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Role of Co-Creative Services, Smart Tourism Services, and Smart Destination Images to Travelers' Intention to Revisit

Son Le Thai[1*], Tu Nguyen Thanh[2]

[1,2]Viet Nam Aviation Academy, Business & Administration, Ho Chi Minh city, Viet Nam; sonphoto@gmail.com (S.L.T.) tunt@vaa.edu.vn (T.N.T.).

Abstract. This research investigates the impact of smart tourism services (STSs) platforms on smart tourism destination image and tourists' revisit intention. Based on the Stimulus-Organism-Response (SOR) theoretical, this study proposes a theoretical model to examine these relationships. Data collected from 300 tourists visiting Ho Chi Minh City in April 2024. Three factors transportation, accommodations, and shopping services have a positive impact on co-creative services, and then on smart tourism destination image, and infrastructure, enjoyment, and value for money have a strong effect on revisit intention. Theoretical and practical implications are discussed, then future research is suggested.

Keywords: Attractiveness, Co-creative, enjoyment, intention to revisit, Smart Tourism Services, Smart Tourism destination images, Value.

1. INTRODUCTION

The concept of Smart Tourism Service (STS), a key element within the smart tourism ecosystem, is gaining significant research attention (Chuang, 2023). Smart tourism service emerges from "smart system" initiatives tailored specifically to the tourism sector or destinations (Xiang et al., 2021). The smart tourism service mechanism is designed to address the demand for tourism services while considering the characteristics of users (Feng et al., (2014). The goal of STS is to enhance convenience by providing an accessible platform that supports tourists' decision-making, leveraging technological advancements (Gretzel et al., 2015b). Therefore, STS platforms such as smart tourism mobile applications or websites allow tourists to access integrated service recommendations within a cohesive smart environment, enriching their experience by offering destination-related information and real-time tourist status updates (Choe & Fesenmaier, 2017). The platform must also cater to the personalized needs of tourists, requiring coordination between tourism authorities and service providers (Gretzel et al., 2015). As a result, tourists can explore new information, enjoy tailored services, and engage in value co-creative through interactions with other stakeholders within the smart tourism ecosystem. This dynamic enables tourists to collaborate with service providers in co-creating their experiences, sharing insights, foresting innovation, and increasing the likelihood of returning for future travels (Gretzel et al., 2015b).

Destination image plays a significant role in influencing tourists' choice of destination and their intention to return. Enhancing the overall image of a destination through smart tourism services can foster a positive perception, thereby increasing tourist satisfaction, revisit intentions, and the likelihood of recommendations (Chuang et al. (2019). A smart tourism destination image is knowledge-based, where information and communication technology (ICT) serves as a platform for the instantaneous exchange of tourism related information and knowledge (Zhang et al., 2018). Wang et al. (2020) developed an AI framework to analyze online destination images, aiming to better understand the projected image of destinations and improve the tourism experience. Tavitiyaman et al. (2021) explored how travelers' perceptions of smart tourism application attributes to influence their perceived image of a destination, thus enhancing future behavioral intentions. While numerous studies have examined smart tourism services (STS) to improve the tourism experience, many focus primarily on describing smart tourism technologies (STT). Few studies, however, have investigated the impact of STS on tourists' intention to revisit, especially in relation to the images of smart tourism destination. As such, this study aims to explore and assess the key component of STS, co-creative services, and smart tourism destination images, with the goal of improving tourists satisfaction and increasing revisit intentions (Kim, 2018; Carbonell & Escudero, 2015).

This paper adapts Chuang's (2023) conceptual framework of STS platform to develop potential smart service measures for a new tourism destination, integrating value co-creation services between tourists and services providers based on travel behavior when utilizing smart services (Edeh et al.,2022). First, the paper explores the nature of STS and examines the connection between Service-Dominant (S-D) logic, tourism value co-creation services, and smart tourism destinations. It then outlines the core service elements of smart tourism within the broader ecosystem and present the conceptual foundation of STS platform. Regarding the research methodology, the paper report on a series of studies designed to explore the STS scale platform is shown to align well with key technology-driven characteristics, and sustainable values derived from tourism behavior are identified. Finally, the paper concludes by offering both theoretical and managerial implications.

* Correspondence: sonphoto@gmail.com

2. LITERATURE REVIEW

2.1. Smart services

Smart services are digital solutions that respond to data collected and analyzed through intelligent technical systems and interconnected platforms, offering cross-functional capabilities. These services are provided based on data analysis performed by various entities, which can include different stakeholders at a destinations, functioning as interconnected players within a network. The core of smart services lies in the rich data related to specific domains of life or work, with the primary aim of delivering value to customers.

