

Tourists Giving Back: Tourists' Pro-Sustainable Behavior through Exchange Relationships

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Abstract

The purpose of this study is to assess the comparative effect of the dimensions of destination personality on tourists' pro-sustainable behavior through the lens of Social Exchange Theory in the context of domestic leisure tourism in Pakistan. This study employed a deductive-quantitative design and collected data from 635 domestic tourists using purposive sampling. The findings indicate that the dimensions of sincerity, excitement, and sophistication have a significant positive influence on tourists' pro-sustainable behavior, whereas competence and ruggedness do not. This study is novel in its assessment of the comparative effects of destination personality dimensions, as these findings can help destination management organizations identify the personality aspects that can yield sustainable behaviour.

Keywords: *Destination Personality, Domestic Tourism, Multigroup Analysis, Sustainable Consumption and Production, Pro-sustainable Behavior.*

JEL Classification: *C12, M31, Q01, Q56, Z30, Z32*

INTRODUCTION

Globally, tourism accounts for 10.7% of employment and 10.3% of GDP. Despite this economic support, tourism is responsible for environmental degradation and destination unsustainability due to the irresponsible behavior of some tourists. The tourism industry increasingly recognizes the critical role of tourists' pro-sustainable behaviour in preserving natural, economic, and cultural resources for future generations (Geng et al., 2024). In an ideal situation, tourists should behave sustainably. However, despite a growing international push for sustainability, many visitors still engage in irresponsible behaviour at tourist destinations (Long & Chan, 2024; Molina-Collado et al., 2022).

The personality of a destination moulds tourists' perceptions and actions (Hanna et al., 2021). Studies confirm that when tourists view a destination's personality positively, they are more likely to exhibit conducive behaviours (Chen & Phou, 2013; Çizel et al., 2022; Cruz-

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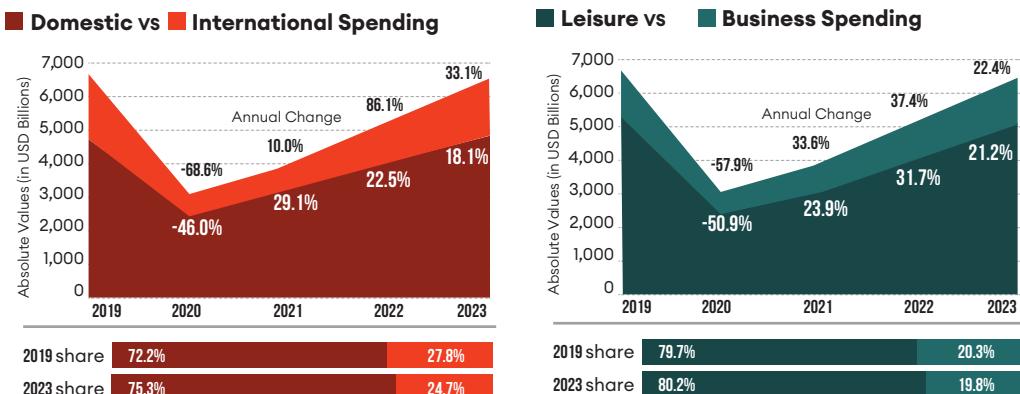
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Tarrillo et al., 2023; Kovacic & Sagovnovic, 2023; Xie & Lee, 2013). Previous research has not yet established a link between destination personality and tourists' pro-sustainable behaviour. Identifying which personality dimensions drive such behaviour is essential knowledge for DMOs, allowing them to tailor marketing campaigns to promote sustainability effectively. Based on the problem statement and literature gaps, this study investigates the following research questions.

RQ1. What is the comparative effect of the dimensions of destination personality on the tourist pro-sustainable behavior?

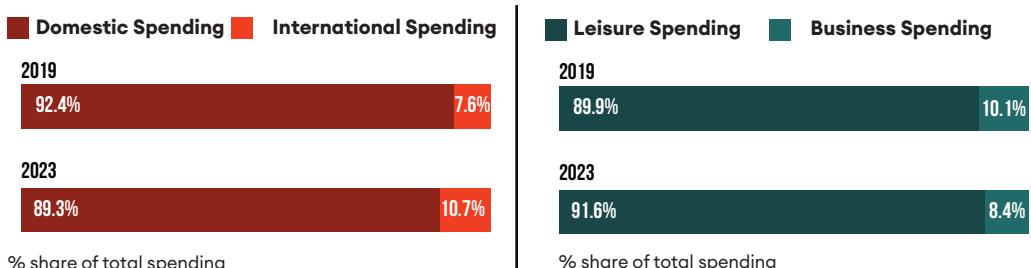
RQ2. What is the conditional effect of gender on the relationship between the destination personality dimensions and tourist pro-sustainable behavior?

