

“Mediating impact of the protection and exploitation of intellectual property rights of local intellectual property on tourism development: An empirical study in Central Vietnam”

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MEDIATING IMPACT OF THE PROTECTION AND EXPLOITATION OF INTELLECTUAL PROPERTY RIGHTS OF LOCAL INTELLECTUAL PROPERTY ON TOURISM DEVELOPMENT: AN EMPIRICAL STUDY IN CENTRAL VIETNAM

Abstract

After the global impact of the COVID-19 pandemic, the tourism industry encounters opportunities and challenges worldwide, including limited tourism resources, while considering intellectual property aspects such as place names, natural resources, traditional knowledge, and regional cultural heritage. This topic research is limited in Vietnam, especially quantitative one. Thus, this study aims to determine the impact of local intellectual assets (LIAs) on tourism development through the mediation of protection and exploitation activities of local intellectual assets. The data for the study were collected through interviews with 296 individual business households in Central Vietnam. The study utilized the SPSS and AMOS 25 software as research tools, and the Structural Equation Modeling (SEM) was applied to test the hypotheses. The research results indicate that local intellectual assets, consisting of reputation, specialties, traditional knowledge, and folk culture, directly and statistically significantly affect the residents' perception and the local government's support. Furthermore, through these two factors, local intellectual assets indirectly and statistically significantly affect protecting and exploiting local intellectual assets and the development of tourism activities. The study's findings also provide a basis for local authorities and businesses to propose policy implications and management strategies that pay more attention to the issue of local intellectual assets and the protection and exploitation of local intellectual assets to serve tourism development.

Keywords intellectual property, hospitality industry, locality, households' perspectives, developing country

JEL Classification M38, M21, K11, D23

INTRODUCTION

During the development process in countries worldwide, especially after the COVID-19 pandemic, the tourism industry faces numerous opportunities along with various challenges, including limited tourism resources. From the perspective of intellectual property (IP), tourism resources encompass diverse elements ranging from place names to natural resources, as well as traditional knowledge and folk culture embedded in the longstanding cultural heritage of each region. In general, and specifically in Vietnam, these signs are protected under exclusive intellectual property rights and exploited through licensing systems to establish quality standards, diversify product and service offerings, generate income from licensing fees, attract foreign investment, develop markets, and promote local tourism and commercial brand. These intellectual assets (IAs) are inexhaustible resources that



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overcome the limitations and gradual depletion of existing resources, becoming an essential component in the local development process and creating distinctiveness and recognition of the locality on the international stage (George, 2010).

Research on the relationship between intellectual assets, intellectual property ownership, and tourism development has been conducted in diverse countries. Interestingly, most studies have found that intellectual assets, through the activities of protection and exploitation facilitated by intellectual property rights regulations, have a positive impact on promoting tourism development and ensuring sustainability and high levels of creativity in this field, such as studies by Zhong and Wang (2021) in China, Zuallcobley and Awang Nik (2020) in Malaysia, Ncube (2011) in South Africa, and Punchihewa (2021) in Sri Lanka.

The number of studies on intellectual assets, particularly local intellectual assets, about tourism development in Vietnam is limited compared to other countries. Some authors who have conducted research in this area include Le (2016), N. Le and T. Le (2016), and Hai (2021). However, most of these studies are qualitative, and no research has examined the mediating role of the protection and exploitation of intellectual assets in the relationship between intellectual assets and tourism development. Besides, there is a lack of studies based the perspective of the perception of households in traditional craft villages and localities.

1. LITERATURE REVIEW

Research on intellectual assets in general and their relationship with tourism development has been conducted extensively and diversely in many countries from the past until now.

First, the term “local intellectual assets” was first mentioned by Goldstein (2007) in the phrase “stability of local intellectual property enforcement.” However, there has been no widely accepted definition for local intellectual assets. Even the World Intellectual Property Organization (WIPO) has not provided a definition. Based on the conceptual framework of intellectual assets and intellectual property rights by WIPO, scholars have proposed definitions for local intellectual assets, considering it as a narrow field of intellectual assets associated with the specialties, geographical and region’s specialties, geographical locations, and traditional industries intellectual assets refer to knowledge created by humans through creative activities closely related to the natural, cultural, social, and human conditions of a land or geographic area, capable of application and value creation through the utilization of that knowledge. Additionally, local intellectual assets can be understood as a collection of objects protected by intellectual property rights (including literary works, folklore, collective trademarks, certification marks, and geograph-

ical indications) that have a connection with the natural, cultural, social, and human conditions of a specific land or geographic area associated with the local place names (Hai, 2021). Therefore, it can be observed that local intellectual assets are generally understood as objects created by human intellect associated with local place names or regional specialties, which are protected by the state for a certain period. Local intellectual assets also include all objects protected by intellectual property rights. These are the rights of individuals or organizations regarding intellectual assets, including copyright and related rights, industrial property rights, and rights related to plant varieties (Intellectual Property Office of Vietnam, 2005).