Smart tourism services (STS) encompass a wide range of applications, including smart tourism information system and the Internet of Things (IoT). These services leverage technologies such as cloud computing, ubiquitous Wi-Fi connectivity, Virtual Reality (VR), Augmented Reality (AR), mobile apps, intergrated payment system, smart cards, and social networking platforms (Gretzel et al., 2015; Huang et al., 2017; Wang et al., 2013). The goal of STS is to enhance the value of the products and services offered to tourist, encouraging repeat visits to the destination in the future.

2.2. Smart Tourism Service System

Smart service systems can be considered as structured models designed to leverage new technology for service delivery. These systems facilitate real-time relationships and accelerates the learning process, with the aim of fostering innovation through continuous improvement, knowledge exchanges, and relationship development, ultimately driving long-term renewal (Barile & Polese, 2010).

The STS comes from the "smart system" initiatives that intergate smart services with applications tailored specifically to the tourism sector or destinations (Xiang et al., 2021). The goal of the STS is to offer both convenience and accuracy through an easily accessible platform, leveraging technological advancements (Gretzel et al., 2015b). STS platforms such as smart travel apps or websites, enables tourists to seamlessly access services within a smart environment, enhancing their travel experience in the context of modern tourism (Choe & Fesenmaier, 2017). These platform combine tourism-related services with modern technology to provide tourists with valuable information and support them with renting vehicles, hotel booking, or selecting restaurants. Li et al. (2017) emphasized the critical role of technology in enhancing the overall tourism experience for travelers.

Information and communication technology used at smart tourist destinations is often considered to as smart hardware. According to Buhalis (2015), these technologies enable the integration of process that allow people to interact and connect, foresting co-creation values that adapt to the context of existing tourism. Smart hardware, by itself, has no strength and does nothing. Only when technology is integrated with humans, structures, and social organizations, these functions can be performed (Geels, 2002, p.1257). To enhance destination images, the inclusion of soft intelligence, derived from soft infrastructure, is essential to give intelligence its full meaning. As such, smart tourism service systems focus on connecting users to a variety of online booking services and sector-specific services at a destination, including attractions (Wang et al., 2016), transportation (Gonzalez et al., 2020), accommodation (Stankova et al., 2019), food and beverage services and shopping (Flavián et al., 2020). When developing STS, the services and interactions that connects local organizations with tourists are crucial to meeting individual needs. Coordination between tourism management agencies and service providers is key to this process (Gretzel et al., 2015). As a result, tourists can discover new ways to find information, enjoy available services, and potential engage in value co-creating their experiences, leading to innovation (Gretzel et al., 2015). Technology-enabled services have become increasingly important in tourism research, especially in relation to value co-creation for sustainability.

Our society is now being shaped by technological advances that enhance the connectivity between service providers, tourism associations, destinations, and consumers. As a result, companies are adopting open information systems and technology platforms to manage their dynamic business models and deliver smart services. When providing innovative services to tourists, companies must consider using intangible resources such as data, technology, and infrastructure in the tourism environment (Barile et al., 2017) to optimize the tourist experience and encourage repeat visits. Chuang (2023) identified key service elements of smart tourism, including destination attractiveness, transportation convenience, accommodation, dining, smart shopping, and payment options. Mathis et al. (2016) emphasize the importance of memorable travel experiences as a key service element. These elements are interconnected and serve as potential dimensions of the STS scale. In smart tourism, technology is a central element, acting not only as a basic information system but also as a comprehensive infrastructure. It includes a range of intelligent computing technologies that integrate hardware, software, and network components. These technologies provide real-time awareness of the physical world and advanced analytics, allowing individuals to make more informed decisions about their choices and actions at the destination.

2.3. Smart Tourism Destination Image

The concept of smart tourism destinations is continually evolving based on previous studies. It is now viewed as a knowledge-based destination, where information and communication technology (ICT) operates as a technological platform that enables the instant exchange of tourism-related information and knowledge. (Zhang et al., 2012). According to Buhalis and Amaranggana (2014), ICT tools are crucial for establishing smart tourism

destinations, such as Cloud Computing and Internet of Things (IoT) which are designed to provide a convenient way to access a solid web platform and store data through a certain network. The integration of IoT in the tourism sector allows tourists to effortlessly use their mobile phones to discover popular destinations while collecting and sharing data in real-time (Buhalis & Amaranggana, 2015). New technologies will enhance communication and collaboration between tourists and destination stakeholders, helping achieve shared goals: delivering high-quality tourism experiences and successful business outcomes for destination stakeholders. Bringing intelligence to tourism destinations can also facilitate the integration of production and consumption while strengthening the link between suppliers and consumers.