The sustainability of tourist destinations is a serious concern in Pakistan, and the government is working to change tourists' behavior (World Bank Group, 2023). The government of Pakistan and Local stakeholders of the tourist destinations have repeatedly expressed concern about damage caused to the destinations by travelers, mainly comprising local tourists (STFP, 2024). Private organizations are also working on making tourism more sustainable in Pakistan. For example, JKD Pakistan focuses on crafting eco-friendly travel experiences, supporting local communities, and preserving Pakistan's natural beauty for future generations (JKD Pakistan, 2024). Therefore, the research setting for this study is Pakistan. Domestic tourism generates more revenue than international tourism. Pakistan's tourism sector is primarily based on domestic tourism (89.3%) and leisure tourism (91%), with visitor trip lengths typically lasting approximately three days (Statista, 2024; World Travel and Tourism Council, 2024). Therefore, this research was conducted in Pakistan, focusing on domestic leisure tourism.



Source: (World Travel and Tourism Council, 2024)

Figure 1 Domestic VS International Tourism – Global



% share of total spending
Source: (World Travel and Tourism Council, 2024)

Figure 2 Pakistan's Tourism Spending

LITERATURE REVIEW

Tourist Pro-sustainable Behavior

Tourist pro-sustainable behavior refers to a tourist's actions and behaviors at a destination with the intention of safeguarding the environment, society, and economy of the destination for future generations (Assaker, 2024; Sharma et al., 2025). The concept of TPSB stems from the core of sustainability that advocates today's consumption without the sacrifice of tomorrow's resources (Hansen et al., 2024). Although several studies have explored the antecedents and outcomes of TPSB in the past, most of these studies focus on the environmental aspect of tourist behavior (Hansen et al., 2024; Li et al., 2024). Several studies have conceptualized TPSB more comprehensively. For instance, Kastenholz et al. (2018) emphasized behaviors such as social interaction with local residents, preservation of nature and culture, appreciation and selection of local products and activities, conservation of resources, recycling, and participation in nature and culture-related activities. Similarly, Landon et al. (2018) and Olya et al. (2024) extended the notion of sustainable behavior by incorporating willingness to sacrifice, localism, and eco-behavior. However, TPSB is often categorized into four dimensions: pro-economic, pro-social, pro-cultural, and pro-environmental in this study.

Destination Personality

Destination personality, rooted in the concept of anthropomorphism, refers to the personification of a destination (Rojas-Méndez & Davies, 2024) or the perception of a destination as possessing human-like traits and characteristics (Chen & Phou, 2013; Ekinci & Hosany, 2006; Hosany et al., 2007). It is also defined as brand personality in the context of tourism (Usakli & Baloglu, 2011). The study of destination personality has undergone significant evolution over the past three decades. Early work was grounded in brand personality theory, while later contributions adapted, extended, or critiqued the construct to fit cultural and experiential contexts of tourism. Aaker (1997) laid the foundation for personality research in marketing with her five-dimensional brand personality scale, which encompasses sincerity, sophistication, ruggedness, competence, and excitement. This five-dimensional model is predominantly used as a framework in DP literature. The literature on destination personality dimensions evolved in three main areas. The first stream revolves around the adoption of Aaker's (1997) five dimensions. For example, Bartkowski et al. (2009) and Kovacic et al. (2020) validated the five original dimensions—sincerity, sophistication, ruggedness, competence, and excitement—showing that these dimensions are relevant across different cultures and contexts.

Another area of the literature focused on contextual adaptations of the destination personality dimensions. In this area of literature, studies have either extended or adapted the original dimensions to capture cultural, social, or experiential nuances of destinations. For instance, Chen and Phou (2013) introduced the "contemporary" dimension to capture modernity. Hultman et al. (2015) added "philoxenia" (hospitality), while Auemsuvarn and Ngamcharoenmongkol (2022) introduced a seven-dimensional scale that includes traditionalism, kindness, and liveliness. Some studies have also introduced a unidimensional measurement of destination personality; for example, Priporas et al. (2020) suggested that destination personality is a single-dimensional construct. Despite the evolution of the destination personality construct, Aaker's original framework remains robust and applicable across varied settings. Therefore,

this study operationalizes the Aaker (1997) dimensions for the purpose of this study.

Theoretical Underpinning

The TPSB model of this study was conceptualized through the theoretical lens of Social Exchange theory (SET), a sociological and psychological framework that explains social behavior as an exchange process where people interact with each other based on the evaluation of costs and rewards they receive from others (Mishra & Mund, 2024). In general, people sustain relationships and interactions when they sense mutual benefit. If a person feels they are receiving benefits from the other party, they reciprocate the benefits. SET is used in consumer and tourism literature to explain positive tourist behaviors (Dhawan & Singh, 2025; Liu et al., 2021; Tan et al., 2025). However, tourist sustainable behavior is rarely assessed through the lens of SET (Li et al., 2024). Tourist sustainable behavior is commonly explained by the theory of planned behavior, Norm-activation theory, and Value-belief norm theory, which focus on how tourists' own characteristics, norms, and value influence their sustainable behavior at a destination (Li et al., 2024). On the other hand, SET provides insight into how destination persona and image can influence TPSB. When tourists perceive a destination as having positive personality traits, they interpret this as the destination's contribution to their well-being (Unurlu, 2021). This perception creates a sense of reciprocity, whereby tourists feel motivated to "give back" through their positive behavior, such as conserving resources, reducing waste, and respecting cultural norms (Long & Chan, 2024; Scuotto et al., 2024; Xie & Lee, 2013). In this way, DP acts as a signaling mechanism that communicates the destination's values and commitments, thereby shaping tourists' behavioral responses (Huaman-Ramirez et al., 2023; Zhang et al., 2022).