Second, local intellectual assets include the following groups of factors. The first factor is the local brands/titles, which is understood narrowly as a brand name associated with natural landscapes or architectural structures in a local destination, accompanied by symbols and accompanying images. These signs can be registered for protection as collective trademarks, geographical indications, or certification marks, or they can be titles associated with international organizations such as UNESCO, indicating the quality of protected heritage sites or structures. Among these certifications, the World Heritage Site certification is widely known concerning tourist destinations (N. Le & T. Le, 2016). These

local certifications or titles are often mentioned in studies on sustainable tourism and ecotourism, such as those by Font et al. (2003), Buckley (2002), Jarvis et al. (2010), and Russo and Segre (2008).

Local specialty products are a general term for products that possess distinctive characteristics due to the natural conditions, people, and traditions of their place of origin (N. Le & T. Le, 2016). This concept is mentioned in various studies with different terms. For example, according to Tregear (2001), it is referred to as a “typical local product,” and Josling (2006) uses the term “Terroir.” Local specialty products are often collectively managed through collective trademarks, certification marks, or geographical indications, playing an essential role in the development of the local area (Matviichuk et al., 2023; Pato & Duque, 2023; Rangnekar, 2003) and tourism development (Bessière, 1998; Pamukçu et al., 2021; Russo & Segre, 2008).

The World Intellectual Property Organization (WIPO) defines “traditional knowledge” as literary, artistic, or scientific works, expressions, inventions, scientific discoveries, designs, symbols, names, and signs, secret information, and all other creative innovations or products of traditional intellectual activity in industrial, scientific, literary, or artistic fields (WIPO, 2001). Wendland (2006) suggests that traditional knowledge reflects the way of life of the local community or is recorded and transmitted from generation to generation, making it difficult to identify individuals who created that knowledge. The characteristics of traditional knowledge include being passed down from one generation to another through oral transmission or imitation, representing the community’s culture and social identity, being a specific part of the community’s cultural heritage, being created by anonymous authors or the community, not being created for commercial purposes, and being continuously developed and regenerated with the community. In addition to the term “traditional knowledge,” other terms used in some studies include indigenous knowledge, local knowledge, and folklore knowledge (Hai, 2021).

Folk culture refers to the creative products of multiple generations and the social community that reflect and define the history, culture, identity, and social values of that community (Le, 2016; N. Le &

T. Le, 2016; Hai, 2021). Folk culture is expressed through various forms such as songs, dances, music, folk poetry, proverbs, patterns, and designs on distinctive products. These are forms of intangible cultural heritage, and if widely recognized, they can also be considered a source of sustainable tourism resources (Kim et al., 2019).

Exploring the relationship between local intellectual property and the development of tourism activities is important for several reasons. First, tourism development relates to tourism resources, especially human tourism resources, in which local intellectual property contributes partially or entirely to these resources. In other words, local intellectual property is essential in attracting tourists. Conversely, with community participation, tourism development brings economic and social values to the local area, contributes to preserving natural and cultural heritage, improves the lives of the community and the owners of local intellectual property, and promotes tourism development (Le, 2016). In line with this viewpoint, Hai (2021) also suggests that local intellectual property creates differentiation and uniqueness for attracting international tourists to Vietnam. Tourism development is an essential element that creates value for local intellectual property. Therefore, the exploitation of local intellectual property in tourism is a direction for sustainable development, which preserves the cultural identity of each locality, resists the influence of external factors, and brings economic benefits to the local area.

Additionally, research on local intellectual property from the perspective of being the subject of intellectual property rights includes literary works, folk art, collective trademarks, certification marks, geographical indications, and their relationship with protection, exploitation, and the development of tourism activities. The competitive capacity of local tourism has been mentioned in many studies. Intellectual property rights, primarily when owned collectively, accelerate the process of creating tourism clusters, a particular organizational form beneficial to the tourism industry. Positive impacts related to these clusters can be reinforced by establishing collective trademarks. The intangible assets of an area, its social cohesion, can be promoted by introducing collective trademarks, as they represent intellectual proper-

ty rights that can be owned collectively by a specific community (Ghafele, 2011). Meanwhile, Zhong and Wang (2021) suggest that a proper intellectual property ownership strategy will promote the development of tourism brands in Chinese market. This can be achieved through proactive registration, timely opposition, adequate protection of trademarks, and the full use of geographical indications. Nanayakkara (2011) also believes that an intellectual property ownership system provides a structure and tools to protect, manage, exploit, and enforce rights arising from those intangible assets, thereby enhancing the competitiveness of the tourism industry. Russo and Segre (2008) propose that tourism development should be based on a system of collective intellectual property rights and their protection. The authors also propose the concept of “area labels,” based on the combination of quality control measures and the delimitation of functional areas of collective intellectual property rights, as the best tool to promote a quality-oriented strategic direction in the development of sustainable local tourism. Furthermore, Zuallcobley and Awang Nik (2020) suggest that protecting indigenous knowledge and cultural traditions will promote sustainable tourism in Malaysia. Promoting the development of the local brand is the most critical factor in tourism development (Parrott et al., 2002), as it constitutes the competitive capacity of the local tourism industry (Lorenzini et al., 2011).