Many authors have studied the measurement of tourist destination images using different approaches based on the actual context of the destination. In an attempt to measure destination images for Australian and New Zealand cities, Chalip et al. (2003) developed a destination image scale consisting of 40 items on nine cognitive factors: (1) developed environment; (2) natural environment; (3) value; (4) visiting opportunities; (5) risk; (6) novelty; (7) climate; (8) convenience; and (9) family environment. Fakeye and Crompton (1991) conducted a study on how a destination image of the Lower Rio Grande Valley is formed in the minds of tourists including (1) social opportunities and attractions; (2) natural and cultural amenities; (3) accommodation, transportation, and infrastructure; (4) food and friendly people; and (5) bars and evening entertainment. In addition, most studies focus on the cognitive aspect of tourists: the measurement scale of Obenour et al. (2005) has six cognitive dimensions; the measurement scale of Hui and Wan (2003) has eight cognitive dimensions.

2.4. Co-Creation Concept in Smart Tourism Service

Co-creation in the service context refers to the active involvement of customers in the design, development, and delivery of a service, allowing them to shape their experience through direct interaction with the service provider or through a technology platform (Prahalad & Ramaswamy, 2004). In the context of smart tourism services, co-creation is further enhanced by advanced technologies such as IoT, AI, and Big Data, which provide real-time data and enable personalized experiences. These smart services often integrate customer-generated data—such as preferences and behaviors—into automated systems that adapt to individual needs, resulting in a more customized and personalized service experience (Vargo & Lusch, 2008).

3. BACKGROUND THEORETICAL AND RESEARCH MODEL

3.1. Stimulus-Organism-Respond Theory (SOR Theory)

The Stimulus-Organism-Response (SOR) framework, which originates from environmental psychology, proposes that external stimuli can influence an individual's internal state. This internal state triggers either an approach or avoidance response (response) (Mehrabian & Russell, 1974). This model is valuable in tourism research as it helps us understand how tourists perceive, feel, and experience external stimuli, and how those experiences translate into their behavior (Manthiou et al., 2017).

The SOR theory includes several essential aspects including the smart tourism service ecosystem to explain tourists' perception of the smart tourism destination image and the resulting response, such as the desire to revisit the destination. Therefore, user feedback is essential for tailoring applications to meet the specific needs of tourists visiting smart tourism destinations.

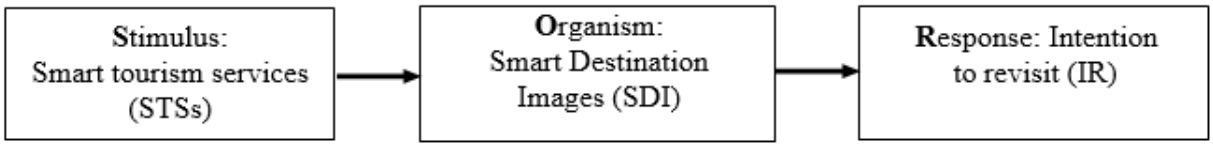

Figure 1: Research framework

In tourism, social stimuli refer to the interactions between tourists and the surrounding society. These include factors that capture tourists' attention, such as appealing attractions (Wang et al., 2016), smart transportation system (Gonzalez et al., 2020), accommodations, cuisine, and shopping options (Flavián et al., 2020). Such interaction shape tourists' behavior and perceptions of themselves and others (Kucukergin & Meydan Uygur, 2019; Kumar et al., 2021). When tourists encounter positive social stimuli at a destination, they are likely to perceive the location as valuable and trustworthy (Gharaibeh et al., 2018), which can enhance their overall travel experience (Ronaghi & Ronaghi, 2022). Environmental stimuli, on the other hand, consist of natural and infrastructural elements like landscapes, air quality, sightseeing opportunities, and transportation to hotel, resorts, restaurants, or shopping areas supported by smart services. These environmental factors either positively or negatively impact tourist behavior, help bridge cultural differences, and enhance understanding of local culture, thus improving the tourist experience. Cultural stimuli encompass co-creative activities, such as interactions with staff at accommodations, dining experiences, and sharing moments on social media (Zhang et al., 2019). These elements play a key role in shaping the perceived appeal of a destination. STSE systems provide tourists with immersive cultural experiences, like visiting historical sites, attending cultural festivals, or sampling local cuisine through AR, VR, and 3D/360⁰ video platforms. By understanding and leveraging these unique

cultural stimuli, tourism service providers can tailor their offerings to attract specific target audiences and enhance the perceived value of a destination.

According to the SOR framework, the research model framework Figure 1 of this study is established by considering STSE as the stimulus (S), Smart tourism destination image as the outcome (O) and revisit intention as the response (R).

