5	2.107	8.778	67.018	2.107	8.778	67.018	2.619	10.913	62.498	
6	1.223	5.095	72.114	1.223	5.095	72.114	2.308	9.615	72.114	
7	.817	3.403	75.517							
8	.632	2.635	78.151							
9	.564	2.348	80.499							
10	.532	2.215	82.715							
11	.489	2.036	84.751							
12	.465	1.937	86.688							
13	.402	1.675	88.363							
14	.365	1.523	89.885							
15	.344	1.433	91.318							
16	.319	1.331	92.649							
17	.304	1.265	93.914							
18	.284	1.182	95.096							
19	.258	1.077	96.173							
20	.245	1.020	97.193							
21	.221	.922	98.115							
22	.184	.768	98.883							
23	.140	.584	99.467							
24	.128	.533	100.000							
Rotated Component Matrix <sup>a</sup> (a. Rotation converged in 6 iterations)										
	Component									
	1	2	3	4	5	6				
BRAN1	.918									
BRAN4	.864									
BRAN2	.857									
BRAN3	.826									
EXPE4		.894								
EXPE3		.877								
EXPE2		.851								
EXPE1		.839								
COMM4			.916							
COMM2			.898							
COMM1			.854							
COMM3			.791							
GUID4				.866						
GUID1				.859						
GUID3				.848						
GUID2				.825						
COST4					.815					

COST1					.752	
COST3					.747	
COST2					.723	
PROD4						.822
PROD1						.807
PROD2						.673
PROD3						.621
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization						

The extracted factors all have Eigenvalues greater than 1 and the stopping point when extracting factors at the 6th factor has an Eigenvalue of 1.223 > 1. The total variance extracted from the 6 factors is 72.114% > 50%, which shows the ability to use these 6 component factors to explain 72.114% of the variation of the observed variables. Based on the factor rotation matrix when running EFA, 24 variables are extracted into 6 factors.

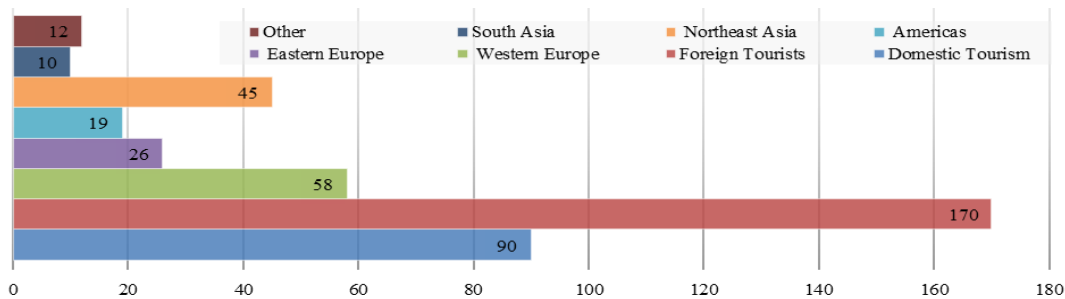


Figure 3. Classification of interviewed tourists by destination (Source: The authors collected)

**Exploratory analysis of dependent variables**

The results of the EFA exploratory factor analysis with KMO equal to 0.901 > 0.5 and Bartlett's test with sig equal to 0.000 < 0.05, so it can be affirmed that the data is suitable for factor analysis. The analysis extracted from 5 variables assessing the influence on the choice of adventure tourism destination into a main factor with Eigenvalue of 4.054 and total extracted variance of 81.082% > 50% (Table 4).

