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Authors:
Alanis Dane A. Gedo Cruz | Ana Clara Lopes | André Gomes | Bilgen Mete | Ebru Kemer | Elif Acuner | Esmaeil Aghaeizadeh | Ezgi Kirici Tekel | Jhezel Reign M. Vergara | Jochelle D. Panlaqui | Jorge Andraz | Kübra Özer | Manuela Pires Rosa | Maria Concepcion A. Ang | Maria Katrina C. Alfaro | Mehmet Tekeli | Phoong Seuk Wai | Qiuhan Zhang | Sedigheh Moghavvemi | Sofia Nicole G. Tolentino | Yang Wang | Yricka M. Alvero

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University of Algarve, Gambelas *Campus*, Faculty of Economics, Building 8, 8005-139, Faro | cinturs@ualg.pt | www.cinturs.pt

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AIMS & SCOPE

The **Journal of Tourism, Sustainability and Well-being (JTSW)** is an international open-access academic journal in the tourism field that publishes high-quality, refereed articles that advance science widely available so that tourism can serve the society, enhance a sustainable development of the destinations, and positively impact the well-being of stakeholders.

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EDITORIAL

This special issue examines how short-term rentals are reshaping tourism dynamics, market behaviour, and community development in an increasingly digital and competitive environment. The first article focuses on digital trust and corporate reputation as crucial factors influencing risk perception and consumer decisions, demonstrating that confidence in platforms significantly affects travellers' willingness to book. The second article explores immersive advertising in shared accommodations, showing that virtual reality and 360-degree media strengthen trust, increase booking intentions, and enhance perceived transparency, offering a competitive advantage in the expanding short-term rental sector. The third article highlights the relevance of proximity-based planning in tourist cities, demonstrating how the spatial distribution of short-term rentals near attractions can enhance walkability, healthy tourism, and accessibility for diverse visitor profiles. The fourth article analyses digital nomadism, revealing how remote workers rely on flexible accommodation options that influence destination attractiveness, local identity, and socio-economic structures. The final article examines homestays in a heritage village, emphasising their contributions to cultural preservation, community well-being, and revenue diversification, while also identifying sustainability challenges that require coordinated governance. Collectively, these studies illustrate the profound implications of short-term rentals for tourism competitiveness, destination planning, and community resilience.

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How Does Perceived Risk on the Airbnb Platform Affect Purchase Intention? The Moderating Role of Digital Trust and Corporate Reputation

Ebru Kemer [1]
Mehmet Tekeli [2]
Ezgi Kırıcı Tekeli [2]

1. Niğde Ömer Halisdemir University, Niğde Vocational School of Social Sciences, Department of Hotel, Restaurant and Catering Services, Niğde, Türkiye
2. Karamanoğlu Mehmetbey University, Faculty of Applied Sciences, Department of Tourism Guidance, Karaman, Türkiye

ABSTRACT

The present study aims to ascertain the effect of individuals' perceived risk towards the Airbnb platform on their purchase intentions within the scope of the Perceived Risk Theory and the Signalling Theory, and to test the moderating role of digital trust and corporate reputation in this relationship. In this regard, data were collected from 467 people in Türkiye using a survey and convenience sampling methods. A moderating model was developed, and hypotheses were tested within the scope of the relevant literature. As a result of the analyses, it was concluded that the risk perceived by individuals towards the Airbnb platform decreased their purchase intentions. Furthermore, it was determined that digital trust and corporate reputation are significant moderating factors in mitigating the negative effects of perceived risk on purchase intention. The study highlights several trust- and reputation-based strategies for short-term rental platforms to increase individuals' purchase intentions by managing perceived risk. Moreover, the research provides an interdisciplinary and holistic perspective on the existing literature by revealing how risk- and trust-based theories explain consumer behaviour, particularly in digital platforms such as Airbnb in the tourism industry.

KEYWORDS

Perceived Risk, Purchase Intention, Digital Trust, Corporate Reputation, Airbnb, Türkiye.

ARTICLE HISTORY

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CORRESPONDING AUTHOR CONTACT Ezgi Kırıcı Tekeli ezgi.krc@windowslive.com Karamanoğlu Mehmetbey University, Faculty of Applied Sciences, Karaman, Türkiye

1. Introduction

The proliferation of digital platforms and the emergence of sharing economy-based applications are among the developments that have most significantly affected and transformed the global tourism sector (Guttentag, 2019). These applications have precipitated a paradigm shift within the hospitality sector, engendering an alternative to conventional hotel management. These platforms, which enable individuals to share their resources with others for a short period while earning income, are rapidly becoming widespread (Avunduk & Akpınar, 2021). Among these platforms, Airbnb stands out for the economic advantages it offers. In particular, the price-value perception, i.e. the consumer's positive evaluation of the benefit obtained in return for the cost of the service provided, is effective in the preference for Airbnb (Tussyadiah & Pesonen, 2016). The Airbnb platform was founded in 2007 and, as of 2024, operates in more than 220 countries and regions worldwide, serving consumers with more than 8 million active listings and more than 5 million hosts (iPropertyManagement, 2024). The number of reservations made through the Airbnb platform has reached 491 million, with a total reservation value of approximately 81.8 billion US dollars (Business of Apps, 2024). Airbnb, which has also gained popularity in Türkiye, offers short-term hospitality options, especially in large cities, providing an alternative (Avunduk & Akpınar, 2021).

On the Airbnb platform, guests make decisions based on risk factors such as the host's reliability, physical safety, financial losses, and service quality (Chua et al., 2020). However, an escalating degree of uncertainty and insecurity within the digital environment gives rise to intricate dynamics that profoundly influence consumer behaviour (So et al., 2018). Consumers are exposed to various risk perceptions when evaluating the services offered through these platforms, including service performance, psychological comfort, physical safety, financial losses, and time loss. The high perception of these risks has a negative impact on consumers' purchase intentions (PI) (Zubair et al., 2022). This risk perception is particularly pronounced among consumers using the Airbnb platform for the first time, which can negatively affect their PI (So et al., 2018). At this juncture, issues such as digital trust (DT) and corporate reputation (CR), which play a significant role in mitigating the negative effects of perceived risk (PR) on PI, assume particular significance (Kim et al., 2008; Othman, 2021). DT is directly related to the platform's reliability, transparency, and data protection capacity and has a facilitating effect on the consumer's purchase decision by minimising their perception of risk (Gefen, 2000). Similarly, a robust CR can increase brand trust and offset the impact of potential adverse perceptions (Ert et al., 2016). The presence of these two elements on sharing economy platforms such as Airbnb has been demonstrated to positively impact consumers' PI by reducing their perceived level of risk (Tussyadiah & Zach, 2017).

A review of the extant literature revealed no studies that addressed the moderating role of DT and CR in the effect of PR on PI. In other words, as a result of comprehensive literature reviews, it is seen that there are various studies on the effect of PR on PI (Kim et al., 2008; Guttentag et al., 2018; Bigné et al., 2020; Jun, 2020; Zubair et al., 2022; Aufa & Gunanto, 2023; Hussain et al., 2023; Permatasari & Muthohar, 2023; Suprapto & Wijaya, 2023; Phamthi, 2024). In addition, studies examining the effect of DT on PI are also found in the literature (Kim et al., 2008; Smith et al., 2019; Trivedi & Yadav, 2020; Ventre & Kolbe, 2020; Othman, 2021; Suprapto et al., 2022). Furthermore, several studies have been identified examining CR's impact on PI (Ert et al., 2016; Jun, 2020; Güllük & İrge, 2021; Aufa & Gunanto, 2023). However, no comprehensive empirical studies have been found in the literature examining these relationships in the context of moderating variables, particularly focusing on the role of DT and CR. This situation distinguishes the study from existing research and highlights the fundamental difference. DT and CR are becoming increasingly critical in shaping consumer behaviour; however, further research is required to elucidate how these concepts affect the relationship between PR and PI. Therefore, this study aims to examine the PR factors that affect consumers' PI on the Airbnb platform and reveal how DT and CR moderate this effect. In addition to the aforementioned aim, understanding how platforms providing services in digital environments shape consumer behaviour within the framework of concepts such as reliability and reputation management is also among the research objectives.