Hypotheses Development

Destination personality evokes positive emotions in a tourist. For example, destination personality has a positive influence on destination identification (Auemsuvarn & Ngamcharoenmongkol, 2022) and satisfaction (Akgoz et al., 2023). When tourists feel satisfied with a destination and identify with it, they engage in sustainable behavior at a destination (Lin et al., 2024; Rao et al., 2022). Literature suggests that dimensions of destination personality might have a varied influence on tourist emotions and behaviors (H. Chen et al., 2024; Huaman-Ramirez et al., 2023). This warrants a dimension-wise investigation of the influence of destination personality dimensions on TPSB.

Excitement and TPSB

The excitement dimension of destination personality has a positive influence on satisfaction with the destination (Šagovnović et al., 2024). It also leads to the development of a positive attitude towards a destination (Huaman-Ramirez et al., 2023). Moreover, tourists tend to show their citizenship behavior and recommend the destination when they find it exciting (Kovacic & Sagovnovic, 2023). Grounded in Social Exchange Theory, this suggests that when tourists perceive an exchange of enjoyable and rewarding experiences from an exciting destination, they feel motivated to reciprocate through responsible actions, leading to the hypothesis below.

H1: The Excitement persona of a destination has a positive effect on TPSB

Sincerity and TPSB

Sincerity of destination positively influences satisfaction with the destination (Šagovnović et al., 2024). Moreover, tourists develop a positive attitude towards a destination when they perceive it as sincere (Chen et al., 2024; Huaman-Ramirez et al., 2023). Drawing on SET, sincerity signals honesty, trust, and authenticity in the exchange relationship between tourists and the destination, encouraging tourists to reciprocate with responsible conduct. This reasoning leads to the hypothesis below.

H2: Sincerely persona of a destination has a positive effect on TPSB

Competence and TPSB

A study shows that the competence persona of a destination doesn't have a significant relation with attitude towards the destination and visit intention (Chen et al., 2024; Huaman-Ramirez et al., 2023). Another study shows that competence does not influence intention to recommend the destination (Kovacic & Sagovnovic, 2023). Interestingly, some other studies show that the competence of the destination didn't show a significant effect on satisfaction and loyalty (Šagovnović et al., 2024) and visit intention (Nguyen et al., 2023). The mixed findings in the literature indicate that the competence persona influences tourist behavior but warrant further investigation into its influence on PSB. Hence, we propose the hypothesis below.

H3: Competence persona of a destination has a positive effect on TPSB

Ruggedness and TPSB

A study shows that the ruggedness persona of a destination leads to a negative attitude towards the destination (Huaman-Ramirez et al., 2023) and inversely influences loyalty (Šagovnović et al., 2024), while another study shows that the ruggedness of the destination improves attitude towards the destination and increases visit intention (Chen et al., 2024). Moreover, another study on leisure tourism shows that ruggedness has a positive influence on destination visit intention (Nguyen et al., 2023). From the SET perspective, ruggedness may signal either costs (e.g., perceived harshness or overexploitation) or benefits (e.g., adventure and challenge) in the exchange between tourists and the destination. Depending on how tourists evaluate these exchanges, they may reciprocate with varying levels of responsible behavior. This leads to the hypothesis that ruggedness can influence TPSB.

H4: Ruggedness persona of a destination has a positive effect on TPSB

Sophistication and TPSB

The sophistication of a destination positively influences satisfaction with it (Šagovnović et al., 2024). Tourists also develop a positive attitude towards destinations with a sophisticated persona (Chen et al., 2024; Huaman-Ramirez et al., 2023). Sophistication also shapes the intention to recommend the destination as a form of giving back to the destination (Kovacic & Sagovnovic, 2023). Through the lens of SET, tourists perceive sophisticated destinations as offering high value and rewarding experiences, which motivates them to reciprocate with favourable behaviours. This reasoning leads to the hypothesis below.

H5: The Sophisticated persona of a destination has a positive effect on TPSB

METHODOLOGY

Research Design

This study adopted a post-positivist worldview, recognizing the multi-perspectives nature of reality (Creswell & Poth, 2024). In line with the research philosophy, this study employed a quantitative research method, enabling statistical analysis free from researcher bias. Moreover, this study followed a deductive approach to the theory, in which hypotheses were derived from Social Exchange Theory (SET). The data were collected via a survey, enabling data from a broad sample of participants. Data collection was conducted within a cross-sectional time horizon, capturing information from respondents at a single point in time.