Table 4. Exploratory factor analysis EFA of dependent variable (Source: The authors collected)

KMO and Bartlett's Test							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					.901		
Bartlett's Test of Sphericity					Approx. Chi-Square		1185.563
					df		10
					Sig.		.000
Component Matrix <sup>a</sup> (a. 1 components extracted.)							
				Component			
				1			
ADTO4				.951			
ADTO5				.903			
ADTO2				.898			
ADTO3				.878			
ADTO1				.870			
Extraction Method: Principal Component Analysis							
Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	4.054	81.082	81.082	4.054	81.082	81.082	
2	.313	6.266	87.347				
3	.276	5.511	92.859				
4	.240	4.801	97.659				
5	.117	2.341	100.000				
Extraction Method: Principal Component Analysis							

**Regression model analysis results**

After extracting the factors from the exploratory factor analysis, we conduct regression analysis to determine the factors affecting the choice of Quang Binh as an adventure tourism destination. Regression analysis will be performed with 6 independent factors: GUID; COMM, PROD, BRAN, EXPE and COST; the dependent variable is ADTO.

**The multivariate linear regression equation of this study is as follows:**

Overall regression function:

$$ADTO = \beta_0 + \beta_1GUID + \beta_2COMM + \beta_3PROD + \beta_4BRAN + \beta_5EXPE + \beta_6COST + U_i$$

The regression model will find 06 independent factors that impact the dependent factor. At the same time, the model also describes the level of impact, thereby helping us predict the value of the dependent factor. According to Table 5, the level of explanation of the model with Adjusted R Square index = 0.472, so about 47.2% of the choice of Quang Binh as an adventure tourism destination is influenced by the independent factors of the model, with a confidence level of over 99% (F test, sig < 0.05).

Table 5. Results of regression model analysis (Source: The authors collected)

Model Summary <sup>b</sup>						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	.687 <sup>a</sup>	.472	.460	.46609	1.836	
a. Predictors: (Constant), COST, COMM, BRAN, EXPE, PROD, GUID; b. Dependent Variable: ADTO						
Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.558	.347		-1.607	.109
	GUID	.171	.043	.196	3.947	.000
	COMM	.176	.042	.196	4.152	.000
	PROD	.012	.043	.014	.280	.780
	BRAN	.144	.042	.166	3.460	.001
	EXPE	.230	.044	.257	5.274	.000
	COST	.533	.085	.357	6.257	.000
a. Dependent Variable: ADTO						

The regression results show that 5 independent factors affect the selection in the following order: COST; EXPE, COMM, GUID and BRAN because they are all statistically significant, sig < 0.05 is satisfactory and will be retained in the research model. According to the above results, 01 factor, PROD, is eliminated because it is not statistically significant, sig > 0.05.

Table 6. ANOVA analysis results (Source: The authors collected)

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.198	6	8.200	37.745	.000 <sup>b</sup>
	Residual	54.962	253	.217		
	Total	104.161	259			
a. Dependent Variable: ADTO; b. Predictors: (Constant), COST, COMM, BRAN, EXPE, PROD, GUID						

Based on the results of Table 6, ANOVA has a Sig value = 0.000 < 0.05, it can be concluded that the model exists. In other words, with a significance level of 5%, it can be concluded that tourists choosing Quang Binh as an adventure tourism destination is influenced by at least 1 of the remaining 5 factors. Travel costs are considered the most important factor for adventure tourism services, which is completely understandable because in this market, the prices of this service have a huge difference among companies providing adventure tourism services in Quang Binh. Most tourists will choose services with suitable prices (Loan and Thanh, 2014), a factor that needs to be considered is the cost related to medical services, which is also a matter of great concern (Mawarni et al., 2022).

When choosing adventure tourism, in addition to reducing life pressure, cultural experiences and social interactions are very important (Mackenzie and Raymond, 2020; Karagiorgos et al., 2023; Pop et al., 2023), this is the second most influential factor in choosing Quang Binh as an adventure tourism destination. Tourists have learned about the characteristics of overnight adventure tourism, they will experience life as real locals. Culinary culture is also what tourists look for in Quang Binh, they have the opportunity to enjoy specialties from both the sea and the highlands when choosing Quang Binh as a destination. The issue of communication in tourism is almost mandatory (Lin et al., 2020; Tsaor et al., 2020) when a destination wants to promote its products to domestic and foreign tourists.