3.2. Service-Dominant Logic (SDL)

From a service-oriented perspective, S-D logic emphasizes three core concepts: (1) service and the relationship between goods and services; (2) customer-provider relationship; and (3) value. According to Vargo and Lusch (2004, 2008), S-D logic component include cloud services (e.g., convenient and scalable access to applications, software, and data via a web browser), the Internet of Things, and end-user Internet services like personal payment systems, wireless connectivity, and touch screens for service exchanges. Smart tourism services, view through the SDL framework, encompass several categories such as smart information systems, smart tourism management, smart sightseeing, e-commerce system, smart transportation, and smart forecasting (Wang et al., 2016). Smart information system include services like free Wi-Fi, QR codes, and mobile applications; Smart tourism management focuses on guiding tourists' browsing behaviors and assisting with travel planning; Smart sightseeing refers to digital guides and maps; E-commerce system include point-of-sale systems and payment methods like PayPal; Smart transportation provides information on road traffic, including services like e-taxis and traffic management systems; and smart forecasting offers traffic predictions and queue times (Wang et al., 2016). Smart service systems are deployed in various sectors, including healthcare and tourism, to deliver intelligent services that support tourism co-creation and enhance the image of smart tourism destinations.

3.3. Co-Creative Theory

Co-creative is a process of participation, collaboration, and simultaneous existence, where peers work together to generate new value, both material and symbolic. The distinction between co-creative and co-production remain a topic of ongoing debate in the literature. In this study, we view co-creation as a broader concept that encompasses all the specific theoretical and empirical instances in which firms and customers generated value through interaction (Vargo and Lusch, 2008).

From the co-creative perspective on destination image construction, various stakeholders - such as tourists, trip planners, and local residents - combine their resources to collaboratively shape destination images (Vargo and Lusch, 2008). These resources, which can be both tangible and intangible, include ideas, brand knowledge, creativity-driven destination imagery, and destination-related information. These resources are accessible to multiple actors, allowing them to co-create relevant value propositions for the destination. Such interactions may occur between tourists and residents, between tourists themselves, or between tourists and services providers like accommodations, restaurants, event venues, transportation services, and travel intermediaries. It can also involve coordinating the complex relationships among destinations, government agencies, tourists, travel companies, and other entities. Thus, the network of actors at the destination level can be seen at various levels of aggregation.

3.4. Hyphothesis and Research Model

* The Role of Co-Creative services in Smart Tourism Service Systems

Co-creation services are a fundamental outcome of resource integration, which involves changes in the resources that actors possess before undergoing integration. As such, co-creation services play a crucial role in the implementation of smart tourism services (Hilton et al., 2012). Furthermore, the distinct characteristics of smart tourism services, which are enabled by advanced technology platform, have greatly enhanced opportunities for co-creation in tourism, facilitating interactive experiences between organizations and individuals engaged in service encounters (Casais et al., 2020). Specifically, tourists gather and use information on various aspects such as weather, queue times, tourist flows, traffic, parking, public transportation, electronic maps, hotels, food prices, and purchases. This information enables them to plan itineraries, make booking, pay, and share their experiences with other system users. According to Li and Zhang (2022), the ICT functions within the STS platform encompass service processes, applications, and users. As customer skills and behaviors are transformed into value creation for companies, a co-creative mechanism is established (Wang et al., 2016). Today, tourists increasingly rely on smart tools for travel, driven bt their attitudes and intentions regarding technology use. The motivation to engage with smart tourism services is not limited to utilitarian values, such as ease of use, but also includes hedonic values like enjoyment and fun. Through their engagement with smart tourism services, tourists participate in co-creation behaviors. As their involvement in the service process increases, they are more likely to develop trust and loyalty towards brands that offer personalized services through co-creation (Frow et al., 2016). From the above discussions, the following hypotheses are proposed:

Hypothesis 1a: Smart shopping services have a positive impact on smart co-creative services.

Hypothesis 1b: Smart attraction services have a positive impact on smart co-creative services.

Hypothesis 1c: Smart transportation services have a positive impact on smart co-creative services.

Hypothesis 1d: Smart accommodation services have a positive impact on smart co-creative services.
Hypothesis 1e: Smart food services have a positive impact on smart co-creative services.

** Relationship between co-creative services and tourism destination image*

The study by Buonincontri & Micera (2016) confirmed the cyclical effects of behavioral intention and its influence on shaping the image of a smart tourism destination. A positive relationship exists between behavioral intention and evolving modern service consumption patterns. Tourists' involvement in co-creative services can significantly enhanced the image of smart tourism destinations, particularly those utilizing IoT and Internet of Things service platforms. Lam et al. (2020) found a strong positive connection between co-creative experience and both cognitive and affective image of tourism destinations. Research by Marques and Borba (2017) highlighted how digital technologies can play a key role in co-creating and revitalizing a destination's physical and socio-cultural structures through processes involving various stakeholders.

Mijnheer and Gamble (2019) also identified a positive relationship between co-creative and destination attractiveness. When tourists co-create with local stakeholders, they enhance the destination's image, making tourists feel more satisfied because they have contributed meaningfully to the experience. Erislan (2017) found that a destination's attractiveness encourages greater tourist participation in value co-creation, helping integrate the destination's unique attraction and resources. Based on these findings, tourist participation in developing a destination's image through co-creation can be summarized in three key points. First, the destination image must effectively and consistently communicate its value so that potential tourists' expectations align with their actual experiences. Second, tourists should actively engage in the process of creating and refining the destination image, reflecting what they expect to experience. Finally, to develop a cohesive branding strategy, destination management should involve tourists at each stage of their journey.