In summary, exploring the relationship between local intellectual property and the development of tourism activities through the protection and exploitation of intellectual property rights can leverage their unique assets to create a sustainable and thriving tourism industry.

Exploring the relationship between local government support and people’s awareness to protecting and exploiting local intellectual property (IP) was mentioned in some studies. First, people are always the most critical resource in achieving the goal of effectively preserving and exploiting the values of local intellectual property. As humans are both the creators of intellectual property assets and the beneficiaries of the added value derived from those assets (N. Le & T. Le, 2016), the role of public awareness and the support of the local government is crucial in the conservation and development of local intellectual property. In this

regard, individuals, households, and individual businesses play a role as creators, commercialists, and promoters of the development and consumption of intellectual property. They are also responsible for raising community awareness about intellectual property, intellectual property rights, protection, and the preservation and development of local intellectual property.

Meanwhile, local government agencies play a role in establishing a legal framework, developing local intellectual property conservation and development strategies, and managing state-owned intellectual property. They provide advice and support in establishing and enforcing rights related to intellectual property and promote community awareness of intellectual property ownership (Le, 2016). Government support and policies that prioritize intellectual property protection can foster an environment conducive to innovation and creativity (Pisuke & Kelli, 2008). When individuals and businesses are aware of the value and benefits of protecting intellectual property, they are more likely to invest in research and development, create new products and services, and contribute to local economic growth (Chen & Puttitanun, 2005). By exploring the relationship between government support and public awareness, strategies can be formulated to incentivize innovation and support IP-driven industries, including those related to tourism.

In conclusion, by understanding the relationship between local government support, public awareness and protecting and exploiting local intellectual property, governments can formulate effective policies, education programs, and support mechanisms that foster a favorable environment for intellectual property rights and their utilization for the benefit of hospitality industry and society.

The study aims to provide empirical evidence to build a research model on the impact relationship between local intellectual assets and tourism development through local government support, public perception, and protection and exploitation of local intellectual assets.

Based on the analysis and evaluation of previous research works and the development of hypotheses, the following research model and hypotheses are proposed.

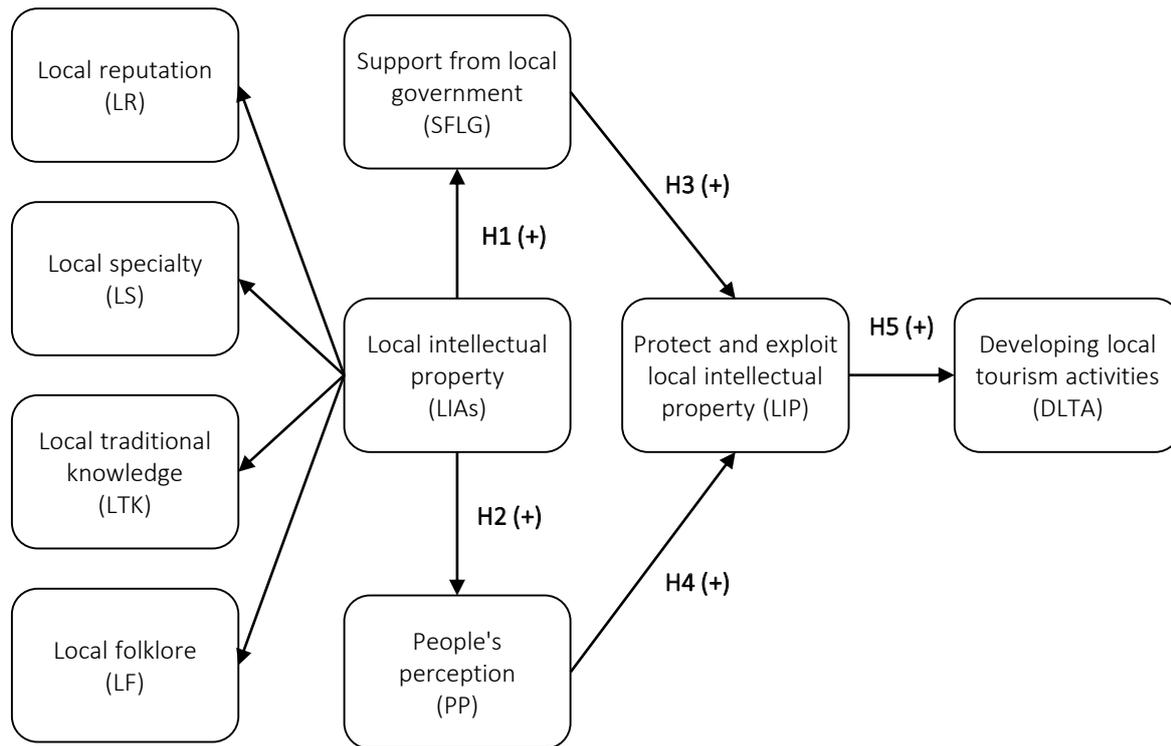


Figure 1. Research conceptual model and hypotheses

- H1: Local intellectual property positively affects the support of the local government.*
- H2: Local intellectual property has a positive impact on people's awareness.*
- H3: The support of the local government positively affects the protection and exploitation of local intellectual property.*
- H4: People's awareness positively affects the protection and exploitation of local intellectual property.*
- H5: Protection and exploitation of local intellectual property positively affect the development of local tourism activities.*

