

A STUDY ON PARTICIPATION MOTIVATION, EXPERIENTIAL VALUE AND BEHAVIORAL INTENTIONS IN RECREATIONAL ACTIVITIES IN PENGHU'S EAST SEA

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Abstract : The recreational activities in the East Sea area of Penghu have been attracted increasing attention from the tourism market since couple of years ago; however, related academic research remains limited. This study therefore was aimed to explore the relationships among participation motivation, experiential value, and behavioral intention among tourists participating in recreational activities in this region and to construct a causal model explaining these relationships. A questionnaire survey was conducted using a snowball sampling approach, targeting tourists who had previously participated in recreational activities in the East Sea of Penghu. A total of 500 questionnaires were distributed, and 431 valid responses were obtained, yielding a response rate of 86.2%. The collected data was analyzed using SPSS 23.0 version and AMOS 24 version, employing descriptive statistics and structural equation modeling (SEM) to test the proposed hypotheses.

The results indicated that participation motivation had a significantly positive effect on both experiential value and behavioral intention, while experiential value also positively influences behavioral intention. Furthermore, experiential value played a mediator role in the relationship between participation motivation and behavioral intention. The findings provided practical insights for tourism operators in designing recreational products and developing marketing strategies for the East Sea region of Penghu. Moreover, the results offered useful references for policymakers in promoting regional tourism development and sustainable tourism practices.

Keywords: Recreational Activities in Penghu East Sea, Participation Motivation, Experiential Value, Behavioral Intention

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Introduction

Taiwan possesses abundant marine resources that provide favorable conditions for the development of marine-related recreational tourism. Among its offshore islands, the Penghu Archipelago is the largest and is widely recognized for its rich marine ecosystems and coastal tourism assets. According to the Penghu Archipelago Island Inventory Project Report, the region comprises 90 islands and reefs (Penghu National Scenic Area Administration [PNSA], 2025). Penghu features diverse natural and cultural resources, including marine ecosystems, intertidal zones, sandy beaches, and distinctive geological landscapes, as well as historical sites and traditional cultural heritage, which together form a strong foundation for tourism development.

From a tourism planning perspective, Penghu is divided into three primary recreational systems: the Main Island, North Sea, and South Sea systems, which are further subdivided into eleven subsystems (Cheng et al., 2009). In recent years, tourist preferences have shifted from traditional destinations such as Jibei Island toward emerging attractions in the East Sea, including Yuanbei Island, Niao Island, and Pengpeng Beach. This shift has prompted tourism operators to develop diversified marine recreational activities, contributing to the rapid growth of the East Sea as a new tourism hotspot.

Despite this increasing popularity, academic research on the East Sea region remains limited, with most prior studies focusing on the North Sea and South Sea areas. This highlights a critical research gap in understanding tourist behavior within this emerging destination.

To address this gap, this study examines the relationships among participation motivation, experiential value, and behavioral intention in the context of recreational activities in the East Sea of Penghu. Specifically, this study aims to (1) explore demographic differences in these constructs, (2) examine the effects of participation motivation and experiential value on behavioral intention, (3) analyze their causal relationships, and (4) test the mediating role of experiential value. The findings are expected to contribute to tourism research and provide practical implications for sustainable tourism development in the region.

Research

Marine recreational tourism has emerged as a significant sector within coastal destination development, offering diverse leisure experiences rooted in natural and ecological environments (Carvache-Franco et al., 2020). Marine recreation is broadly defined as leisure activities associated with marine settings, extending beyond water-based activities to include all experiences shaped by ocean environments (Orams, 2002). Prior studies have highlighted that marine-based activities constitute a primary attraction for visitors and play a central role in shaping island tourism experiences (Hsu

et al., 2011).

In addition to its marine environment, Penghu possesses distinctive cultural and ecological assets. Traditional stone fish traps, for instance, serve as both cultural heritage and landscape features, reflecting historical fishing practices adapted to local environmental conditions (Yu et al., 2015). Furthermore, seasonal ecological phenomena—such as tern migrations—have been incorporated into tourism offerings, enhancing ecological awareness and supporting sustainable tourism development (PNSA, 2024). Tourism operators have also diversified recreational products, including island-hopping, intertidal exploration, and recreational fishing, which has gained global popularity. These developments demonstrate the integration of natural, cultural, and experiential elements in marine tourism.