Population and Sampling

The target population for this study consisted of local tourists from Pakistan who had traveled to at least one tourist destination for leisure purposes in the past year. Domestic leisure tourism is of prime importance to Pakistan's economy; however, local destinations are inversely affected by domestic leisure tourists. The sample was drawn using a purposive sampling method because an exhaustive sampling frame of the target population was unavailable, leaving many target population members inaccessible. Respondents were screened using three questionnaire questions to ensure only relevant participants participated in the study. The sample size of SEM analysis is generally recommended to be 200. Kline (2023) suggests that a sample should be 5 to 10 times the items in the study. Since this study has 24 items, the recommended sample size was around 240. Considering these recommendations, a sample of 635 was selected to reduce selection bias and enhance analysis power (J. Hair et al., 2019).

Data Collection Plan

Pre-validated scales were used in this study to measure TPSB and DP. The items of TPSB and DP are presented in Table 1. All the items were rated on a 5-point Likert-type scale by the respondents. The questionnaire was circulated on social media groups related to tourists in Pakistan.

Table 1 Measurement Scales

Scale	Item	Description	Source
Tourist Pro-sustainable behavior	TPSB1	I act responsibly to protect the destination's environment at this destination.	Salinero et al. (2022)
	TPSB2	At this destination, I support the local economy	
	TPSB3	I am empathetic toward those in need at this destination.	
	TPSB4	I respect the local community's cultural values at this destination.	
Destination Personality			Aaker (1997); Kovacic et al. (2020)
Excitement	DP1	This destination is energetic.	
	DP2	This destination is funny.	
	DP3	This destination is lively.	
	DP4	This destination is dynamic.	

Sincerity	DP5	This destination is kind.
	DP6	This destination is sentimental.
	DP7	This destination is open.
	DP8	This destination is pleasant.
Competence	DP9	This destination is reliable.
	DP10	This destination is responsible.
	DP11	This destination is serious.
	DP12	This destination is organized.
Sophistication	DP13	This destination is smooth.
	DP14	This destination is balanced.
	DP15	This destination is gentle.
	DP16	This destination is charming.
Ruggedness	DP17	This destination is spontaneous.
	DP18	This destination is frank.
	DP19	This destination is uncontrollable.
	DP20	This destination is resistant.

Data analysis

The data collected for this study were analyzed using partial least squares structural equation modeling (PLS-SEM). The data analysis followed a multi-step process. First, the demographic analysis enabled the assessment of the sample profile. Following this, the measurement model was evaluated for reliability, convergent validity, and discriminant validity. Next, a structural model assessment was conducted to evaluate the model's robustness with respect to explanatory power and multicollinearity. Moving forward, hypothesized relationships among destination personality dimensions and tourists' pro-sustainable behavior were assessed. Lastly, multigroup analysis (MGA) was conducted to assess gender-based differences in the influence of DP dimensions and the TPSB.

FINDINGS AND DISCUSSION

Demographic analysis

The demographic characteristics of the respondents are presented in Table 2. A total of 635 valid responses were collected. Although the sample was balanced by gender, there were slightly more males than females. Most respondents were young adults, with a smaller group in the older category, indicating a clear predominance of younger tourists. In terms of educational background, most respondents had completed an intermediate level of education or held an undergraduate degree or higher, while a small proportion had completed only secondary or primary education, and a negligible fraction reported no formal education. The sample was noted to have a tilt toward educated tourists, as the data were collected via an English-language questionnaire. When asked about travel habits, most respondents described themselves as frequent travelers, with a smaller group traveling very frequently. Only a very small number reported rarely traveling, suggesting that the respondents were generally active travelers. Overall, the sample profile highlights that the study's participants were primarily young, educated, and relatively frequent travelers, providing a suitable basis for examining the

role of destination personality in shaping pro-sustainable behavior.

Table 2 Sample Profile

Demographics	Group	Frequency	Percentage
Gender	Male	336	52.9
	Female	299	47.1
Age	18 – 25 years	491	77.9
	26 – 42 years	144	22.1
Education	No formal education	1	0.2
	Primary	22	3.5
	Secondary	52	8.2
	Intermediate	317	49.9
	Undergraduate or more	243	38.3
Travel Frequency	Rarely	4	0.6
	Occasionally	285	40.4
	Frequently	334	47.4
	Very Frequently	82	11.6

Measurement Model Assessment

To assess the measurement model, we examined internal consistency reliability and convergent validity for all constructs (see Table 2). Most items loaded above the recommended 0.708 level of item reliability, except for DP02 (0.508), DP11 (0.602), DP18 (0.634), and TPSB4 (0.644), which were slightly lower but retained due to their AVE being above 0.5 and their theoretical importance. The AVE values for all constructs exceeded the .50 threshold (J. Hair et al., 2024), confirming convergent validity. Cronbach's alpha (α) and composite reliability (CR) values exceeded the recommended threshold of 0.70 (J. F. Hair et al., 2022), indicating adequate internal consistency, with only TPSB's alpha marginally below the ideal cutoff but still acceptable in exploratory research.