In the study, the effect of individuals' PR regarding the Airbnb platform on their PI is based on the Perceived Risk Theory (Bauer, 1960) and the Signalling Theory (Spence, 1973). The Perceived Risk Theory is based on how individuals perceive the possible adverse consequences they may encounter in their decision-making processes (Spence, 1973). In platforms where physical contact is limited, consumers perceive a high level of risk when they are unsure of the safety or accuracy of the service. In contrast to conventional hotel systems, sharing economy-based platforms such as Airbnb lack a standardised service structure, which can result in a heightened level of PR (Zubair et al., 2022). From this perspective, the Signalling Theory posits that businesses can foster consumer trust by disseminating trust-building signals to establish trust-based communication between parties (Spence, 1973). Indicators such as consumer reviews, star rating systems, and "Superhost" badges on the online platform Airbnb have been shown to reduce consumers' risk perceptions by providing indirect information about the service (Jun, 2020). In this regard, the research provides a multidimensional and holistic perspective on the literature by evaluating current concepts such as "PR," "DT," and "CR," which are frequently discussed in the literature on understanding consumer behaviour in the context of digital platforms. In particular, testing the effect of risk perception on PI through the moderating role of DT and CR variables contributes to filling theoretical gaps in the existing literature. Moreover, the study's findings offer managerial insights into digital platforms such as Airbnb, addressing crucial issues such as formulating risk reduction strategies, cultivating consumer trust, and managing reputation. In addition, it provides policymakers with data-driven insights regarding regulations and oversight processes related to short-term rental activities. In this regard, the research was conducted using a quantitative approach, and the relationships between variables were empirically tested using statistical methods to obtain the results. A comprehensive literature review was conducted on the relevant variables, thereby establishing a conceptual framework and theoretical foundation. Subsequently, the necessary analyses were conducted within the scope of the research, and the findings were evaluated and interpreted in detail.

2. Theoretical Framework and Hypothesis Development

2.1 The Perceived Risk Theory and the Signalling Theory

In the present study, the effect of individuals' PR towards the Airbnb platform on their PI is based on the Perceived Risk Theory (Bauer, 1960) and the Signalling Theory (Spence, 1973). The Perceived Risk Theory adopts an approach based on consumers' subjective assessments of the adverse consequences they may encounter due to their decisions in purchasing a good or service. This theory, first proposed by Raymond Bauer (1960), posits that individuals form their purchasing decisions by engaging in rational cost-benefit analysis and considering the potential harm and uncertainty that may arise from these decisions (Kapoor et al., 2016). Consumers perceive an increased risk, especially in digital platforms and online shopping environments, due to factors such as the absence of physical experience or the paucity of information about the quality of goods or services (Mahliza, 2020). Consequently, it is imperative for brands and platforms operating within digital environments to develop confidence-building strategies to effectively manage consumers' risk perceptions (Youn & Jin, 2021).

The Signalling Theory is a theoretical framework that posits the argument that in situations where there is information asymmetry, the party with information (e.g. a seller, service provider or institution) sends various signals to persuade the party without information (e.g. a consumer or investor) (Spence, 1973). The seminal work of Michael Spence in the domain of the labour market has since given rise to a plethora of adaptations of this theory across a wide range of disciplines, including marketing, finance, organisational behaviour and consumer research (Connelly et al., 2011). According to the theory, when consumers cannot directly observe the quality of a good or service, they form inferences about quality and reliability through the indirect indicators provided by the business (Spence, 1973). In this regard, elements such as DT practices, CR, brand value, certifications, consumer reviews, and transparency serve to reduce PR by sending positive signals to consumers (Rantanen et al., 2020; Kusraeva, 2023). These approaches, i.e., signalling strategies, are critical in online environments and sharing-based platforms to gain consumer trust and positively affect purchasing decisions (Erdem & Swait, 2004; Connelly et al., 2011). Consequently, the Signalling Theory provides a robust theoretical foundation for comprehending consumer behaviour in digital environments and analysing trust-building processes (Featherman & Pavlou, 2003).

In contexts where physical interaction is restricted, such as digital platforms, consumers cannot ascertain the quality of the service provided directly, so the level of risk perceived by consumers exerts a substantial influence on their decision-making processes (Kapoor et al., 2016). In this regard, individuals utilising sharing-based digital platforms such as Airbnb may encounter factors such as financial losses, privacy violations, and uncertainty in service quality as potential risks (Zubair et al., 2022). Within this scope, the Perceived Risk Theory posits that consumers take possible adverse consequences into account in their decisions, while the Signalling Theory emphasises the significance of strategic communication tools businesses use to mitigate these risks (Spence, 1973). DT and CR elements serve as key mechanisms through which such platforms can signal reliability and quality to consumers (Kusraeva, 2023). A well-structured CR and robust DT systems can positively affect consumers' purchasing tendencies by reducing their PR (Rantanen et al., 2020). Accordingly, the present study employs a holistic approach by utilising both theories to comprehend the impact of PR on consumers' PI. It also comprehensively analyses DT and CR concepts that influence this interaction.

2.2 Perceived Risk and Purchase Intention

PR, a significant concept in consumer behaviour literature, refers to individuals' subjective assessments of the uncertainties and potential adverse consequences they experience when purchasing a good or service (Bauer, 1960). This concept was introduced by Raymond A. Bauer (1960), who argued that PI is not merely a rational process, but rather a decision-making process involving various risks. As posited in the extant literature, PR is a multidimensional structure comprising the following dimensions: "financial, performance, physical, psychological, social, and time risk" (Featherman & Pavlou, 2003, p. 458). In digital environments, the inability to physically experience the product and limited trust in the seller increase PR and negatively affect consumers' purchasing decisions (Phamthi, 2024). As Bigné et al. (2020) demonstrate, consumers' decision-making processes when using sharing economy-based digital platforms such as Airbnb are characterised by higher PR levels than traditional hotel reservations. The following factors have been identified as increasing consumers' perception of risk on such platforms: the inability to experience a physical good or service in advance, uncertainty about the actual condition of the hospitality facility, potential problems with the host, and security concerns (Tussyadiah & Pesonen, 2016). Moreover, the potential for the hospitality service to fall short of expectations, along with the environmental assessment regarding this decision, are among the salient concerns Airbnb consumers express (Jun, 2020). In this regard, it has been asserted that elements such as consumer reviews, rating systems, and guarantee mechanisms offered by the platform play a significant role in reducing potential problems and risks and in influencing PI (Ert et al., 2016). However, there is still a lack of theoretical clarity regarding the effectiveness of these factors and under what conditions they become more functional.

PI is defined as an individual's motivation and tendency to purchase a particular good or service in the future (Ajzen, 1991). PR, one of the most significant psychological variables shaping consumers' PI, refers to individuals' feelings of anxiety and uncertainty about the adverse consequences that may arise in the process of purchasing a good or service (Bauer, 1960). The lack of opportunity to experience physical goods or services on online shopping sites and sharing-based platforms increases this risk perception and weakens consumers' intentions (Featherman & Pavlou, 2003). In this regard, PR can negatively affect the consumer's decision-making process, resulting in a decline in PI. Indeed, studies demonstrate that in situations where PR is high, individuals' online PI decreases significantly (Kim et al., 2008; Hussain et al., 2023; Permatasari & Muthohar, 2023; Suprapto & Wijaya, 2023; Phamthi, 2024). Despite offering significant empirical insights, existing research lacks robust comparative evidence regarding how PR manifests across diverse cultural settings. Furthermore, research has indicated that the PR associated with Airbnb online hospitality platforms has a negative impact on consumers' PI (Guttentag et al., 2018; Bigné et al., 2020; Jun, 2020; Zubair et al., 2022; Aufa & Gunanto, 2023). It is posited that, in consideration of the aforementioned propositions, the subsequent hypothesis was formulated.

H1. Perceived Risk negatively affects Purchaise Intention.