Participation motivation is widely recognized as a key determinant of tourist behavior. It refers to the underlying drivers that influence individuals' engagement in activities, encompassing both intrinsic and extrinsic motivations (Iso-Ahola, 1980). Thus, understanding participation motivation is essential for interpreting tourist decision-making processes.

Experiential value has become a central construct in tourism research, reflecting tourists' subjective perceptions and emotional responses during participation (Holbrook, 1996). Experiences are not spontaneous but are stimulated by designed environments and services (Schmitt, 1999). Prior studies suggest that experiential value enhances satisfaction and influences behavioral outcomes (Mathwick et al., 2001). It is frequently identified as a mediating variable linking antecedents and behavioral responses (Fu & Wang, 2021; Yoon et al., 2010).

Behavioral intention, derived from attitude theory, is commonly used to predict future actions such as revisit intention and word-of-mouth recommendation (Oliver, 1980). In tourism studies, it reflects tourists' willingness to re-engage with a destination or recommend it to others (Gan et al., 2023). Strong behavioral intention is often associated with higher satisfaction and perceived value, making it a critical indicator for tourism management (Baker & Crompton, 2000; Chen & Chen, 2010).

Overall, existing literature suggests that marine tourism integrates environmental, cultural, and experiential dimensions, with participation motivation, experiential value, and behavioral intention forming a critical theoretical framework. These constructs are particularly relevant in emerging destinations such as Penghu's East Sea region, where understanding tourist behavior is essential for sustainable tourism development (Chang et al., 2017).

Research objectives

The primary objective of this study is to investigate tourists' participation motivation, experiential value, and behavioral intention in the East Sea region of Penghu.

Specifically, it aims to examine the interrelationships among these constructs and to assess the mediating role within the proposed conceptual framework.

Hypothesis

Previous studies have consistently demonstrated that participation motivation plays a significant role in shaping individuals' perceptions of experiential value. Higher levels of motivation tend to enhance individuals' engagement and involvement in activities, thereby strengthening perceived experiential value (Ding et al., 2021; Li et al., 2021). When individuals possess strong motivations to participate in tourism or leisure activities, they are more likely to invest greater attention and emotional involvement in the experience, which subsequently leads to more meaningful and valuable experiential outcomes.

Experiential value has also been widely recognized as a critical antecedent of behavioral intention in tourism research. It serves as a key determinant influencing tourists' future behavioral responses, such as revisit intention and word-of-mouth recommendations (Yoon et al., 2010; Ali et al., 2016). Empirical studies across different tourism contexts have confirmed the positive relationship between experiential value and behavioral intention. For instance, More recent research by Zhu and Liu (2024) further supports this relationship, demonstrating that higher experiential value significantly enhances tourists' behavioral intentions.

In addition to its direct influence, experiential value has also been identified as an important mediating variable linking participation motivation and behavioral intention. Research in leisure and tourism contexts has shown that participation motivation can influence behavioral intention both directly and indirectly through experiential value (Chang, 2013; Lin et al., 2016). For example, Ding et al. (2021) found that stronger participation motivation among exhibition visitors significantly increased perceived experiential value, which in turn strengthened their behavioral intentions. Similarly, Zhu and Liu (2024) demonstrated that experiential value mediates the relationship between participation motivation and behavioral intention in family tourism contexts, indicating that motivated tourists are more likely to perceive higher experiential value, which subsequently enhances their behavioral intentions.

Based on the above theoretical and empirical findings, experiential value can be conceptualized as a crucial mechanism through which participation motivation influences tourists' behavioral responses. Accordingly, this study proposes the following hypotheses regarding recreational activities in the East Sea area of Penghu:

H1: Participation motivation positively influences behavioral intention in recreational activities in the East Sea of Penghu.