2. METHOD

To achieve the research objectives, the following design, construction of scales, and selection of specific samples were carried out.

Preliminary research and main research to test the constructed hypotheses (Figure 1) were con-

ducted. The interview subjects were individual business households and families engaged in providing unique products and services for tourists in several traditional craft villages and localities in three provinces in Central Vietnam: Quang Binh, Thua Thien Hue, and Quang Nam. The reason for selecting these three locations is that they are known for having four famous world cultural heritage sites: Phong Nha – Ke Bang, the ancient capital of Hue, Hoi An ancient town, and My Son Sanctuary. Additionally, they also possess two out of the 14 intangible cultural heritages recognized by UNESCO as of the present time. In the preliminary research, the authors conducted in-depth interviews and group discussions with high-ranking experts with extensive experience in intellectual property ownership, preservation, and development of craft village tourism. They also interviewed some households in major cities such as Da Nang, Hoi An, and Hue. The purpose of the preliminary research was to evaluate the content of the scales by examining how experts and individual business households described the concepts in the study, including local intellectual property and its constituent factors, protection and exploitation of local intellectual property, development of tourism activities, the supportive

role of the local government, and the perception of the people. Although the scales used in the study were inherited from previous research, the authors made modifications and used appropriate language suitable for the interview subjects, who were individual business households representing families engaged in business activities related to tourism in the localities.

According to the 2021 economic survey by the General Statistics Office of Vietnam, Central Vietnam currently has around 200 traditional craft villages that attract millions of domestic and international tourists each year to visit landmarks, experience, relax, and purchase local specialties. There are currently about 1.3 million individual business establishments operating in the fields of production, business, and services, of which 40% are related to tourism activities. In this study, based on information about traditional craft villages in three provinces of Central Vietnam, the research team contacted local management agencies to compile a list of family business households within the craft village area that engage in business activities related to local specialties and services for tourists. Based on a list of over 400 households recommended by local authorities, the research team used a convenient sampling method to select and conduct interviews with 350 households and establish a direct contact for exchange and interviews. The interviews took place from September 2022 to February 2023. The results included 300 individual households that agreed to participate in direct interviews and survey responses through question-

naires. After screening, verification, analysis, and evaluation, 296 questionnaires were retained for data analysis and processing. Comparing with the theories of sample selection for the study and the proposed structural equation modelling framework, it was found that the sample size of $n = 296$ ensured appropriateness. According to Hair (2009), the minimum sample size should be at least 5 times the total number of observations in the questionnaire ($5 \times 35 = 175$). For the structural equation modelling (SEM) analysis method, the appropriate sample size is usually large, with a minimum requirement of 200 (Hoelter, 1983). Detailed information about the sample of the study is presented in Table 1.

The study has inherited and developed the research findings from several previous studies related to measuring the relationship between local intellectual assets and the development of tourism activities, such as Josling (2006), Zhong and Wang (2021), Russo and Segre (2008), Buckley (2002), Zuallcobley and Awang Nik (2020), Le (2016), N. Le and T. Le (2016), Hai (2021), and the opinions of experts in the field of intellectual property, conservation, and tourism development. A 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) was used in this study to measure five key concepts: local intellectual assets, support from local authorities, residents' perception, protection and exploitation of local intellectual assets, and the development of local tourism activities. The details of the measurement scales are presented in Table 2.

Table 1. Descriptive statistics about the samples

Source: Author's survey, 2023.

Characteristics	Frequency	Percentage
Sex	N = 296	100
Male	128	43.2
Female	168	56.8
Age	N = 296	100
Under 25 years old	33	11.1
From 26 to under 35 years old	98	33.1
From 36 to under 45 years old	77	26.0
From 46 to under 55 years old	46	15.5
Over 55 years old	42	14.2
Monthly income	N = 296	100
Under 9 million VND	190	64.2
From 10 to under 15 million VND	75	25.3
From 16 to under 20 million VND	21	7.1
Over 20 million VND	10	3.4