2.3 The Moderator Role of Digital Trust

DT is an attitude shaped by individuals' perceptions of security, privacy, and accuracy when engaging in activities such as sharing information, shopping, or obtaining services online (Mahliza, 2020). The protection of personal data and the transparency of social media platforms are among the key factors determining consumers' trust in the digital environment (Smith et al., 2019; Trivedi & Yadav, 2020; Othman, 2021; Suprapto et al., 2022). This is because individuals may refrain from voluntary interaction on digital platforms unless they are confident that their personal information will not be misused. DT, therefore, emerges as a pivotal factor affecting consumers' propensity to adopt online services and their PI (Othman, 2021). In this regard, DT offers a strategic advantage in sustaining consumer-seller relationships. In purchases made through digital platforms, PR and trust are key determinants that directly affect PI (Kim et al., 2008; Ventre & Kolbe, 2020). Therefore, PI is a significant indicator reflecting individual preferences and the effectiveness of trust signals in the digital environment (Trivedi & Yadav, 2020). However, there is a lack of in-depth analysis concerning the cognitive processes through which consumers interpret these signals. Similarly, on sharing-based digital platforms like Airbnb, consumers' intentions regarding hospitality services are influenced by their trust in the host and platform, consumer reviews, and price-performance balance (Bigné et al., 2020). In this regard, trust-based assessments encompass economic and social evaluation processes. There is a growing need for interdisciplinary models to enhance understanding of this multidimensional structure. Research indicates that consumers who exhibit a high level of DT hold a more positive disposition towards online shopping, even when they PR (Chua et al., 2020). This positive disposition can be attributed to their robust belief in the platform's reliability and the effectiveness of its data protection measures (Mahliza, 2020). However, how this belief structure is formed and its sustainability remain open to debate. Several studies have been conducted on the subject of the effect of DT on PI (Kim et al., 2008; Smith et al., 2019; Trivedi & Yadav, 2020; Ventre & Kolbe, 2020; Othman, 2021; Suprapto et al., 2022). Consequently, DT mitigates the negative effects of PR and positively affects consumers' PI, highlighting the pivotal role of trust-building strategies for businesses (Othman, 2021). However, further empirical research still needs to support the extent to which trust strategies generate lasting effects. It is hypothesised that, in consideration of the aforementioned propositions, the subsequent hypothesis has been formulated.

H2. Digital Trust plays a moderating role in the effect of Perceived Risk on Purchaise Intention.

2.4 The Moderator Role of Corporate Reputation

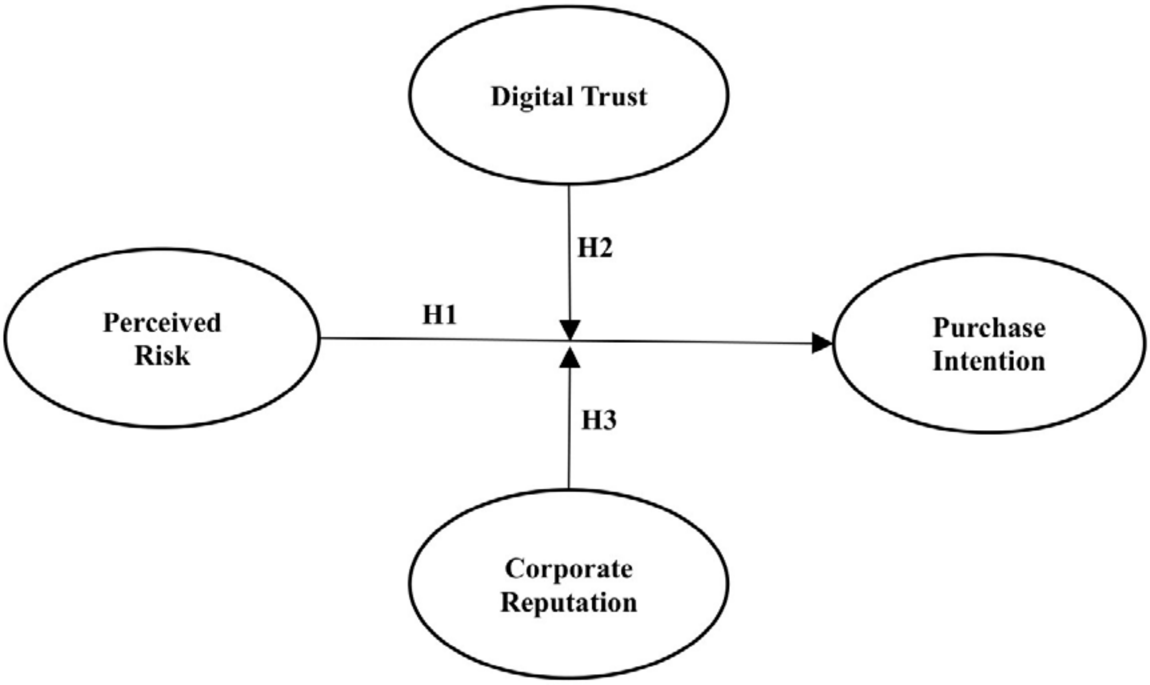
CR refers to a business's general perception and respectability among its stakeholders. This concept is shaped by many factors, such as the business's past performance, social responsibility activities, ethical values, and stakeholder relationships (Issa et al., 2023). Therefore, CR is not solely an external image but also plays a pivotal role in long-term relational capital. A robust CR contributes to attracting talented employees to the company, increasing customer loyalty and mitigating damage to the company in times of crisis (Rantanen et al., 2020). The extant literature emphasises that CR positively impacts brand value, financial performance, and long-term competitive advantage (Pollák & Marković, 2022). In this regard, businesses must prioritise not only economic success but also demonstrate a consistent stance in transparency, ethical management, and social responsibility to safeguard their CR (Issa et al., 2023). Nevertheless, existing studies treat CR as a static concept, without thoroughly examining its relationship with evolving user expectations, shifting platform dynamics, and increasing industry competition over time. This situation necessitates a reconsideration of CR as a dynamic construct, particularly in the context of digital platforms.

On today's digital platforms, consumers' PI is closely related to the perceived level of risk, particularly within the context of sharing economy models (Ert et al., 2016). For consumers who purchase hospitality services through platforms such as Airbnb, factors such as cleanliness, safety, and potential problems with the host can constitute significant risk factors (Zubair et al., 2022). This phenomenon prompts consumers to engage in emotional and rational risk analysis processes during decision-making. In this regard, CR emerges as a significant moderating variable that balances the negative relationship between PR and

PI (Güllük & İrge, 2021). Airbnb's CR is shaped by the significance it attaches to consumer experiences, the effectiveness of its customer service, and its crisis management capacity, creating a positive perception. This positive perception can strengthen consumers' PI by reducing risk perceptions (Jun, 2020). The extant literature on the effect of CR on PI supports this idea (Ert et al., 2016; Jun, 2020; Güllük & İrge, 2021; Aufa & Gunanto, 2023). In other words, a robust CR increases consumers' trust in the platform, allowing them to tolerate risk perception and thus positively affecting their PI (Ert et al., 2016; Aufa & Gunanto, 2023). Therefore, a literature review reveals a need for more comprehensive and theoretically grounded models that explain how CR functions in this process. It is posited that, in consideration of the aforementioned propositions, the subsequent hypothesis has been formulated. Furthermore, the research model developed based on the conceptual framework and hypotheses of the study is presented in Figure 1.

H3. Corporate Reputation plays a moderating role in the effect of Perceived Risk on Purchaise Intention.

Figure 1. Research Model



Source: Own Elaboration

3. Methodology

3.1 Measures

The measurement variables of the study include PR, PI, DT, and CR. The scales employed in the extant literature were utilised in accordance with the study. In this regard, the PR scale, which consists of three items developed by Mao & Lyu (2017), was utilised to measure individuals' risk perceptions. The PI scale, which consists of four items developed by Kim & Park (2013), was utilised to measure individuals' PI. The DT scale, consisting of five items developed by Kim & Park (2013), was utilised to measure DT towards Airbnb. Furthermore, a CR scale consisting of five items developed by Wei (2021) was utilised to measure CR towards Airbnb. All scales within the study were applied using a 5-point Likert scale (1=Strongly Disagree-5=Strongly Agree).

3.2 Sample and Procedure

The present study examines the effect of individuals' PR towards the Airbnb platform on their PI and the moderating role of DT and CR in this relationship. In this regard, field research was conducted to test the hypotheses, and data were collected through a survey technique. Following the acquisition of ethical approval from the second author's institution, the surveys were conducted throughout Türkiye between 28 May 2025 and 20 June 2025 using a convenience sampling method. As a result of the face-to-face and online surveys, data suitable for analysis were collected from 467 individuals. Indeed, this sample size is greater than 384, considered the threshold number for uncertain or broad populations (Gürbüz & Şahin, 2018). Consequently, the number of surveys obtained was deemed sufficient. Because the study utilised a convenience sampling method, a non-probability approach, the extent to which the findings can be generalised to the broader population is limited. This factor represents a potential limitation regarding the external validity of the research. Additionally, as participation was voluntary, the sample includes individuals with prior experience using digital accommodation platforms and those without such experience. Consequently, the sample may disproportionately represent certain user groups, restricting its diversity.