H2: Experiential value positively influences behavioral intention in recreational activities in the East Sea of Penghu.

H3: Experiential value mediates the relationship between participation motivation and behavioral intention.

In summary, participation motivation is an important driving force that encourages individuals to engage in leisure activities and significantly enhances perceived experiential value. Experiential value, in turn, functions as a critical antecedent of behavioral intention and frequently serves as a mediating mechanism linking motivational factors to tourists' future behavioral responses.

Research Methods

This study employed a questionnaire survey method to examine participation motivation, experiential value, and behavioral intention among tourists participating in recreational activities in the East Sea area of Penghu. The research instrument consisted of four sections: participation motivation, experiential value, behavioral intention, and respondents' demographic information. All measurement items were designed using a five-point Likert scale, ranging from strongly disagree to strongly agree, and were presented as positively worded, closed-ended questions.

A snowball sampling technique was adopted to collect data. Initially, tourism operators providing recreational activities in the East Sea of Penghu were contacted to seek their cooperation. These operators subsequently invited tourists who had participated in related activities to complete the survey. The questionnaire was distributed online using Google Forms between December 1, 2024, and March 23, 2025. A total of 500 questionnaires were distributed, of which 431 valid responses were obtained, yielding a response rate of 86.2%. Data analysis tools used were IBM SPSS Statistics 23 and IBM SPSS Amos 23.

To ensure measurement reliability and validity, item analysis and exploratory factor analysis (EFA) were conducted. For the participation motivation scale, item discrimination values ranged from $t = 17.004$ to 32.961 , and item-total correlations ranged from $r = 0.705$ to 0.907 . The scale demonstrated high internal consistency (Cronbach's $\alpha = 0.973$), and the KMO value was 0.912 , indicating suitability for factor analysis. Four factors were extracted: intellectual motivation, nature motivation, psychological motivation, and recreational fishing.

For the experiential value scale, discrimination values ranged from $t = 12.533$ to 21.577 , with item-total correlations between $r = 0.608$ and 0.844 . The overall reliability was high (Cronbach's $\alpha = 0.963$), and the KMO value was 0.898 . Four factors were identified: learning experience, entertainment experience, fishing enjoyment, and escape from reality.

For the behavioral intention scale, discrimination values ranged from $t = 14.917$ to 21.240 , with item-total correlations between $r = 0.649$ and 0.750 . The scale demonstrated good reliability (Cronbach's $\alpha = 0.911$) and an acceptable KMO value of

0.791. Three factors were extracted: revisit intention, satisfaction, and loyalty. Overall, the results indicate that all measurement scales exhibit satisfactory reliability and construct validity.

Research Results

Table 1 Respondent Profile

Demographic characteristics			%	Demographic characteristics			%
Gender	Male		69		No fixed income		36
	Female		31		Under 30,000		17
Age (years)	18-30		51	Monthly income (NTD)	30001-50000		14
	31-40		9		50001-70000		15
	41-50		9		70001-90000		10
	Over 50		32		90001-110000		5
Marital status	Unmarried		56		110000 or more		4
	Married		44		Under 500		69
Education	High school and below		16	Input expenditure (NTD)	501-1000		15
	College degree		8		1001-2000		8
	University degree		63		2001 or more		7
	Graduate degree		13	Companion type	Alone		51
Profession	Public servant		23		Family relatives		26
	Business		8		Friends		23
	Industry		8	Number of people traveling together	1-2		54
	Freelance		10		3-4		41
	worker				5-6		3
	Retiree		7		7-8		1
	Unemployed		13		9 or more		1
	Other occupations		32	Information source	Experiences		13
Residential area	Northern region		17		Network		16
	Central region		10		Expert advice		8
	Southern region		33		Mass media		63
	Eastern region		11				
	Island area		29				