Table 2. Measurement summary

Symbol	Scales	Sources
Local reputation (LR)		
LR1	Symbols and images associated with landmarks can create local geographic area brands	Buckley (2002), Parrott et al. (2002), Russo and Segre (2008), Matviichuk et al. (2023), Rangnekar (2003), Le (2016), N. Le and T. Le (2016), Hai (2021)
LR2	The reputation of a locality is reflected through the names associated with its buildings and architectural complexes	
LR3	The reputation of a locality is reflected through the names associated with its natural resources (natural landscapes)	
LR4	The reputation of a locality is demonstrated through certifications from organizations regarding the locality (UNESCO certification, national heritage sites, cultural heritage, etc.)	
LR5	The reputation and overall brand of a locality are known as a famous tourist destination	
Local specialty (LS)		
LS1	Traditional handmade local products	Josling (2006), Matviichuk et al. (2023), Rangnekar (2003), Le (2016), N. Le and T. Le (2016)
LS2	Local specialty cuisine	
LS3	Unique souvenirs, with their own distinctive characteristics.	
LS4	All products have collective brands, specific certification labels, and clear geographical indications	
Local traditional knowledge (LTK)		
LTK1	The existence of traditional craft villages, artisans, and community leaders	Zuallcoble and Awang Nik (2020), Pato and Duque (2023), Matviichuk et al. (2023), Le (2016), N. Le and T. Le (2016), Hai (2021)
LTK2	The understanding of local people about history and traditions	
LTK3	The sharing and transmission of experiences, secrets, and knowledge from one generation to another within the community	
LTK4	Knowledge of artistic creativity, social etiquette, and community management (legends, epics, poetry, songs, music, oral history, proverbs, folklore, jokes, beliefs, fairy tales, storytelling, customs, festivals, etc.)	
LTK5	Knowledge of human beings and the sustainable utilization of natural resources and the environment (agricultural practices, hunting methods, processing techniques, traditional medicine, etc.)	
Local folklore (LF)		
LF1	Cultural festivals organized locally	Zuallcoble and Awang Nik (2020), Pato and Duque (2023), Matviichuk et al. (2023), Rangnekar (2003)
LF2	Local customs, traditions, religious beliefs, and folklore	
LF3	Diverse and captivating artistic and performance programs	
LF4	Intangible cultural heritage recognized by international and national organizations	
Support from local government (SFLG)		
SFLG1	Issuing regulations, guidelines, and procedures for the exploitation, conservation, and promotion of the value of local intellectual assets	Le (2016), N. Le and T. Le (2016), Hai (2021)
SFLG2	Engaging in direct management (through the roles of Heritage Management Boards or People's Committees at various levels) or indirect management (through craft villages or businesses) in the exploitation of the value of local intellectual assets	
SFLG3	Establishing a system for controlling local products bearing collective trademarks, specific certification marks, and geographical indications	
SFLG4	Implementing promotional campaigns, providing support to local residents and craft villages in protecting local intellectual property rights	
People's perception (PP)		
PP1	Demonstrating an understanding of the significance of collective trademarks, specific certification marks, and geographical indications of unique products in the local area.	Le (2016), N. Le and T. Le (2016), Hai (2021)
PP2	Demonstrating creative thinking to create destination brands based on local intellectual assets	
PP3	Demonstrating an understanding of intellectual property rights	
PP4	Demonstrating involvement in the management, exploitation, protection, and development of local intellectual property	
Protect and exploit local intellectual property (LIP)		
LIP1	Identifying the priority local intellectual property assets to be protected, exploited, and developed	Zhong and Wang (2021), Le (2016), N. Le and T. Le (2016), Hai (2021)
LIP2	Carrying out intellectual property protection procedures effectively helps safeguard and efficiently exploit the value of local intellectual property assets	
LIP3	Developing activities that generate value from local intellectual property assets to maximize benefits for the community and society (such as promotion, building value chains for protected intellectual property products...)	
LIP4	Utilize and appropriately utilize intellectual property assets associated with cultural and natural resources to serve the local economic objectives and social development	

Table 2 (cont.). Measurement summary

Symbol	Scales	Sources
Developing local tourism activities (DLTA)		
DLTA1	Develop orientations and strategies to protect and enhance the value of local intellectual property assets associated with tourism activities	Zhong and Wang (2021), Parrott et al. (2002), Le (2016), N. Le and T. Le (2016), Hai (2021)
DLTA2	Create new local tourism products based on the unique intellectual property assets	
DLTA3	Diversify the management, exploitation, protection, and development models of local intellectual property assets associated with tourism activities	
DLTA4	Improve policies related to intellectual property rights and the development of tourism activities in the local exploitation of intellectual property assets	
DLTA5	Enhance customer satisfaction with owning or experiencing local intellectual property assets	

3. RESULTS

The study utilized a multivariate analysis approach in a multi-step process. Firstly, CFA (Confirmatory Factor Analysis) and SEM (Structural Equation

Modeling) were employed to evaluate the measurement model and the statistical significance of the hypothesized relationships (causal intermediary) within the proposed structural model using AMOS 23 software. The measurement of concepts

Table 3. Descriptive statistics, internal reliability and convergent reliability

Source: SPSS output, 2023.