Upon thorough examination of the salient characteristics of the study participants, it was ascertained that 217 out of 467 individuals were female, while 250 were male. Furthermore, 244 were unmarried, and 223 were married. The most significant number of participants in the age group was 215 individuals aged 26-35. In comparison, the most significant number of participants in terms of educational status was 192 with bachelor's degrees. In terms of occupation, the study revealed that 71 students, 215 private sector employees, and 181 public sector employees participated in the research. Regarding income, most participants (280) indicated that they were in the middle-income bracket. Moreover, 322 participants indicated that they had previously utilised platforms such as Airbnb to rent short-term accommodation, while 145 stated that they had never engaged with such platforms.

3.3 Data Analysis Strategy

The research data analysis was conducted utilising the SPSS, PROCESS macro and AMOS analysis programmes. The data distribution was initially examined, and a normality test was performed. In this regard, the kurtosis and skewness values were examined. The kurtosis values were found to range from -0.227 to 0.792, while the skewness values ranged from -0.736 to 0.878. Therefore, the normality assumption was met within the ±1 threshold value recommended by Hair, Black, Babin and Anderson (2014). Exploratory Factor Analysis (EFA) was initially conducted to assess the validity of the research, followed by Confirmatory Factor Analysis (CFA). Furthermore, the scale structures' convergent-discriminant validity was examined using the Fornell and Larcker (1981) method. Cronbach's alpha (α) results were checked for reliability. The research hypotheses were tested using the PROCESS macro with two models, with 5.000 bootstrapping iterations and a 95% confidence interval.

4. Results

EFA with varimax rotation was applied to ensure construct validity for the variables considered in the study, and the results are presented in Table 1. Initially, an evaluation was conducted to ascertain the appropriateness of the correlation matrix for the analysis. The Kaiser-Meyer-Olkin (KMO) values were found to be at least 0.75 for all variables and suitable for analysis (Kaiser, 1974). Furthermore, Bartlett's test of sphericity ($p<.001$) was significant for all variables. Upon examination of the variances of the factors (Table 1), it was observed that the minimum explained variance was 74%, which was deemed sufficient. The α values of the factors (Table 1) were found to be at least 0.90 and were determined to be at a high level (Hair et al., 2014).

Table 1. EFA, CFA, Reliability, Mean, and Standard Deviation Values

		EFA		CFA				
Factors	**Items**	**Factor Loadings**	**Variance (%)**	**Factor Loadings[a]**	**Critical Ratio**	**α**	**$\bar{X}$**	**S.D**
PR	PR1	0.91	83.009	0.87	-	0.90	2.11	0.86
	PR2	0.92		0.88	24.224			
	PR3	0.90		0.84	22.696			
PI	PI1	0.90	79.168	0.87	-	0.91	3.93	0.73
	PI2	0.87		0.82	22.779			
	PI3	0.90		0.86	24.509			
	PI4	0.88		0.85	23.926			
DT	DT1	0.88	81.117	0.84	-	0.95	3.84	0.76
	DT2	0.92		0.88	25.953			
	DT3	0.91		0.87	25.532			
	DT4	0.91		0.88	26.109			
	DT5	0.88		0.83	23.240			
CR	CR1	0.86	74.425	0.83	-	0.91	3.84	0.76
	CR2	0.86		0.81	20.650			
	CR3	0.88		0.84	21.675			
	CR4	0.86		0.81	20.700			
	CR5	0.87		0.83	21.469			

Measurement Model's Fit Statistics: x^2=298.379, df=113, x^2/df=2.641, GFI=0.931, AGFI=0.906, IFI=0.973, TLI=0.967, CFI=0.973, RMSEA=0.059, SRMR=0.031
Note: [a] All factor loadings are significant at p<0.001
Source: Own Elaboration

The results of the CFA are presented in Table 1. Accordingly, the factor loadings are at least 0.81, higher than the recommended threshold value of 0.50 (Hair et al., 2014). Furthermore, it was detected that the model fit statistics related to the measurement model (Table 1) were appropriate (Gürbüz, 2019). Following the validation of the factor structures, the convergent and discriminant validity of the model were tested, and the results of these tests are presented in Table 2. In this regard, it was determined that the Composite Reliability (CR) statistics for the factors related to convergent validity were at least 0.90, the Average Variance Extracted (AVE) statistics were at least 0.68, and that CR>AVE held for all factors. Concerning discriminant validity, it was observed that all Maximum Shared Variance (MSV) values were lower than the AVE values. Moreover, it was found that the correlations related to the factors were smaller than the square root of the AVE values. The findings of this study suggest that convergent and discriminant validity were achieved (Fornell & Larcker, 1981).

Table 2. Convergent-Discriminant Validity and Correlations among Variables

Factors	CR	AVE	MSV	PR	PI	DT	CR
PR	0.90	0.75	0.42	**0.864***			
PI	0.91	0.72	0.59	-0.645	**0.850***		
DT	0.94	0.76	0.59	-0.619	0.766	**0.874***	
CR	0.91	0.68	0.54	-0.645	0.732	0.701	**0.825***

Significance of All Correlations: p< 0.001
*The square root of the AVE
Source: Own Elaboration

When evaluating the overall averages of the research variables, it was determined that PR ($\bar{X}$=2.11) was low, while PI ($\bar{X}$=3.93), DT ($\bar{X}$=3.84), and CR ($\bar{X}$=3.84) were high (Table 1). Hypotheses were tested using the PROCESS macro to analyse the research model (Hayes, 2018). Furthermore, the multicollinearity problem among the variables was checked using tolerance and variance inflation factor (VIF) values, and no problem was found (tolerance > 0.1, VIF < 10). Accordingly, the analysis results obtained from the two models using variable averages are presented in Table 3.

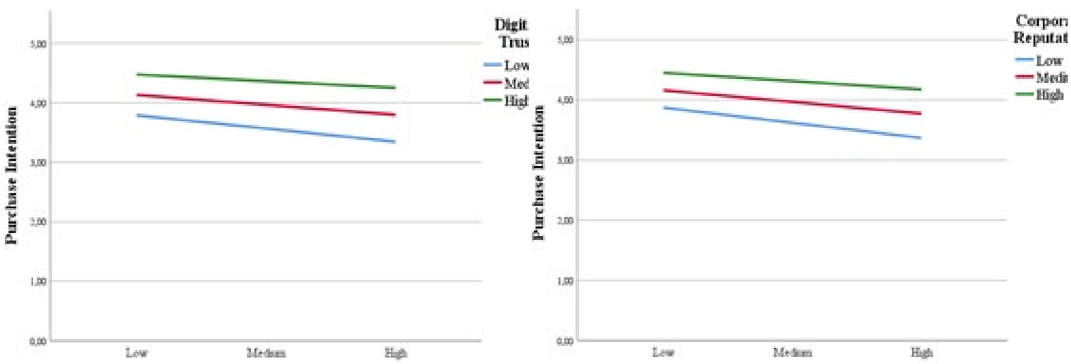
Table 3. Path Coefficients of a Theoretical Model

Effect	β	S.E	t	p	95% of CI		R^2
					LLCI	ULCI	
Model 1 - Digital Trust (Moderator)							
PR→PI	-0.195	0.033	-5.819	0.000	-0.2602	-0.1288	
DT→PI	0.521	0.036	14.546	0.000	0.4508	0.5916	0.565
PR*DT→PI	0.084	0.028	3.012	0.003	0.0293	0.1394	
Model 2 - Corporate Reputation (Moderator)							
PR→PI	-0.227	0.035	-6.494	0.000	-0.2958	-0.1584	
CR→PI	0.456	0.039	11.698	0.000	0.3794	0.5327	0.514
PR*CR→PI	0.087	0.031	2.785	0.005	0.0256	0.1482	

Source: Own Elaboration

The results of the analyses confirm the effect of PR on PI in both the first model (β=-0.195; CI=95%; [LLCI=-0.2602 & ULCI=-0.1288]) and the second model (β=-0.227; CI=95%; [LLCI=-0.2958 & ULCI=-0.1584]) (Table 3). That is, when PR increases, individuals' PI decreases. In consideration of the aforementioned results, H1 is supported. Furthermore, it was determined that the first model explained 57% of the PI, and the second model explained 51%.