Table 3 Reliability and Convergent Validity

Constructs	Items	Outer loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Competence	DP01	0.746	0.752	0.783	0.844	0.578
	DP02	0.508				
	DP03	0.863				
	DP04	0.779				
Excitement	DP05	0.758	0.722	0.795	0.821	0.542
	DP06	0.707				
	DP07	0.757				
	DP08	0.795				
Ruggedness	DP09	0.824	0.841	0.955	0.889	0.67
	DP10	0.854				
	DP11	0.602				
	DP12	0.737				

Sincerity	DP13	0.717	0.749	0.755	0.841	0.57
	DP14	0.785				
	DP15	0.835				
	DP16	0.779				
Sophistication	DP17	0.887	0.795	0.824	0.861	0.609
	DP18	0.634				
	DP19	0.862				
	DP20	0.864				
TPSB	TPSB1	0.796	0.695	0.706	0.812	0.521
	TPSB2	0.728				
	TPSB3	0.712				
	TPSB4	0.644				

Discriminant validity was assessed using the heterotrait-monotrait ratio of correlations (HTMT; Henseler et al., 2015). As shown in Table 3, most HTMT values were below the conservative threshold of .85, suggesting adequate discriminant validity among the constructs. Two pairs of constructs exceeded this threshold: sincerity—excitement (HTMT = .903) and competence—sophistication (HTMT = .912). However, to further confirm discriminant validity, we employed a bootstrapping procedure with 5,000 subsamples. The 95% confidence intervals of the HTMT values did not include 1.00, thereby supporting discriminant validity despite the elevated ratios (Henseler et al., 2015).

Table 4 HTMT Ratios

	Competence	Excitement	Ruggedness	Sincerity	Sophistication	TPSB
Competence						
Excitement	0.695					
Ruggedness	0.567	0.545				
Sincerity	0.759	0.903	0.459			
Sophistication	0.912	0.699	0.575	0.841		
TPSB	0.406	0.538	0.196	0.615	0.454	

STRUCTURAL MODEL ASSESSMENT

A structural model assessment was conducted after the reliability and validity of the items and constructs were established. The structural model is presented in the Figure 3.

The hypothesized relationships between destination personality dimensions and TPSB were tested using path analysis (see Table 4). The model explained 23.3% of the variance in TPSB ($R^2 = 0.233$), indicating a moderate explanatory power (Hair et al., 2022). Variance inflation factors (VIFs) for all constructs were well below the threshold of 5.0, suggesting that the data were free from multicollinearity concerns. The findings show that none of the dimensions of destination personality statistically significantly influence TPSB. Specifically, H2 was supported by the sample data. Excitement showed a significant positive effect on TPSB ($\beta = 0.206$, $t = 3.922$, $p < 0.001$). Similarly, H4 was also supported by the sample data. Sincerity also showed a statistically significant positive effect on TPSB ($\beta = 0.254$, $t = 4.007$, $p < 0.001$). Likewise, H5 was also supported by the data. The sophistication dimension showed a significant positive influence on TPSB ($\beta = 0.121$, $t = 2.039$, $p = 0.042$). on the other hand,

H1 and H3 were not supported by the sample data. Competence ($\beta = -0.001$, $t = 0.016$, $p = 0.987$) did not significantly affect TPSB (H1), and Ruggedness also did not show a statistically significant effect ($\beta = -0.074$, $t = 1.818$, $p = 0.069$). The findings suggest that the excitement, sincerity, and sophistication dimensions of destination personality significantly shape tourists' pro-sustainable behaviour.