Co-creation enables local communities and businesses to contribute to tourism offerings, creating diverse and authentic experiences that enhance the destination's image. As tourists become co-creators, the destination's image becomes more authentic, transparent and participatory, often leading to stronger and more positive public perceptions.

From the above discussion, the following hypotheses are developed:

Hypothesis 2a : Smart Co-creative services have a positive impact on destination infrastructure.
Hypothesis 2b : Smart Co-creative services have a positive impact on smart destination attractiveness.

** Relationship between smart tourism destination image and tourists' revisit intention*

In exploring the relationship between the attractiveness, value, enjoyment, and tourists' revisit intention, Beerli and Martin (2004) proposed that individuals who are more familiar with co-creative experiences tend to assess the value and enjoyment they derive from destination more quickly. This is because they have previously experiences and appreciated the co-creative outcomes at that destination. Elliot et al. (2011) suggested that individuals with greater familiarity with a destination can better understand its functional image, including attractions and infrastructure, and evaluate the destination based on their direct experiences of value and enjoyment (Zhang et al., 2018). As a result, they are more likely to revisit and make repeat purchases. Both destination image and consumer experience positively influence destination loyalty. Enhancing the overall image of a destination foster positive evaluations, which encourage repeat visits. Similarly, Chen and Tsai (2007) found a that perceived tourist value has a positive impact on behavioral intentions and future actions. positive impact of perceived tourist value on behavioral intention and future behavior. Based on the above discussion, the following hypothesis is proposed:

Hypothesis 3a : Smart tourism destination attractiveness has a positive impact on tourist value.
Hypothesis 3b : Smart tourism destination attractiveness has a positive impact on tourist enjoyment.

Baloglu and McCleary (1999) identified two key components of the destination image are cognitive image, which relates to infrastructure, and emotional image, which encompasses value and enjoyment. These components collectively shape the overall image of a destination and are closely linked to tourists' intentions to revisit. Hilton et al. (2012) further explained that value is relative and influenced by both situational and individual factors, as well as by the comparison between tourists' expectations and their actual experiences. This suggests that value is subjective assessment, shaped by how individuals evaluate the service outcomes, and varies from person to person.

Additionally, recent research has reinforced the importance of perceived value in shaping tourists' attitudes and behaviors. For example, Ruy et al. (2012) found that tourists' perceptions of value significantly impact their satisfaction and future behavioral intentions, including their likelihood of revisiting a destination image. Similarly, Zhang et al. (2020) highlighted that the emotional component of the destination image, particularly enjoyment, plays a crucial role in fostering emotional attachment and enhancing loyalty. Therefore, both cognitive and emotional perceptions of a destination contribute to shaping the overall image, influencing tourists' decisions to return. With the above discussion, the following hypothesis is proposed:

Hypothesis 4a : Smart tourism destination infrastructure has a positive impact on tourists' intention to revisit
Hypothesis 4b : Smart tourism destination attractiveness has a positive impact on tourists' intention to revisit

Hypothesis 4c: Value obtained at smart tourism destination image has a positive impact on tourists' intention to revisit

Hypothesis 4d : Enjoy at smart tourism destination image has a positive impact on tourists' intention to revisit With the stated hypotheses, the proposed research model is presented in Figure 2.