Figure 2. Slope Analysis Results for the Moderating Effects



DT	β	p	S.E	t value
Low	-0.256	0.000	0.033	-7.781
Medium	-0.195	0.000	0.033	-5.819
High	-0.130	0.004	0.045	-2.879

CR	β	p	S.E	t value
Low	-0.293	0.000	0.037	-7.867
Medium	-0.227	0.000	0.035	-6.494
High	-0.161	0.001	0.047	-3.448

Source: Own Elaboration

As a result of the analyses conducted on the interactive effect, it was determined that DT (β=.084; CI=95%; [LLCI=0.0293 & ULCI=0.1394]) and CR (β=0.087; CI=95%; [LLCI=0.0256 & ULCI=0.1482]) have a moderating effect on the impact of PR on PI (Table 3). In consideration of the findings, H2 and H3 are supported. Furthermore, the results pertaining to the moderating role of DT and CR at low, medium, and high levels are visualised in Figure 2. Accordingly, it was found that as DT and CR levels increased, the negative effect of PR on PI decreased. In conclusion, all hypotheses formulated within the scope of the research were supported.

5. Conclusion

With the proliferation of digital platforms, sharing economy-based applications are among the developments that have most affected and transformed the global tourism sector. Airbnb, one of the most visible examples of this transformation, is changing the traditional concept of accommodation and creating a novel alternative (Guttentag, 2019; Avunduk & Akpınar, 2021). When providing hospitality services through digital platforms, consumers evaluate traditional factors such as price and service quality and more intangible factors such as security, reputation, and uncertainty (Mahliza, 2020). This scenario can heighten consumers' PR, primarily due to the absence of physical experience and the paucity of information available on digital platforms (Kapoor et al., 2016). Conversely, the signals businesses provide to mitigate these risks, i.e. indirect indicators, significantly decrease PR (Kusraeva, 2023). The judicious structuring of these indirect indicators has been demonstrated to positively shape consumers' PI on digital platforms by mitigating their risk perception. This finding changes the traditional approach in the existing literature, which generally considers DT effective, revealing that it can only significantly reduce risk perception when considered in conjunction with CR (Rantanen et al., 2020). Based on these assumptions, the present study tested the PR factors affecting consumers' PI on the Airbnb platform and the moderating role of DT and CR in this effect. The results obtained in the study were discussed in terms of theoretical and practical contributions, and several recommendations were developed.

The findings support existing theories and offer an opportunity to reconsider their boundaries within sharing-based digital platforms. The initial result obtained within the scope of the research is directed towards the effect of PR on PI. This finding indicates that individuals' risk factors on sharing-based digital platforms like Airbnb directly impact their decision-making processes. In other words, it has been determined that when consumers' perceptions of risk, such as security, uncertainty, and paucity of information, increase, their PI decreases. The findings obtained in this context confirm that security and uncertainty-based risks are still the primary determinants of user behaviour in the context of the sharing economy. On the other hand, they reveal that these risk perceptions focus not only on individual characteristics but also on the DT elements offered by platforms and their sensitivity to CR strategies. This suggests that consumer behaviour is shaped by individual preferences and the environmental factors embedded in the digital architecture. This finding demonstrates that PR directly affects individuals' PI (Guttentag et al., 2018; Bigné et al., 2020; Jun, 2020; Zubair et al., 2022; Aufa & Gunanto, 2023). Another study finding is that an increase in DT and CR levels is associated with a decrease in the negative effect of PR on PI. When evaluated within the scope of the Perceived Risk Theory and the Signalling Theory, it has been revealed that indirect indicators (signals) offered by businesses play a significant role in mitigating the risks perceived by consumers. DT elements, which are among these indirect indicators, positively affect consumers' PI through digital platforms by decreasing their risk perception (Smith et al., 2019; Trivedi & Yadav, 2020; Ventre & Kolbe, 2020; Othman, 2021; Suprapto et al., 2022). Thus, it becomes evident that purchasing decisions in digital environments rely on more complex cognitive processes compared to those in traditional commercial settings. Furthermore, a well-structured CR positively affects consumers' PI through digital platforms by reducing their risk perception (Ert et al., 2016; Jun, 2020; Güllük & İrge, 2021; Aufa & Gunanto, 2023). In other words, effective DT mechanisms and a robust CR increase consumers' trust in the Airbnb platform, facilitating risk perception tolerance and positively shaping their PI. This finding indicates the multi-faceted nature of DT on highly interactive digital platforms such as Airbnb, demonstrating that digital signals are more effective when evaluated in interaction with CR rather than in isolation. At this point, it can be argued that trust-building on digital platforms is linked to technological interfaces and the platform's cultural and social capital. In this regard, the research extends extant literature on risk, trust, and reputation by highlighting the role of structural trust elements provided by platform architecture.

5.1 Theoretical Implications

This present study evaluates consumer decision-making processes on digital platforms in the context of the transformation created by the sharing economy in the tourism sector within the framework of the Perceived Risk Theory and the Signalling Theory. The study reaffirms the decisive effect of PR on consumer behaviour in the digital environment and finds that factors such as a paucity of physical experience, information confusion, and security concerns directly and negatively affect consumers' PI. This finding lends further credence to the notion that the Perceived Risk Theory remains valid in the context of digital tourism, thus encouraging further research in this area. Moreover, within the paradigm of the Signalling Theory, the study demonstrates that indirect indicators proffered by businesses on digital platforms are pivotal in influencing consumer decision-making. This finding suggests trust-building signals are not limited to brand awareness; DT elements structured in the digital environment and CR strategies also function as effective signals in consumer behaviour. Moreover, the study under discussion highlights the moderating effects of DT and CR elements on the relationship between PR and PI, indicating that these two variables should be considered regarding their direct and contextual effects. Indeed, as has been demonstrated, DT and CR are significant factors in alleviating the negative effects of PR. This finding regarding Airbnb introduces an alternative approach to the existing literature on tourism. The theoretical findings revealed that recommendations for application should be based on practical observations and a theoretical foundation. In particular, strategies to reduce consumers' PR must be addressed beyond managerial decisions, using policies consistent with behavioural theories and supported by empirical evidence. Within this framework, initiatives to strengthen elements such as DT and CR should be designed at an operational level and as theoretically meaningful, coherent, and literature-supported interventions. The present study provides an interdisciplinary and holistic perspective on the extant literature by revealing how risk- and trust-based theories work together to explain consumer behaviour, specifically in the context of digital platforms in tourism. Moreover, the findings on direct and moderating effects extend the existing literature on short-term rental platforms and enrich the scope of the Perceived Risk Theory (Bauer, 1960) and the Signalling Theory (Spence, 1973).

5.2 Practical Implications

The findings of this study provide practical implications for businesses operating on digital tourism platforms, particularly sharing economy-based service providers such as Airbnb. The research findings indicate that PR is a determining factor in consumers' PI. In this regard, it is incumbent upon managers and service providers of digital platforms to prioritise security, transparency and the presentation of verifiable information, with a view to minimising users' perception of risk. For instance, confidence-building practices such as reviews of hospitality providers, past user ratings, identity verification systems, and open communication channels should be widely implemented. The positive impact of CR and DT infrastructure on consumers must be considered on these platforms. Digital platforms such as Airbnb should implement in-service arrangements to improve user experiences and adopt robust policies in areas such as data security, the protection of personal information and transaction security in the online environment to increase the reliability of their brands. In this regard, Airbnb needs to make its algorithm-based rating systems more transparent, develop mechanisms to verify the accuracy of reviews, and enforce quality standards for hosts more strictly. In addition, innovative tools such as AI-powered risk analysis systems or real-time user support can also effectively support trust-based decision-making processes. Furthermore, signalling strategies should be placed at the centre of digital marketing and brand management. A more strategic structuring of messages that inspire consumer confidence, visual and written content, user-friendly interfaces, and customer support systems will decrease consumers' perception of risk and increase their propensity to purchase. Therefore, platform managers and service providers must base their marketing strategies on material advantages and emotional and social factors to establish trust. Furthermore, policymakers must enhance regulatory frameworks, establishing security and transparency standards for digital platforms within the sharing economy. In particular, there is a necessity for clearer regulations on issues such as digital identity verification, user data protection, legal responsibilities of service providers, and user rights. With the escalating platformisation process in the tourism sector due to digitalisation, public authorities and local governments must formulate policies that enhance user confidence and ensure fairness. They should also devise comprehensive strategies, particularly in platform control, licensing, and taxation. Moreover, to enable local authorities to monitor these platforms more effectively in critical areas such as urban planning, housing rights, and tourist density, there is a need for a comprehensive oversight infrastructure that incorporates real-time data sharing, digital monitoring systems, and transparent reporting tools. Such technological solutions would provide public institutions with strategic advantages in analysing regional concentrations of short-term rentals, assessing their impacts on the housing market, and ensuring compliance with local regulations. Consequently, practices prioritising user safety can be encouraged, while maintaining the balance between housing supply and demand and preserving the social fabric of neighbourhoods, thus fostering sustainable harmony between community welfare and digital tourism activities.