Constructs	Items	Factor Loading	Mean	CA	C.R	AVE
Local reputation (LR)	LR1	0.890	3.4824	0.911	0.972	0.874
	LR2	0.921				
	LR3	0.893				
	LF4	0.966				
	LF5	1.000				
Local specialty (LS)	LS1	1.000	3.7086	0.893	0.889	0.674
	LS2	0.686				
	LS3	0.659				
	LS4	0.890				
Local traditional knowledge (LTK)	LTK1	0.989	4.0392	0.935	0.986	0.932
	LTK2	1.023				
	LTK3	0.941				
	LTK4	1.000				
	LTK5	0.867				
Local folklore (LF)	LF1	1.000	3.5921	0.854	0.873	0.639
	LF2	0.707				
	LF3	0.622				
	LF4	0.818				
Support from local government (SFLG)	SFLG1	1.054	3.9054	0.823	0.993	0.974
	SFLG2	0.927				
	SFLG3	0.962				
	SFLG4	1.000				
People's perception (PP)	PP1	1.000	3.8471	0.921	0.944	0.808
	PP2	0.880				
	PP3	0.870				
	PP4	0.838				
Protect and exploit local intellectual property (LIP)	LIP1	1.000	4.3480	0.947	0.994	0.975
	LIP2	0.959				
	LIP3	0.944				
	LIP4	1.043				
Developing local tourism activities (DLTA)	DLTA1	0.920	4.1304	0.916	0.953	0.803
	PTDL2	1.000				
	DLTA3	0.855				
	DLTA4	0.816				
	DLTA5	0.878				

Note: CA: Cronbach's Alpha; CR: Composite Reliability; AVE: Average Variance Extracted.

in the model utilized the method of observed variable replication. Additionally, bootstrapping with 1000 resamples drawn with replacement from the original sample at a significance level of 0.05 was used to retest the relationships among variables in the model.

According to the values in Table 3, the range of composite reliability (CA) values is between 0.823 and 0.947, and the range of critical ratios (C.R) is between 0.873 and 0.994. All values are higher than 0.6, indicating that the measurement scales used in the study demonstrate adequate reliability and internal consistency of the latent variables (Hair, 2009). Moreover, the measurement scales also exhibit convergent validity as indicated by the factor loadings, all of which are above 0.5, and the average variance extracted (AVE) values, which range from 0.674 to 0.975 and exceed the threshold of 0.5 (Hair, 2009). Additionally, referring to Table 4, the square root of the AVE values, ranging from

0.799 to 0.987, are all greater than 0.7, indicating discriminant validity among the concepts in the model (Fornell & Larcker, 1981).

Therefore, based on the results from Tables 3 and 4, it can be concluded that the research data exhibit one-dimensionality, reliability, discriminant validity, and convergent validity.

The results of the CFA factor analysis presented in Table 5 indicate that the model is suitable for the market data.

3.1. Hypothesis test – SEM model

The indices in the model shown in Figure 2 demonstrate the compatibility of the data with the market and are deemed acceptable (Chi-square = 845.769; Chi-square/df = 1.546 < 2; GFI = 0.867 > 0.8; TLI = 0.960 > 0.9; CFI = 0.963 > 0.9; RMSEA = 0.043 < 0.08). Based on the results in Table 6, all 5 out of 5 initial proposed hypotheses are accepted.

Table 4. Discriminant reliability

Source: SPSS output, 2023.

Constructs	DT	DS	TT	VH	NTND	PTDL	CQDP	BHKT
LR	0.934	0.150	0.210	0.250	0.325	0.216	0.358	0.484
LS	0.150	0.820	0.041	0.362	0.034	0.029	0.339	0.175
LTK	0.210	0.041	0.965	0.149	0.312	0.269	0.314	0.547
LF	0.250	0.362	0.149	0.799	0.177	-0.053	0.226	0.182
PP	0.325	0.034	0.312	0.177	0.898	0.177	0.356	0.473
DLTA	0.216	0.029	0.269	-0.053	0.177	0.896	0.350	0.522
SFLG	0.358	0.339	0.314	0.226	0.356	0.350	0.986	0.539
LIP	0.484	0.175	0.547	0.182	0.473	0.522	0.539	0.987

Note: The bold and italic figures are the square root of AVE for the constructs.

Table 5. Fit indices

Source: AMOS output, 2021.

Fit Indices	Chi-squared/df	GFI	CFI	TLI	RMSEA	P value
Measurement model	1.442	0.874	0.970	0.967	0.039	0.000
Satisfactory level	< 2	> 0.8	> 0.9	> 0.9	< 0.08	0.000
Sources	Hair (2009)					

Table 6. Structural equation modeling analysis results

Source: AMOS output, 2023.

Path	Hypothesis	Estimate	S.E.	C.R.	P	Decision on Hypothesis
LIAs → PP	H2	1.078	0.181	5.969	***	Accepted
LIAs → SFLG	H1	0.676	0.110	6.142	***	Accepted
PP → LIP	H4	0.238	0.047	5.027	***	Accepted
SFLG → LIP	H3	1.079	0.132	8.158	***	Accepted
LIP → DLTA	H5	0.584	0.060	9.747	***	Accepted

Note: *** p < 0.01.