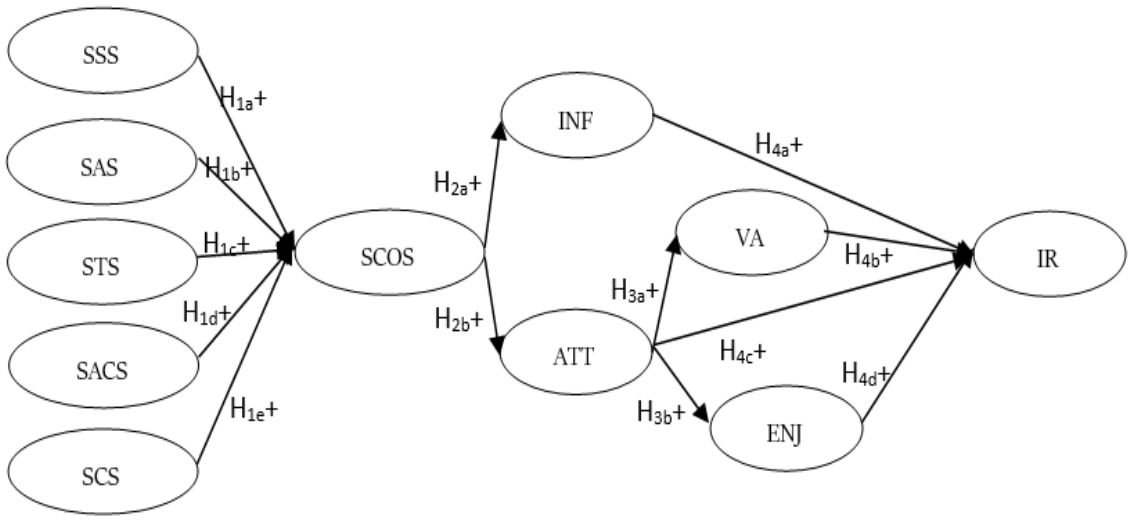

Figure 2: Proposed research model

4. RESEARCH METHOD

4.1. Operationalizational of the Constructs

The research framework of this paper incorporates four constructs, and the operationalization of each construct is developed based on previous research. The smart tourism service system was defined with five dimensions based on the smart tourism service model of Chuang (2023): smart sightseeing services (7 variables), smart transportation services (5 variables), smart accommodation services (3 variables), smart dining services (6 variables), smart shopping services (7 variables), and was adjusted to supplement smart co-creative services (5 variables) from the study of Verleye, (2015). The smart tourism destination image structure based on the research of Byon and Zhang (2010) consists of four components: infrastructure, attractiveness, value for money, and enjoyment. Tourists' revisit intention was also operationalized using four variables adopted from Kirova & Vo (2018). These constructs were assessed using a five-point scale ranging from 1 to 5, representing "strongly disagree" to "strongly agree". To test the understandability and ease of answering the survey questionnaire, a pilot test was conducted, and then the formal study to verify the reliability and validity of the survey.

4.2. Data Collection and Sampling

In this study, the research subjects were tourists visiting Ho Chi Minh City for both domestic and foreign tourists. The interview team was given interview instructions before conducting the formal survey. A convenient sample was drawn for the survey due to financial and time constraints. 300 questionnaires were distributed directly, 279 responses were received, representing a response rate of 93%.

5. DATA ANALYSIS

5.1. Data Screening and Pre-Analysis

Initially, the data were cleaned and screened for potential statistical errors in normality, outliers, missing values, and demographic characteristics. The sample size for the study was 279. The results showed that 57.9% (n = 142) of the survey participants were female and 49.1% were male (n = 137). The survey participants were 18 – 35 years old, accounting for more than 50%. The number of tourists from Europe accounted for the highest proportion (31.9%), followed by Vietnamese tourists (26.2%), Asian tourists (16.1%), Southeast Asian countries, and North America (both 10%). Finally, tourists from Australia (5.7%). The characteristics of the tourists are described in Table 1.

Table 1: Statistical description

Item	Characteristic	Number	Frequency %
Sex	Male	137	49,1
	Female	142	50,9
Age	18-25	95	34,1
	26-30	104	37,3
	31-35	42	15,1
	36-40	19	6,8
	41-50	12	4,3
	>50	7	2,5
Nationality	Europe	89	31.9
	North America-Canada	28	10.0
	Asia	45	16.1
	Southeast Asia	28	10.0
	Việt nam	73	26.2
	Australia	16	5.7
Form of travel	Free	44	15.8
	Tour	106	38.0
	With family	111	39.8
	Other	18	6.5
Travel time and overnight stay	During the day	33	11.8
	1 night	65	23.3
	2 nights	94	33.7
	3 nights	52	18.6
	>3 nights	35	12.5
Using Devices While Traveling	Smart phone	197	70.6
	Tablet	23	8.2
	Laptop	21	7.5
	Other	38	13.6
Share your experience	Frequently	64	22.9
	Sometimes	137	49.1
	No	78	27.9

5.2. Measurement Model

To validate the measurement model of the study, we conducted an assessment of content validity, convergent validity, and discriminant validity. First, the content validity of our survey was established from the existing literature, and our measures were constructed by applying constructs that have been validated by other researchers. Second, convergent validity was established by examining the composite reliability (CR), Cronbach's alpha, and average variance extracted (AVE) (Hair et al., 2019). As shown in Table 4, Cronbach's alpha (greater than 0.5), CR (greater than 0.7), and AVE (greater than 0.5) indicated that all constructs used in the model met the requirements. Therefore, the results established that the items demonstrated convergent validity.

Finally, the discriminant validity of the measurement model was tested by comparing the square root of the AVE for each construct with the correlations between that construct and other constructs. If the square root of the AVE is greater than the correlations between that construct and another construct, it indicates discrimination. As shown in Table 2, the square root of the AVE for each construct exceeds the correlations between that construct and other constructs. Therefore, the discriminant validity of the instrument was established (Hair et al., 2019).

Table 2: Reliability of the scales.