5.3 Limitations and Future Research

The findings of this study are subject to certain limitations and offer a range of opportunities for further research. The research data was collected in Türkiye during a specific period. This may limit the generalisability of the results. Comparative studies conducted in various countries, especially societies where the level of trust in the sharing economy and digital literacy differ, may yield different results. The study addressed the variables of PR, DT, and CR at a general level. However, in future studies, the sub-dimensions of these variables (e.g., perceived social risk, financial risk, cognitive trust, emotional trust, and ethical, social or performance-oriented dimensions of reputation) can be addressed separately to expand the research. Furthermore, this present study focused solely on the Airbnb platform. However, comparative studies with similar sharing economy applications could provide more in-depth information about the differences in consumer perceptions between digital platforms. Finally, a quantitative data collection method was ultimately deemed optimal in the present study. In subsequent studies, using mixed or qualitative data collection methodologies may prove advantageous in acquiring more nuanced outcomes pertaining to consumers' risk perceptions, trust, and reputation-building processes within digital environments. Although quantitative data collection methods have enabled the conceptual framework to be tested measurably, they may be limited in fully revealing complex, contextual, and subjective structures such as trust and reputation. Qualitative or mixed-method approaches (e.g., supporting survey data with in-depth interviews or focus group studies) may provide a more holistic understanding of how consumers experience risk perceptions in digital environments and how they build or question trust and reputation. This is particularly significant in the case of Airbnb, as elements such as user interaction, reviews, and service experience shape DT not only on a cognitive level but also on an emotional and social level. Such methodological diversifications can increase future research's theoretical depth and practical validity.

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ORCID

Ebru Kemer https://orcid.org/0000-0002-7620-6297

Mehmet Tekeli https://orcid.org/0000-0002-6069-4740

Ezgi Kırıcı Tekeli https://orcid.org/0000-0002-1613-8448

Notes on contributors

Ebru Kemer is graduated from Akdeniz University, Department of Hospitality Management (2010). She received her master's degree from Niğde University, Department of Production Management and Marketing (2013) and her Ph.D. degree from Nevşehir Hacı Bektaş Veli University, Department of Tourism Management (2017). She works as an associate professor at Niğde Ömer Halisdemir University in Niğde/Türkiye (2022). The main fields of study are tourism and gastronomy.

Mehmet Tekeli is graduated from Nevşehir Hacı Bektaş Veli University, Department of Tourism Management (2014). He received his master's degree from Nevşehir Hacı Bektaş Veli University, Department of Tourism Management (2016) and his Ph.D. degree from Nevşehir Hacı Bektaş Veli University, Department of Tourism Management (2021). He works as an associate professor at Karamanoğlu Mehmetbey University in Karaman/Türkiye (2024). The main fields of study are tourism and tourism management.

Ezgi Kırıcı Tekeli is graduated from Nevşehir Hacı Bektaş Veli University, Department of Tourism Guidance (2014). She received her master's degree from Nevşehir Hacı Bektaş Veli University, Department of Tourism Management (2016) and her Ph.D. degree from Nevşehir Hacı Bektaş Veli University, Department of Tourism Management (2020). She works as an associate professor at Karamanoğlu Mehmetbey University in Karaman/Türkiye (2023). The main fields of study are tourism guidance and tourism management.

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Trusting the Virtual: How Virtual Reality Advertising Influences Customer Decisions

Yang Wang [1]
Seuk Wai Phoong [1]
Qiuhan Zhang [1]
Sedigheh Moghavvemi [1]

1. Department of Decision Science, Faculty of Business and Economics, University of Malaya, Kuala Lumpur, Malaysia

ABSTRACT

This study aims to explore the impact of virtual reality, 360-degree video, static image advertisements on customer trust and their tendency to approach shared accommodation. A total of 306 questionnaires were collected through a within-subject field experiment and analysed using Smart PLS, to measure the effectiveness of each advertising method on customer decision making. The findings reveal that both VR and 360-degree video advertisements significantly enhance customer trust and approach tendency compared to static images. Furthermore, the interactivity and vividness of advertisements significantly impact trust in advertising directly while influencing brand trust indirectly. Brand trust has a stronger impact on behaviour in VR and 360-degree video advertising, while advertising trust is more influential in static image ads. For shared accommodation advertisers, enhancing the vividness and interactivity of advertisements - particularly through the development and use of virtual reality (VR) and 360-degree video ads - is key to building customer trust by creating more immersive user experiences. Managers should recognise that vividness and interactivity influence brand trust indirectly through advertising trust and thus should prioritise enhancing advertising trust as a key strategic objective.

KEYWORDS

Virtual Reality, Advertising Effectiveness, Trust, Airbnb, Approach Tendency.

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CORRESPONDING AUTHOR CONTACT Sedigheh Moghavvemi sedigheh@um.edu.my Department of Decision Science, Faculty of Business and Economics, University of Malaya, Kuala Lumpur, Malaysia

1. Introduction

The shared accommodation sector has grown rapidly with the rise of digital multilateral platforms that connect hosts and travellers for short-term stays (Gerwe, 2021). Prominent examples include Airbnb, HomeAway, Booking.com as well as regionally popular platforms such as Xiaozhu and Tujia in China. Among these, Airbnb has emerged as a leading example of the sharing accommodation model, owing to its extensive global reach and highly active user community (Bianco et al., 2024).

Trust is widely recognised as a crucial factor in the success of shared accommodations platforms, as guests often book stays with unfamiliar hosts based solely on online information (Ji et al., 2024). Perceived risk and lack of trust remain key concerns that can deter potential bookings (Lee & Deale, 2021). While existing research has examined trust in hosts and trust in platforms as intermediaries (Chua et al., 2020; Negi & Tripathi, 2023), there is limited understanding of how trust in advertising content – such as photos, videos, or virtual reality (VR) previews – shapes overall platform trust and booking intentions.

Advancements in information and communication technology (ICT) have expanded advertising formats from static images to 360-degree videos and VR experiences, which can enhance immersion and provide realistic previews of accommodation spaces (Beck et al., 2019; Lo & Cheng, 2020). Many international hotel brands now employ 360-degree videos and VR to showcase rooms and facilities (Leung et al., 2020). Similarly, some shared accommodations platforms are experimenting with these immersive technologies to increase transparency and reduce guests' uncertainty (Fan et al., 2023). However, evidence of the effectiveness of these formats in building guest trust in such platforms remains scarce.

Airbnb previously announced plans to develop VR and AR features to enhance guest trust and browsing (Airbnb, 2017); however, years later, VR functionality remains unimplemented. One possible reason for this delay is that adopting cutting-edge innovations can be challenging without clear evidence of their effectiveness (Kim et al., 2023). In contrast, Kaolahome, a Chinese shared accommodation platform, has recently introduced VR functionality to strengthen its market competitiveness (Fan et al., 2023). This contrast highlights Airbnb's cautious approach to technological adoption and underscores the need for further research into the effectiveness of VR advertising.

Prior studies in hospitality marketing have mainly focused on traditional hotels, leaving the rapidly expanding shared accommodation sector underexplored in this regard (Barhorst et al., 2021; Lyu et al., 2021). Most studies within the context of Airbnb examine trust in hosts (Godovykh et al., 2023), trust in brand (Chua et al., 2020), or both (Mao et al., 2020; Li & Tsai, 2022). Furthermore, few studies have compared trust formation across different advertising formats – static images, 360-degree videos, and VR- within the same context.