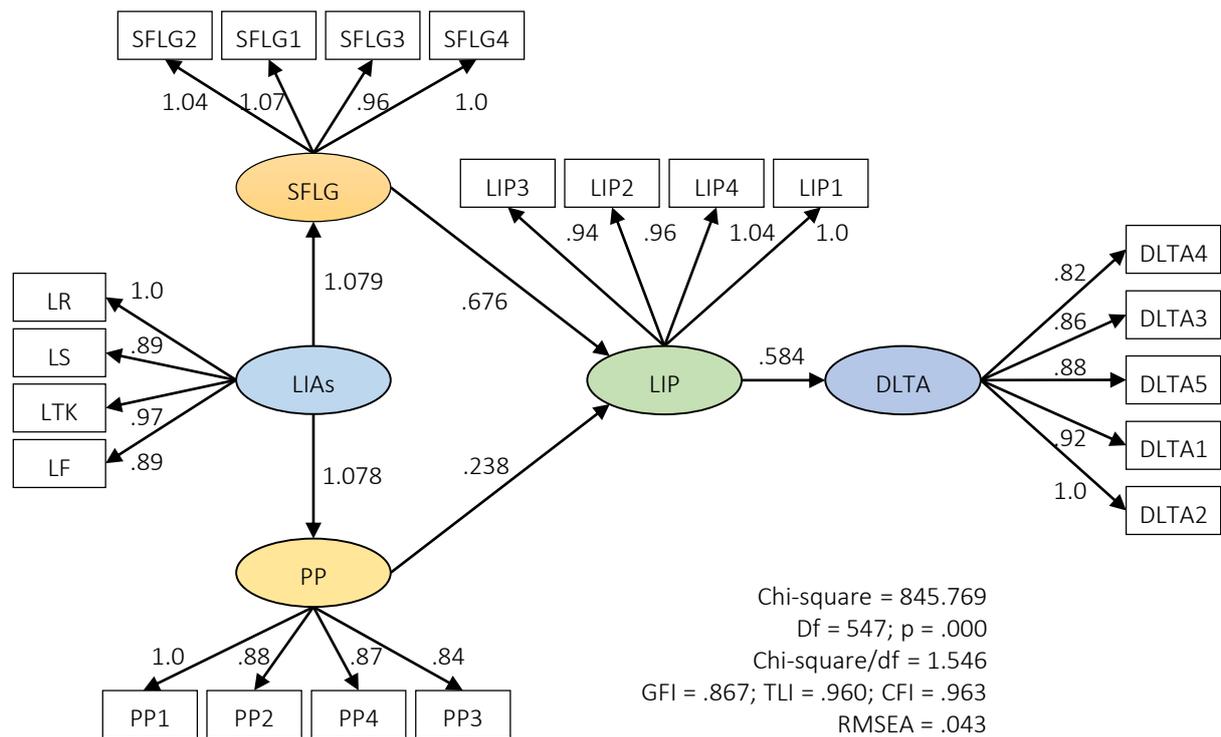


Figure 2. SEM testing

The results from the Bootstrap analysis method with 1,000 samples in Table 7 have indicated both the direct and indirect relationships among the factors in the model. Specifically, TSTT has a direct impact on the support of local authorities and the perception of local residents (LIAs → PP with $\beta = 1.078$, p-value = 0.000 < 0.05; LIAs → SFLG with $\beta = 0.676$, p-value = 0.000 < 0.05). The support of local authorities and the perception of local residents have a direct impact on the protection and exploitation of natural and cultural tourism resources (PP → LIP with $\beta = 0.238$, p-value = 0.000 < 0.05; SFLG → LIP with

$\beta = 1.079$, p-value = 0.000 < 0.05; PP → LIP → DLTA with $\beta = 0.154$, p-value = 0.001 < 0.05; SFLG → LIP → DLTA with $\beta = 0.311$, p-value = 0.002 < 0.05). The research results also demonstrate that the protection and exploitation of natural and cultural tourism resources directly impact the development of tourism activities (LIP → DLTA with $\beta = 0.584$, p-value = 0.000 < 0.05). Additionally, considering the overall relationship, LIAs has an indirect impact on the development of tourism activities through intermediate variables (LIAs → DLTA with $\beta = 0.323$, p-value = 0.000 < 0.05).

Table 7. Summary of effect decomposition

Source: AMOS output, 2023.

Dependent variable	Type of effect	LIAs	SFLG	PP	LIP
LIP	Direct effect	–	1.079**	.238**	–
	Indirect effect	.571*	–	–	–
	Total effect	.571*	1.079**	.238**	–
DLTA	Direct effect	–	–	–	.584**
	Indirect effect	.323**	.311**	.154*	–
	Total effect	.323**	.311**	.154*	.584**

Note: Significance level: * p < 0.05, ** p < 0.01.