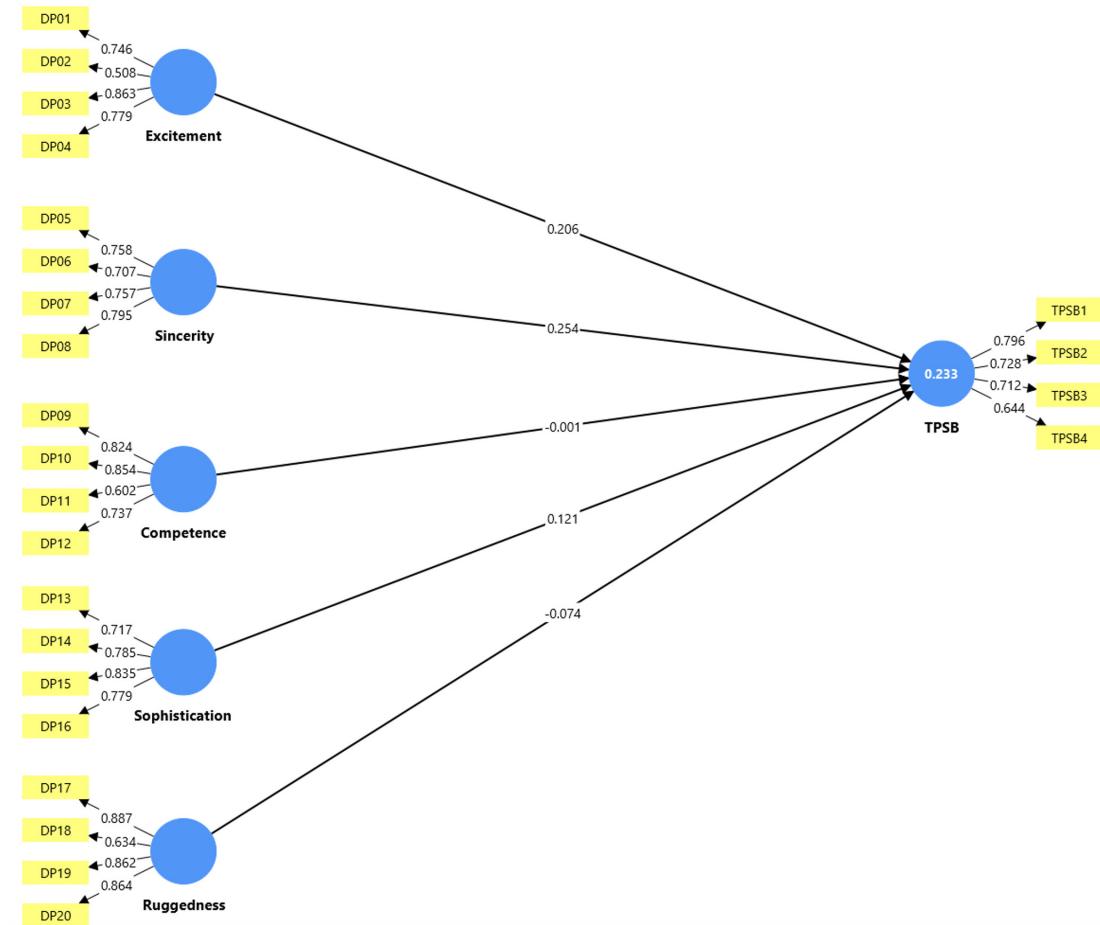


Figure 3 Structural Model

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Table 5 *Hypotheses Testing*

Path	Coefficient	STDEV	T stat	P values	VIF	CI 2.50%	CI 97.50%
H1: Competence -> TPSB	-0.001	0.050	0.016	0.987	2.069	-0.095	0.103
H2: Excitement -> TPSB	0.206	0.053	3.922	0.000	2.117	0.104	0.310
H3: Ruggedness -> TPSB	-0.074	0.041	1.818	0.069	1.402	-0.149	0.011
H4: Sincerity -> TPSB	0.254	0.063	4.007	0.000	2.543	0.125	0.378
H5: Sophistication -> TPSB	0.121	0.059	2.039	0.042	2.506	0.003	0.235

Multigroup Analysis

A multigroup analysis was conducted in SmartPLS to examine potential gender-based differences in the effect of destination personality on TPSB. To ensure meaningful multigroup comparisons, the Measurement Invariance of Composite Models (MICOM) procedure was applied (Hair et al., 2024). The assessment followed three sequential steps: compositional invariance, mean invariance, and variance invariance (see Table 5). All constructs demonstrated compositional invariance, as the original correlations were very close to 1, and the permutation p-values were nonsignificant ($p > 0.05$). This indicates that the constructs are measured similarly across male and female groups. The mean difference values for all constructs were nonsignificant, with permutation p-values greater than 0.05. This confirms that there were no systematic differences in the latent construct means between male and female groups. Similarly, the variance difference values were nonsignificant across all constructs, with permutation p-values exceeding 0.05. This suggests that the variances of the constructs are equivalent across groups. These results confirm full measurement invariance of the constructs across male and female groups.

Table 6 *MICOM*

Compositional Invariance Assessment					
Personality Dimension	Original correlation	Correlation permutation means	5.0%	Permutation p-value	Compositional Invariance?
Competence	0.996	0.991	0.976	0.738	Yes
Excitement	0.998	0.995	0.986	0.721	Yes
Ruggedness	0.989	0.985	0.948	0.407	Yes
Sincerity	1.000	0.997	0.992	0.972	Yes
Sophistication	1.000	0.994	0.982	0.978	Yes
TPSB	0.999	0.995	0.986	0.946	Yes