To address these gaps, this study investigates how trust in advertising content influences trust in the platform and guests' intention to book stays in the context of shared accommodation. Drawing on the Stimulus-Organism-Response (SOR) framework, it examines the psychological mechanisms through which different advertising formats shape user trust and behavioural intentions. Specifically, this study has two objectives:

1) To investigate how immersive advertising formats – specifically VR technology- influence guests' trust in advertising content and in the shared accommodation platform (Airbnb).
2) To compare the relative effectiveness of VR, 360-degree video, and static images in enhancing advertising trust, brand trust, and guests' intention to book accommodation.

This study offers several contributions by clarifying the critical role of trust in shaping consumer behaviour within the shared accommodation market, particularly regarding different advertising formats. First, drawing on the SOR framework, it enhances understanding of how trust in advertising and trust in the platform influence guests' approach tendencies and booking decisions. Second, it expands existing knowledge by providing a comparative analysis of the effectiveness of three preview modes (VR, 360-degree video, and static images) through within-subject and field experiments. This study also highlights the critical link between trust in advertising information and trust in the platform, suggesting that more engaging and realistic advertising formats can strengthen consumer trust. Finally, the findings can guide platform operators and individual hosts in designing effective advertising strategies. The demonstrated potential of 360-degree videos and VR to build trust suggests that platforms like Airbnb should consider greater investment in these immersive technologies to maintain competitiveness.

2. Literature Review

2.1 Impact of Virtual Reality on Advertising and Marketing

With the advancement of ICT, traditional marketing techniques struggle to meet evolving customer needs (Akbari et al., 2023). These advancements have driven innovation in advertising, enabling businesses to create immersive brand experiences and build stronger consumer relationships (Kalyvaki et al., 2023). While VR in advertising is still in its early stages, with limited understanding of its effective use (Zhou et al., 2023), the continued maturation of technology is prompting advertisers to develop strategies for VR ad design and dissemination (Wu et al., 2022).

Virtual Reality (VR) technology encompasses the display of 360-degree videos and images using head-mounted devices or on flat screens (Wu et al., 2024). The most common VR advertising in recent years has been the use of traditional 2D advertisements on a virtual reality platform (Wu et al., 2022). In particular, 360-degree videos on flat screens allow users to control and adjust the viewing angle using a mouse or device. In contrast, head-mounted VR focuses more on customer experience and personal perception, enabling the video angle to change freely based on the user's physical movements.

Researchers have compared the effectiveness of various advertising formats in tourism and hospitality. While some studies focus on VR versus traditional advertisements (Lyu et al., 2021), others differentiate between head-mounted VR, 360-degree videos, and static images (McLean & Barhorst, 2021; Yung et al., 2021; Griffin et al., 2023). VR advertisements and 360-degree video advertisements are preferred over static images for their higher interactivity (Fan et al., 2023) and significant enhancement of customer behavioural intentions (Griffin et al., 2023). Additionally, Bogicevic et al. (2021) highlight that customers generally perceive VR advertisements as more engaging than 360-degree video and static image advertisements, often describing them as a "cooler" experience. However, these studies focus mainly on tourism destinations and hotels, overlooking the shared accommodation sector. Given the sector's rapid growth and influence on visitor experiences, examining the differential impact of advertising formats in this context is essential to bridging the research gap and helping platforms optimise their marketing strategies.

2.2 Theoretical Foundation

The SOR framework from environmental psychology (Mehrabian & Russell, 1974) serves as the theoretical foundation for this study. Recognised as a core model in virtual reality research in tourism, the SOR framework has been widely adopted to explain how immersive technologies influence consumer behaviour (Loureiro et al., 2020; Ying et al., 2021). According to this framework, an environmental stimulus (S) triggers an internal emotional or cognitive state (O), which subsequently shapes a behavioural response (R) (Zhu et al., 2020a). In this study, the different advertising formats (VR, 360-degree video, and static images) function as the stimuli, trust in advertising and brand trust represent the organism stage, and the customer's approach tendency corresponds to the response.

Within the social psychology literature, trust is often conceptualised as comprising both specific and general beliefs within an "antecedents-trust-outcomes" framework (Mao et al., 2020). This perspective positions trust as a mediator that channels the effects of informational cues on behavioural outcomes. In the context of immersive advertising, trust has been found to play a crucial mediating role, as interactivity and vividness enhance trust, which in turn shapes consumer engagement (Arghashi & Yuksel, 2022). Similarly, trust in advertising is typically treated as an antecedent to brand trust: consumers first evaluate whether the advertising message itself is credible and transparent, and this initial judgment then influences their overall trust in the advertised brand (Li & Miniard, 2006; Hussain et al., 2020). Therefore, in line with trust theory and the SOR paradigm, this study models trust in advertising as preceding brand trust rather than the reverse. This directional relationship reflects the typical sequence in consumer information processing: customers form trust judgements about the ad before extending that trust to the brand it represents. Integrating this trust pathway into the SOR framework helps clarify how different advertising stimuli shape consumer approach tendencies through a sequential trust-building process.

2.3 Trust in Advertising and Brand

Trust is defined as "the willingness to rely on a confident exchange partner" (Moorman et al., 1992, p. 315) and is essential for building relationships between individuals and firms. It influences users' willingness to exchange information (Bigné et al., 2023) and plays a vital role in fostering strong consumer-brand relationships (Samarah et al., 2022). In digital marketplaces, where physical interactions are absent, trust becomes even more critical, as consumers rely on the perceived credibility of online information (Cardoso et al., 2022). Customer trust in the information presented in online advertising is crucial to their decision-making process (Leong et al., 2020). This highlights the importance of fostering trust in advertising content to ensure a positive reception and to influence customer behaviour effectively. Since this study does not involve host information in the advertisements, only trust in brand and advertising is included.

Trust in brand further enhances online purchase intentions (Samarah et al., 2022), particularly on platforms like Airbnb (Wang et al., 2023), where it significantly influences customer decision-making (Mao et al., 2020). Del Chiappa et al. (2021) highlighted that travellers often refrain from using platforms like Airbnb due to distrust toward service providers, the platform itself, and other users. In particular, in a post-pandemic context, the ability of a brand like Airbnb to establish and maintain trust is vital for its continued success.

Customer trust in advertising, as a key factor influencing customer behaviour, has been acknowledged in some studies but has not received sufficient attention. Additionally, the mechanisms behind the formation of trust in advertising and its specific role remain underexplored. Moreover, the varying manifestations of advertising trust and brand across different types of advertisements have yet to be thoroughly investigated.

2.4 Hypotheses Development

The importance of interactivity has long been widely recognised in the fields of virtual reality (Steuer, 1992; Bogicevic et al., 2021; Lyu et al., 2021; Slevitch et al., 2022), media, advertising, and marketing (Kuo & Chen, 2023). Studies have shown that interactivity affects user-perceived behaviour in virtual shopping environments (Kim et al., 2023) and impacts individual's cognitive load (Petersen et al., 2022). Recent research in tourism confirms that interactivity significantly enhances digital user experience (Henriques et al., 2024). Furthermore, expert insights suggest that brand experiences have become increasingly complex across online and offline channels that are seamlessly connected, reinforcing the need for cohesive and interactive design (Toniatti et al., 2023). These findings collectively highlight interactivity as a core factor for enhancing user experience and optimizing technology design.

In studies examining the relationship between interactivity and trust, researchers have found that higher levels of interactivity facilitate trust-building (Lee, 2005; Wu et al., 2010; Wang et al., 2013; Jun & Yi, 2020; Samarah et al., 2022). Additionally, Samarah et al. (2022) highlighted that interactivity not only enhances user experience but also strengthens the trust consumers place in digital platforms and services. Further research has revealed that varying levels of interactivity across media technologies influence the perceived credibility of advertisements (Logan et al., 2012), and interactivity has become a crucial prerequisite for brands to establish and maintain consumer trust (Wang et al., 2013). Jun and Yi (2020) also confirmed the positive impact of interactivity on brand trust.

Although existing studies have validated the relationship between interactivity and trust, there is still a lack of systematic research on how interactivity in different advertising contexts influences brand trust through the mediating role of advertising trust. Therefore, this study proposes the following hypotheses:

H1. Interactivity positively impacts customer trust in advertising.
H2. Interactivity positively impacts customer trust in brand.