Constructs	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)
INF	0.779	0.856	0.598
SCS	0.851	0.889	0.573
SACS	0.755	0.86	0.673
SSS	0.808	0.866	0.565
SCOS	0.759	0.847	0.582
SAS	0.795	0.867	0.619
STS	0.818	0.874	0.581
VA	0.792	0.878	0.705
ATT	0.756	0.859	0.67
ENJ	0.76	0.847	0.582
IR	0.817	0.88	0.648

5.3. Structural Model

To assess the predictive power of the structural model, we calculated R^2 values for confirmation, smart tourism service system, smart destination image, and intention to revisit. Interpreted similarly to multiple regression results, R^2 indicates the amount of variance explained by exogenous variables (Hair et al., 2016). Using bootstrapping techniques, path estimates and statistics were calculated for the hypothesized relationships. The

bootstrapping sample size used in the PLS analysis was 5000. The results showed distinct causal relationships among endorsement of smart tourism service system, smart destination image, intention to revisit. Figure 3 and Table 3 present the results of the hypothesis tests of the proposed model.

Tests for Hypotheses H_{1a}, H_{1c}, H_{1d} indicated that smart shopping service ($\beta_{SSS\text{-}SCOS}$ = 0.217, p =0.00), smart transportation service ($\beta_{STS\text{-}SCOS}$ = 0.288, p = 0.000), and smart accomodation ($\beta_{SACS\text{-}SCOS}$ = 0.217, p = 0.000) was significantly influenced to the smart co-creative service. However, hypotheses H_{1b}, and H_{1e} indicate that smart attraction service and smart culinary service was no significantly influenced to the smart co-creative service ($\beta_{SAS\text{-}SCOS}$ = 0.037, p = 0.647), ($\beta_{SCS\text{-}SCOS}$ = 0.051, p = 0.516). Tests for Hypotheses H_{2a} and H_{2b} indicated that smart co-creative significantly influenced infrastructure ($\beta_{SCOS\text{-}INF}$ = 0.247, p = 0.000) and attractions ($\beta_{SCOS\text{-}ATT}$ = 0.192, p = 0.000). Test for hypotheses H_{3a}, H_{3b} indicated that attractiveness was significantly to the value ($\beta_{ATT\text{-}VA}$ = 0.32, p = 0.000), and to the enjoyment ($\beta_{ATT\text{-}ENJ}$= 0.251, p = 0.000). The path from infrastructure, value of money, enjoyment to intention to revisit was significant ($\beta_{INF\text{-}IR}$ = 0.247, p = 0.000; $\beta_{VA\text{-}IR}$ = 0.173, p = 0.01; $\beta_{ENJ\text{-}IR}$ = 0.435, p = 0.01), thus Hypothesis H_{4a}, H_{4c}, H_{4d} was supported. Howerver, hypothesis H_{4b} from attractiveness to intention to revisit has no significantly ($\beta_{ATT\text{-}VA}$ = 0.039, p = 0.54).

Table 1: Result of testing hypotheses.

Hypothesis		β	T value	P value	Results
H1a	SSS -> SCOS	0.217	2.329	0.02**	Supported
H1b	SAS -> SCOS	0.037	0.458	0.647	No Supported
H1c	STS -> SCOS	0.288	2.518	0,012**	Supported
H1d	SACS -> SCOS	0.217	2.766	0.006**	Supported
H1e	SCS -> SCOS	0.051	0.65	0.516	No Supported
H2a	SCOS -> INF	0.247	3.889	0.000***	Supported
H2b	SCOS -> ATT	0.192	3.033	0.002**	Supported
H3a	ATT -> VA	0.32	5.637	0.00***	Supported
H3b	ATT -> ENJ	0.251	4.66	0.00***	Supported
H4a	INF-> IR	0.169	2.514	0.012**	Supported
H4b	ATT -> IR	0.039	0.613	0.54	No Supported
H4c	VA -> IR	0.173	2.593	0.01**	Supported
H4d	ENJ -> IR	0.435	7.028	0.00***	Supported