4. DISCUSSION

This study applied the Structural Equation Modeling (SEM) to examine the relationship between local intellectual assets and the development of tourism activities at the local level, through the mediating roles of residents' perception, local government support, protection, and exploitation of local intellectual assets within individual businesses in traditional craft villages and famous tourist destinations in the Central provinces of Vietnam. Despite some existing studies on this issue in the Vietnamese market, most of them have been qualitative studies and did not specifically target the direct subjects, namely individual businesses and families directly involved in the production of local products and services.

The study found that local intellectual assets, through reputation and brands certified by reputable organizations (such as UNESCO) or national certifications for traditional craft villages, local specialties, traditional knowledge, and folklore, have a significant impact on the development of tourism activities. This relationship is consistent with previous qualitative studies conducted by other authors in Vietnam, such as Le (2016), N. Le and T. Le (2016), Hai (2021), as well as studies in other countries, such as Zhong and Wang (2021) in China, Zuallocobley and Awang Nik (2020) in Malaysia, Ncube (2011) in South Africa, and Punchihewa (2021) in Sri Lanka. This indicates that sustainable tourism activities and sustainable tourism development must be based on the foundation of local intellectual assets, including natural resources and cultural resources.

Furthermore, the study also highlighted the importance of the protection and exploitation of local intellectual assets in promoting sustainable tourism. This includes enhancing intellectual property rights for trademarks, collective marks, and geographical indications, along with the conservation of traditional knowledge and folklore. These findings are consistent with the perspective of enhancing competitive capacity in tourism activities, ensuring sustainable tourism and ecotourism, as indicated by various authors such as Font et al. (2003), Buckley (2002), Jarvis et al. (2010), Russo and Segre (2008), Lorenzini et al. (2011), Le (2016), N. Le and T. Le (2016), and Hai (2021). The study also provid-

ed empirical evidence that the protection and exploitation of local intellectual assets are influenced by and affect multiple stakeholders, with the most important being the support of local governments and the perception of residents in traditional craft villages and famous tourist destinations.

Based on the findings of this study, the study suggests that from a policy perspective, government agencies in developing countries like Vietnam need to review and compare legal regulations on intellectual property and tourism laws to officially recognize the concept of local intellectual assets. Protecting intellectual property rights for local intellectual assets is crucial to ensure the sustainable development of tourism and the overall local economy. Local authorities should also implement measures to enhance support for individual businesses, cooperatives, and families in traditional craft villages, as well as residents in tourist destinations, by promoting the registration and protection of product trademarks, collective marks, and geographical indications. This will contribute to improving the reputation and brand of the local area. Additionally, businesses, families, and residents themselves need to enhance their knowledge of intellectual property and have a clear understanding of the importance of protecting local specialties, traditional knowledge, and folklore as a means of ensuring their livelihoods and sustainable business operations in the tourism supply chain.

It is important to note that this study has some limitations. The research was constrained by time and cost, and the study selected a convenience sample of individual businesses in three provinces in the Central region of Vietnam, which may not fully represent the broader population. The research model only included a limited number of fundamental factors and did not consider the impact indicators from market dynamics or psychological and behavioral factors of tourists towards local intellectual assets and their relationship with tourism development at the destination. The model also did not delve into the analysis of the impact relationship of control variables.

Future research should include a larger and more diverse sample of businesses from different regions of Vietnam, a more comprehensive understanding of the relationship between local govern-

ment support, public awareness, and the protection and exploitation of local intellectual property can be obtained. Next, future research could incorporate market dynamics and psychological and behavioral factors of tourists to gain a more comprehensive understanding of the impact of local intellectual assets on tourism development. Besides, future studies can include industry char-

acteristics, firm size, technological infrastructure, and regional socio-economic conditions may significantly influence the outcomes and should be considered in the research model. Finally, conducting longitudinal and comparative studies can help identify best practices, policy variations, and cultural factors that influence the relationship, providing a broader understanding of the topic.

CONCLUSIONS

This study aims to explore the impact of local intellectual assets on the development of local tourism activities through intermediaries such as the protection and exploitation of local intellectual assets, the support of local authorities, and the awareness of residents in traditional craft villages and famous tourist destinations. The findings confirm that local intellectual assets are a complex concept with constituent factors that influence the development of tourism activities through intermediaries such as the protection and exploitation of intellectual property rights for local intellectual assets, the support of local authorities, and the awareness of the local population. The discovery of this study is that the experimental model and proposed scale will serve as a basis for further research. In addition, the results of the study contribute to providing more evidence that in order to develop tourism activities in a sustainable and safe way, special attention must be paid to enhancing the value of local intellectual property. In which, perfecting the legal system on intellectual property protection, raising awareness from the population, and increasing the support of local authorities are positive measures for implementation.

AUTHOR CONTRIBUTIONS

Conceptualization: Long Tran Viet, Hai Phan Thanh.

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