Mean Invariance Assessment

Personality Dimension	Original difference	Permutation mean difference	2.5%	97.5%	Permutation p value	Mean Equality?
Competence	-0.036	-0.003	-0.159	0.141	0.607	Yes
Excitement	-0.088	0.001	-0.153	0.151	0.257	Yes
Ruggedness	0.060	-0.002	-0.158	0.158	0.460	Yes
Sincerity	-0.119	0.000	-0.155	0.153	0.130	Yes
Sophistication	-0.011	-0.004	-0.167	0.150	0.900	Yes
TPSB	-0.121	-0.001	-0.157	0.159	0.123	Yes

Variance Equality Assessment

Personality Dimension	Original difference	Permutation mean difference	2.5%	97.5%	Permutation p value	Variance Equality?
Competence	0.070	-0.004	-0.218	0.216	0.550	Yes
Excitement	-0.037	-0.000	-0.244	0.252	0.789	Yes
Ruggedness	-0.044	-0.001	-0.229	0.204	0.686	Yes
Sincerity	-0.127	-0.002	-0.227	0.240	0.292	Yes
Sophistication	-0.026	0.001	-0.211	0.215	0.814	Yes
TPSB	0.045	0.002	-0.268	0.267	0.708	Yes

Establishing invariance enables a valid and reliable comparison of structural path coefficients across the two groups, thereby further crediting the MGA findings. Table 7 shows that in the pooled data, competence had no significant effect on TPSB ($\beta = -0.001$, $p = 0.987$). This pattern was consistent across both genders. For males ($\beta = -0.022$, $p = 0.750$) and females ($\beta = 0.043$, $p = 0.577$), competence did not significantly influence TPSB, indicating that tourists, regardless of gender, do not associate competence-related traits of a destination with pro-sustainable behaviour.

Excitement showed a strong positive and significant influence on TPSB in the pooled data ($\beta = 0.206$, $p < 0.001$). The effect of excitement was slightly stronger among males ($\beta = 0.224$, $p = 0.001$), suggesting that male tourists are more likely to exhibit pro-sustainable behaviour when they perceive the destination as exciting. On the other hand, the effect of excitement was weaker and only marginally significant in the female group ($\beta = 0.153$, $p = 0.056$), suggesting that excitement plays a comparatively smaller role in shaping sustainable behaviour among female tourists.

In the pooled analysis, ruggedness had a negative but statistically insignificant effect on TPSB ($\beta = -0.074$, $p = 0.069$). The influence was negligible and non-significant in the male group ($\beta = -0.018$, $p = 0.721$). Female tourists tended to link a rugged destination personality with less sustainable behaviour. In other words, if they perceived a place as rugged, they were less inclined to protect it. This could be because women view ruggedness as a sign that the environment is being harmed or lacks ecological harmony.

The findings show that a destination's "sincerity"—meaning how authentic, honest, and trustworthy it feels—was the most important factor in encouraging tourists to behave sustainably. Overall, sincerity had a strong positive effect ($\beta = 0.254$). The effect was also

positive for male tourists, though slightly weaker ($\beta = 0.214$). For female tourists, the positive effect of sincerity was the strongest among the dimensions ($\beta = 0.312$), indicating that they place a particularly high value on a destination's genuine and honest character when deciding to act in an environmentally friendly manner.

Sophistication had a positive influence on TPSB in the pooled data ($\beta = 0.121$, $p = 0.042$). For males, the effect was positive but not statistically significant ($\beta = 0.123$, $p = 0.097$). Similarly, for females, sophistication did not significantly predict TPSB ($\beta = 0.124$, $p = 0.184$). This suggests that while sophistication may be relevant at the overall level, it does not appear to be a strong gender-specific driver of pro-sustainable behaviour. These results suggest gender differences in how destination personality dimensions shape pro-sustainable behaviour. Male tourists are more influenced by excitement and sincerity, whereas female tourists respond strongly to sincerity and are negatively influenced by ruggedness. This highlights the nuanced role of gender in destination branding and sustainability initiatives.

Table 7 Multigroup Analysis

Path	Pooled Data Coefficient	p-values	Male Data Coefficient	p value	Female Group Coefficient	p value
Competence -> TPSB	-0.001	0.987	-0.022	0.750	0.043	0.577
Excitement -> TPSB	0.206	0.000	0.224	0.001	0.153	0.056
Ruggedness -> TPSB	-0.074	0.069	-0.018	0.721	-0.132	0.045
Sincerity -> TPSB	0.254	0.000	0.214	0.015	0.312	0.001
Sophistication -> TPSB	0.121	0.042	0.123	0.097	0.124	0.184

DISCUSSION

This study aimed to examine the influence of DP dimensions on TPSB through the lens of social exchange theory. The findings show that only three dimensions – excitement, sincerity, and sophistication – have a statistically significant effect on TPSB, whereas competence and ruggedness do not affect tourists' sustainable behaviours.

The findings show that excitement significantly influences tourists' pro-sustainable behaviour. These results align with previous literature, which indicates that destination excitement has a significant impact on destination satisfaction, attitude towards the destination, and tourist citizenship behaviours, such as recommending the destination (Šagovnović et al., 2024; Huaman-Ramirez et al., 2023; Kovacic & Šagovnović, 2023).