Structural equation modeling

This study employed Structural Equation Modeling (SEM) via IBM SPSS AMOS 23.0 to examine the hypothesized relationships between participation motivation, experiential value, and behavioral intention within the context of Penghu's East Sea recreational activities. Preliminary diagnostics confirmed that the data distribution adhered to the assumptions of multivariate normality, justifying the use of Maximum Likelihood Estimation (MLE). The structural model's goodness-of-fit was evaluated using multiple indices (see Table 2). The absolute fit index yielded a χ^2 value of 862.005. Although statistically significant, this elevation is frequently attributed to the index's

sensitivity to sample size and model complexity (Hair et al., 2019). While the Adjusted Goodness of Fit Index (AGFI = 0.765) fell slightly below the stringent 0.80 threshold, it remained within a marginal yet acceptable range for exploratory research. Regarding incremental fit indices, the TLI (0.847), CFI (0.862), and IFI (0.864) approached the conventional 0.90 benchmark, while the NFI (0.776) and RFI (0.751) exhibited consistent, albeit moderate, alignment. Despite these indices not reaching ideal levels, the holistic evaluation suggests the proposed model maintains a satisfactory degree of parsimony and fit, providing a robust foundation for subsequent hypothesis testing.

Table 2 Overall structural model compatibility and adaptation status

Model Fix Index		Acceptable value	Modified
Absolute fit indicators	χ^2	Small	862.005
	χ^2/df	<5	2.205
	GFI	>0.8 is good	0.802
	AGFI	>0.8 is acceptable	0.765
	RMR	<0.05	0.037
	RMSEA	<0.08	0.074
	NFI	>.90 is great, >.80 is tolerable	0.776
Incremental fit indicators	TLI	Same	0.847
	CFI	Same	0.862
	RFI	Same	0.751
	IFI	Same	0.864

Overall structural causal model

The results of the structural path analysis indicated that all hypothesized relationships were statistically significant (see Table 3). Specifically, participation motivation exerted a significant positive influence on experiential value ($\beta = 0.737$, $T = 5.470$, $p < .001$), providing strong support for H1. Regarding behavioral intention, both participation motivation ($\beta = 0.446$, $T = 2.492$, $p < .05$) and experiential value ($\beta = 0.729$, $T = 3.182$, $p < .01$) exhibited positive and significant effects, thereby confirming H2 and H3, respectively. These findings suggest that higher levels of initial motivation and perceived value are critical antecedents to tourists' subsequent behavioral intentions within the context of the study (see Fig 1).