Tourists will feel and imagine the products they will experience through modern communication techniques, which further stimulates them to choose the destination. Tour guides play a very important role in adventure tours (Mackenzie and Raymond, 2020; Jin et al., 2019). They will decide on key issues in the trip such as the schedule, participating in experiences, and adventure travel experiences that need to ensure safety, the tour guide is the main person responsible. If the tour guide is a local, knowledgeable about information such as terrain, culinary facilities, and culture, it will increase the possibility of choosing a tourist destination.

In addition, the brand of the company operating adventure tours also receives attention from customers (Wang et al., 2024; Karagiorgos et al., 2023), especially customers who choose high-level adventure tours, they are actually people in the middle class, always concerned about safety issues, medical expenses or accident insurance.

## CONCLUSION

According to the planning approved by the Government, adventure tourism will be a key economic sector, a breakthrough to promote growth, socio-economic development of Quang Binh, developing in the direction of exploring



nature, caves, historical culture, and sea sports. Key tourist areas include Phong Nha - Ke Bang; Dong Hoi city and surrounding sea; the center of cultural, historical tourism, resort, and nature experience in the South; the Northern region and Vung Chua - Yen Island. Quang Binh's Phong Nha - Ke Bang National Park - which has been recognized by UNESCO twice as a world natural heritage site, will be invested in resources and infrastructure to submit to the Minister of Culture, Sports and Tourism for recognition as a national tourist area and submit to UNESCO for recognition as a world biosphere reserve. Phong Nha - Ke Bang will also develop specific products such as cave exploration, ecological nature conservation, community, resort, cultural history, biodiversity exploration, archaeology; become a Southeast Asian-class tourism center. Some recommendations for developing adventure tourism in Quang Binh: The Government and local authorities need to seek support and cooperation from authorities at all levels to allocate resources, provide necessary funding and create favorable policies for the development of adventure tourism in the region.

The Government should soon issue a decree specifying the development of ecotourism projects, entertainment resorts for forest areas, a decree on rural agricultural tourism business when the revised Land Law is issued to help businesses have favorable investment mechanisms, increase the number of adventure tourism investors to offer competitive service prices in tourism. In order to increase cultural and human experiences in adventure tourism products, local authorities and travel companies need to attract and engage local communities to participate in the tourism development process; encourage community-based tourism initiatives, homestays and cultural exchanges to provide visitors with authentic local experiences while enabling local people to own and benefit from the tourism activities they participate in; continue to prioritize conservation efforts in the national park; conduct research and monitoring programs to conserve the park's biodiversity, protect endangered species and maintain ecological balance.

In terms of advertising and communication, businesses, in collaboration with the Department of Tourism and other agencies, it should be developed a comprehensive marketing strategy to promote Quang Binh in general and Phong Nha - Ke Bang National Park in particular as Asia's adventure tourism hub. This may include online and offline campaigns, participation in tourism fairs and exhibitions, creating informative promotional materials, visually appealing video clips on platforms such as TikTok, Instagram. In addition, travel businesses should invest in training local guides, adventure instructors and hotel staff to ensure high-quality services and memorable experiences for visitors. This includes providing language skills training, customer service training and knowledge of the history, flora and fauna of adventure tourism sites in Quang Binh. Finally, the Government and travel businesses operating in Quang Binh province should promote partnerships with adventure tourism companies and operators in various forms such as linkages, cooperation, public-private partnerships to promote Phong Nha - Ke Bang National Park as a leading adventure destination in Asia.

Cooperation with these operators is needed to provide unique adventure tourism packages and experiences. They should promote digital transformation and build a smart tourism management system, creating convenient direct connections between customers and service providers at Phong Nha - Ke Bang destination, Quang Binh. Although the research results have shown the factors and their level of influence on the development of adventure tourism in Phong Nha-Ke Bang, there are still certain limitations. Firstly, the research has not been conducted on a larger sample size due to limitations in time and survey costs. Secondly, the research has not been conducted in many provinces and cities with similar characteristics of adventure tourism services. Thirdly, the characteristics of adventure tourism sectors in Phong Nha, Ke Bang have not been analyzed too deeply. This is also a suggestion for further research in the future.

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