Similarly, sincerity emerged as the strongest predictor of TPSB. This finding is consistent with previous studies, which have shown that sincerity significantly influences destination satisfaction and attitude towards the destination (Chen et al., 2024; Huaman-Ramirez et al., 2023). This shows the importance of authenticity and trust in the tourist–destination exchange relationship (Ekinci & Hosany, 2006), suggesting that destinations perceived as sincere motivate tourists to reciprocate with responsible behaviours.

Furthermore, sophistication was found to positively affect TPSB. Previous research also indicates that sophistication significantly influences destination satisfaction and destination recommendation intentions (Šagovnović et al., 2024; Kovacic & Šagovnović, 2023). Social

exchange theory explains this relationship by positing that tourists perceive sophisticated destinations as providing valuable experiences, leading to reciprocal, sustainable behaviour on the part of the tourists.

In contrast, competence did not influence TPSB, echoing prior studies that found weak or non-significant effects of competence on tourist attitudes, satisfaction, and loyalty (Huaman-Ramirez et al., 2023; Šagovnović et al., 2024). Ruggedness also showed no overall effect and even a negative effect for female tourists, supporting the notion that rugged traits may signal environmental costs or overexploitation (Huaman-Ramirez et al., 2023), thereby reducing motivation to behave sustainably.

CONCLUSION, LIMITATIONS, AND IMPLICATIONS

Conclusion

The aim of this study was to assess how the personification of a destination encourages tourists to behave sustainably and to analyze gender-related differences that influence tourist behaviour. The findings show that some of the destination personality dimensions – sincerity, excitement, and sophistication – have a positive effect on tourists' pro-sustainable behaviour. Moreover, the results of the multi-group analysis show that gender influences the effect of the ruggedness and excitement dimensions on tourists' sustainable behaviour. These results address the research objectives by revealing that specific destination personality dimensions—particularly sincerity, excitement, and sophistication—positively drive tourists' pro-sustainable behaviour, thereby answering RQ1. Additionally, the findings showing gender-based differences in the effects of ruggedness and excitement answered RQ2, indicating that gender conditionally influences the effect of destination personality on sustainable tourist actions.

Limitations and Future Research Directions

This study offers meaningful theoretical and practical insights but has some limitations that provide avenues for future research. First, the cross-sectional approach limits the ability to infer causality between destination personality and tourists' pro-sustainable behaviour. Second, as with most self-reported survey data, there may be common method bias and social desirability effects. Future researchers may want to use longitudinal or even experimental approaches to capture causal relationships and changes in behaviour over time. Also, expanding the model to different cultural or geographic contexts, or adding qualitative perspectives on the topic, can broaden understanding and strengthen the case for generalizability.

Implications

Theoretical Implications

The findings of this study expand theoretical understanding of the influence of destination personality on tourists' disposition. The findings show that not all personality dimensions influence TPSB equally. The existing literature has predominantly emphasized destination personality as a holistic construct, whereas this study highlights the varying roles of sincerity, excitement, and sophistication as key antecedents of TPSB. On the other hand, competence and ruggedness have shown little to no influence.

Importantly, this research is among the few that have studied the link between destination personality theory and sustainability research. Therefore, this study extends Aaker's brand personality framework to the sustainability domain. Moreover, this study is the first to examine the antecedents of TPSB through the lens of SET. Although SET has been previously used in destination personality literature to demonstrate positive links with behavioral outcomes, its application to TPSB introduces a novel perspective, enriching the theoretical base of exchange-based reciprocity and sustainable tourism practices. The observed gender differences further enrich theoretical debates by revealing that male and female tourists interpret and respond differently to specific destination personality traits. This underscores the need for more complex models that account for gendered perceptions when linking destination personality to sustainable behavior, thereby advancing both tourism branding theory and the broader literature on TPSB.

Practical Implications

The findings of this research have significant implications for destination managers and policymakers. These results suggest that destination management organizations (DMOs) and marketers should strategically embed sincerity, excitement, and sophisticated personality aspects into their branding, marketing campaigns, and hosting experiences. For instance, using digital storytelling and visual content to highlight tangible, local, and authentic tradition (sincerity), adventurous eco-activities (excitement), and high-class cultural or food experiences (sophistication). The hospitality interactions of the visitor should seamlessly reinforce the identified destination's personality traits, including sincerity, excitement, and sophistication. This research has provided DMOs with more integrated, memorable, and substantial guidelines for visitor experiences. By utilizing integrated branding and exhibitions, DMOs can: 1) further develop and enhance their competitive attractiveness, 2) prepare higher quality mindful tourist dispositions and behavior, and 3) ensure the marketing context addresses sustainability, aligns strategies with broader sustainability strategies. Noting that highlighting authenticity, cultural affability, and/or inviting experiences can foster greater responsible behavior, while sophistication and excitement are more likely to enhance visitor behavior toward sustainability.

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