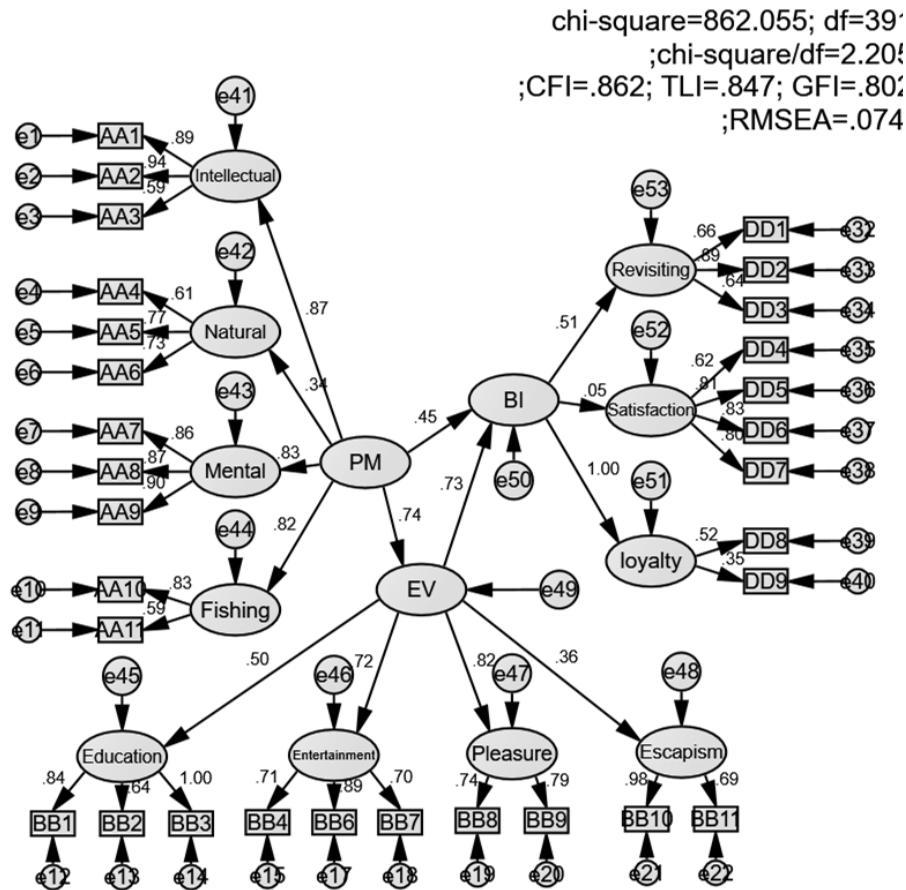


Fig 1 Structural Equation Modeling

Mediation Analysis

This study employed the bootstrap approach proposed by Efron (1979) to conduct statistical inference, utilizing confidence intervals to estimate indirect effects and examine mediation. The criteria for assessing mediation followed the guidelines of Preacher and Hayes (2004). Specifically, effects are considered non-significant when the confidence interval includes zero, whereas intervals excluding zero indicate statistical significance. An indirect effect is deemed non-existent if its confidence interval contains zero, and significant if it does not. Furthermore, full mediation is indicated when the direct effect is non-significant, whereas partial mediation is supported when both indirect and total effects are significant.

The empirical results demonstrate that the indirect effect of experiential value between participation motivation and behavioral intention is 0.464. Both the bias-corrected (BC) and percentile (PC) 95% confidence intervals exclude zero, with a p-value below 0.05, indicating a significant mediating effect. The direct effect (0.424) is also significant, as its confidence interval does not include zero. Additionally, the total

effect (0.888) is statistically significant. Based on the criteria proposed by Preacher and Hayes (2004), the simultaneous significance of both indirect and total effects confirms the presence of partial mediation. Overall, experiential value serves as a significant partial mediator in the relationship between participation motivation and behavioral intention.

Table 3 Summary of the Mediating Effect of Experiential Value

Participation Motivation (X)→Experiential Value (M)→Behavioral Intention (Y)						
		Estimate	BC/PC 95% Confidence Interval			Result
			P value	BC	PC	
Indirect Effect	XMY	0.464	0.000/0.006	0.300~1.232	0.144~0.707	Confirmed
Direct Effect	XM	0.735	0.000/0.001	0.568~0.875	0.548~0.866	Partial Mediation
	XY	0.424	0.029/0.025	0.064~0.698	0.072~0.705	
	MY	0.631	0.000/0.006	0.404~1.270	0.217~0.883	
Total Effect	XY	0.888	0.000/0.001	0.064~0.698	0.686~0.928	Confirmed

Conclusion and Discussion

This study confirms that participation motivation, experiential value, and behavioral intention are significantly interrelated within the context of recreational activities in the East Sea of Penghu. The findings indicate a relatively homogeneous visitor profile, predominantly composed of young, male, and well-educated individuals, with low expenditure patterns and a preference for individualized or small-group participation. Empirical results demonstrate that participation motivation positively influences both experiential value and behavioral intention, while experiential value further exerts a significant positive effect on behavioral intention. These results are consistent with prior studies (Ding et al., 2021; Li et al., 2021; Zhu & Liu, 2024), reinforcing the critical role of motivation and experience in shaping tourist behavior. Moreover, experiential value is found to partially mediate the relationship between participation motivation and behavioral intention, supporting the proposed theoretical framework.

From a managerial perspective, tourism operators are advised to design market-oriented products targeting younger segments, incorporating experiential and flexible elements. Pricing strategies should consider low expenditure tendencies by offering tiered products and value-added services. Additionally, integrating traditional and digital media may enhance marketing effectiveness. For policymakers, strengthening promotional efforts and fostering sustainable tourism practices are essential to ensure

long-term development, particularly given the ecological sensitivity of the East Sea region.

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