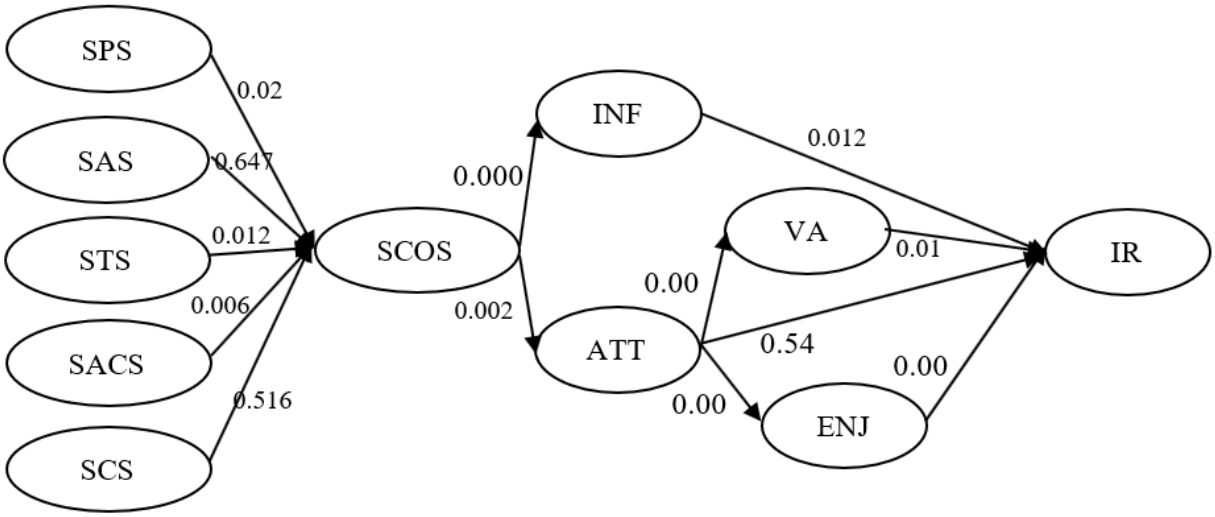

Figure 1: PLS-SEM structural model result.

6. DISCUSSION AND CONCLUSION

This study explores the evolving relationship between smart tourism service systems, smart co-creative services, and the image of smart tourism destination in attracting tourists to Vietnam. Our research emphasized the importance of strengthening the connection between smart tourism services and destination image, capitalizing on opportunities for innovative development and value creation. While smart tourism service systems offer significant potential benefits through co-creation, these have yet to be fully realized. Therefore, we propose that a well-developed smart tourism service system could not only attract tourists to a destination but also motivate repeat visits as part of a leisure activity.

The primary aim of this study is to assess whether the tourism service system – including sightseeing, transportations, accommodation, food and beverage, shopping, and co-creative services – positively influences the image of a smart tourism destination. This empirical investigation seeks to determine how potential tourists engage with the system, learn about the destination image, and are motivated to visit Vietnam based on their perceptions of the destination image.

Within the research model, the smart shopping service structure is identified as a key factor influencing

tourists' co-creative engagement, which in turn affects their perception of the destination image and intention to revisit. Therefore, providing comprehensive information about pre-sale, in sale, and post-sale services – such as reasonable pricing and timely updates on promotions – is crucial for creating a positive tourist experience.

Furthermore, smart transportation services are highlighted as the most influential factor among smart tourism service impacting tourists' co-creative behaviors, although they have not been highly rated by participants. Tourists still face challenges in choosing transportation options and destinations during their strips. To enhance the evaluation of this service, it is recommended to integrate the public transportation system into existing smart tourism applications, offering tourists greater ease in accessing information.

Tourists have reported that they currently invest more effort than the results yield. Improvements in both supply and demand will create more opportunities to provide information on trends, needs, and visitors at tourism destinations, while also encouraging tourists to actively share travel information and personal experiences. This sharing enables tourists to receive more travel ideas and connect with people who share similar interests.

Byon and Zhang's (2010) measurement scale suggests that all factors have equal impact on tourists' intention to revisit. In contrast, this study introduces a new insight into the hierarchy of factors, showing that enjoyment and value for money strongly influence the attractiveness of a destination and tourists' intention to revisit. To maintain this attractiveness, it is essential for managers and businesses to continue refining their strategies, adjusting them according to tourist seasons, and ensuring that the costs incurred by tourists deliver value and appeal.

This study adapted the successful model of Chuang (2023), Byon and Zhang (2010), and Verleye (2015) to assess the relationship between smart tourism systems, destination image, and revisit intention. Tourists who had used the system were selected to test the hypotheses, with 10 hypotheses were accepted and three rejected. The results revealed that smart payment services, transportation, and accommodations influence tourists' co-creative services, which in turn affect their destination image and revisit intention. However, the two factors - SAS and SCS - showed low impact levels and were not statistically significant in the model, different from the study of Chuang's (2023) findings. Possible reasons for this discrepancy include:

(1) Chuang's study focuses on dietary tourists, while the current research emphasized culinary services at Vietnamese tourist destinations.

(2) The service information system at Vietnam tourist destinations has not yet received significant investment or are not fully integrated.

This current study has several limitations that could be addressed in future studies. First, it was only conducted on tourists who visited Ho Chi Minh City between April and May 2024, during a period when the smart tourism service system was still under development. Future research could collect data at different times to compare findings across various stages of system implementation. Second, a convenience sampling method was used, which suggests that further studies should apply probability sampling techniques and expand the sampling frame to include additional tourists destinations to create a more representative sample. Finally, the analysis was based on cross-sectional data, which limits causal inference. Since the concept of smart tourism service structure is relatively new in Vietnam, the results are interpreted as indicating associations rather than causal relationships. Future research should continue to use the test scales to expand the study to other s=destinations, potentially adjusting the model to contribute to theoretical advancements in this emerging field.

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