Vividness, a critical characteristic of media technology, has been widely recognised across various fields. Vividness is defined as " the representational richness of a mediated environment as defined by its formal features, that is, the way in which an environment presents information to the senses" (Steuer, 1992, p. 11). Vividness is not only an essential component of virtual reality technology's functional quality (Zhu et al., 2022) but is also regarded as a measure of realism or richness in media technologies (Yim et al., 2017). The richer and more vivid the information provided by the media, the more efficient the communication between the user and the media (Wu et al., 2021). Furthermore, the more vividly a product is presented to the customer through the advertisement, the richer the information conveyed to the customer (Jiang & Benbasat, 2007).

The impact of vividness on consumer perception is particularly evident in the realm of advertising. Research indicates that product information in image and video advertising is more vivid and attractive to customers than information in text advertising (Yeo et al., 2020). For instance, image and video advertisements are more vivid than text-based ads and are more effective in stimulating consumer interest. Sheng et al. (2020) advocate for firms to incorporate more vivid elements in their advertisements to stimulate customers' imagination and inspiration. Further studies have demonstrated that the higher the quality of the information, the more consumers trust the information (Bao & Wang, 2021).

Vividness in VR environments plays a critical role in shaping user attitudes and potential trust responses (Kim et al., 2021). Existing research primarily focuses on the influence of vividness on consumer perceptions and behaviours while neglecting how vividness affects trust in advertisements and brands. Further research is also needed on how the vividness of different advertising formats—such as image, video, or VR ads—translates into consumer trust (Figure 1). Based on the discussion above, this study proposes the following hypotheses:

H3. Vividness positively impacts customer trust in advertising.
H4. Vividness positively impacts customer trust in brand.

The impact of advertising on brand trust has been extensively examined from various perspectives, including advertising credibility (Hussain et al., 2020), visual elements such as motion direction (Monahan & Romero, 2020), the speed of disclaimers (Herbst et al., 2012), and the appeal of social media advertising (Aisyah, 2023). Numerous traditional advertising models have demonstrated that the positive psychological responses elicited by advertisements translate into favourable attitudes towards the advertised products or brands (Yim et al., 2012). These findings highlight the critical role advertising plays in shaping consumer perceptions and fostering brand trust.

For example, Li and Miniard (2006) found that even simple trust-oriented appeals in advertisements can significantly enhance a brand's perceived trustworthiness. Likewise, Hussain et al. (2020) showed that when advertisements communicate honest and transparent information, consumers are more likely to perceive the brand as credible and trustworthy. This suggests that trust in advertising often precedes and influences trust in the brand itself, as consumers typically assess the credibility of an advertisement before forming opinions about the brand it promotes.

In the context of shared accommodation platforms like Airbnb, this connection is particularly relevant. Users are more likely to trust the platform when they perceive that the information presented is accurate, complete, and clear (Li & Tsai, 2022). Therefore, fostering trust in advertising not only increases acceptance of the ad content but also strengthens overall brand trust. Based on this reasoning, we propose the following hypothesis:

H5. Customer trust in advertising has a positive influence on brand trust.

Behavioural responses (R) in the SOR model in environmental psychology are categorised into approach tendency and avoidance tendency. Approach behaviour is described as a customer's intention to physically remain in an environment and actively explore it, indicating a tendency to approach (Moye & Giddings, 2002), while avoidance behaviour represents the opposite.

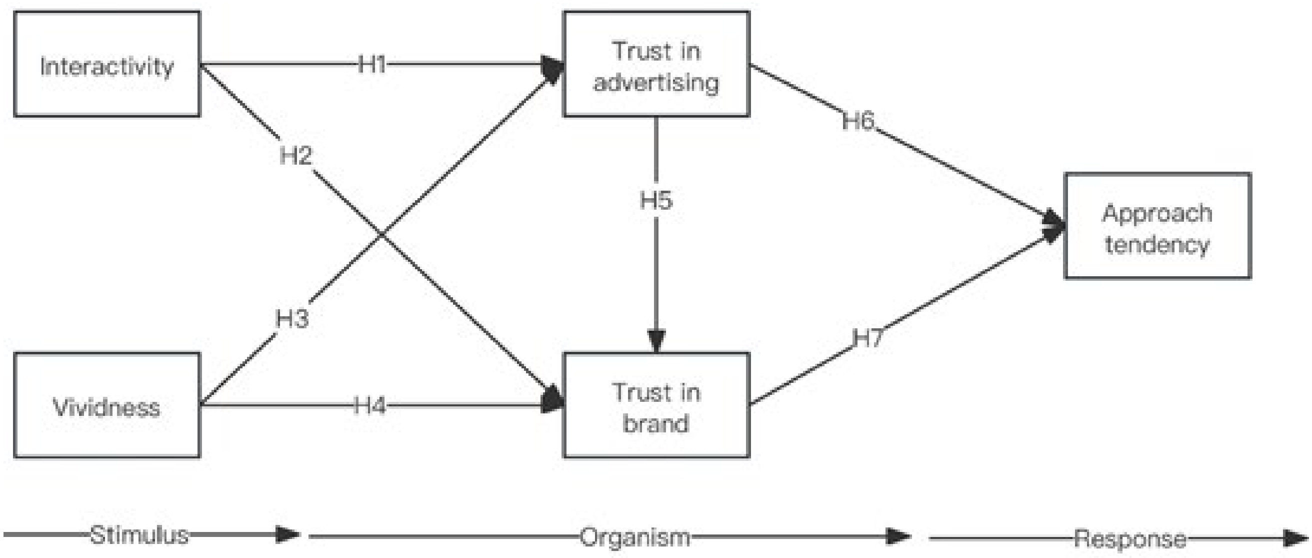
On the Airbnb platform, research shows that the stronger the trust customers have in Airbnb, the more likely they are to continue using the platform (Li & Tsai, 2022). Conversely, if customers develop negative attitudes towards advertising, their desire to purchase decreases (Dotson & Hyatt, 2000). This further underscores the importance of advertisement trust in the sharing economy.

Trust, as an affective and cognitive response, influences people's value judgements and behaviours (Zhu et al., 2020b). In advertising research, the visual appeal of advertising impacts purchase intention by shaping attitudes towards the advertising and the brand (Weismueller et al., 2020). Thus, advertisements that effectively build trust can improve customer attitudes towards the brand and increase the likelihood of purchase, particularly on platforms like Airbnb.

By integrating the SOR framework and three behavioural theories, Yuen et al. (2023) demonstrated that customer trust significantly influences behavioural responses towards VR technology. Tan et al. (2023) leveraging the technology acceptance model (TAM) and SOR theory, revealed that trust in sellers significantly impacts behavioural responses towards VR tourism. Additionally, numerous studies (Lee & Min, 2021; Liu et al., 2022) have confirmed that trust significantly influences behavioural response based on the SOR framework. Hence, this study proposes the following hypotheses:

H6. Trust in advertising has a positive impact on approach tendency.
H7. Trust in brand has a positive impact on approach tendency.

Figure 1. Research Model



Source: Own Elaboration

3. Methodology

3.1 Research Design

According to Charness et al. (2012), the two most common types of experiments are within-subject and between-subject designs. In a within-subject experiment, each participant experiences all experimental treatments, which may include different preview formats (e.g., VR, video, images) (Yung et al., 2021). This design has several advantages: it requires a smaller sample sizes, increases the likelihood of detecting true differences among treatments, enhances statistical power, and aligns well with theoretical perspectives in marketing research (Viglia et al., 2021). Given these strengths, this study adopts a within-subject field experiment with three distinct preview modes: A) VR, B) 360-degree video, and C) static images. In this study, the term 'preview modes' specifically refers to these three advertising presentation formats, while 'conditions' refer to the different sequences in which these modes are experienced by participants.

While within-subject designs offer important benefits, they can be affected by carryover effects, where a participant's experience with one mode influences their perception of subsequent modes. To minimise this risk, we used two standard strategies: counterbalancing and rest intervals. First, participants were randomly assigned to one of six possible sequences (ABC, ACB, BAC, BCA, CAB, and CBA), ensuring that each preview mode appeared equally often in each position (Greenwald, 1976; Yung et al., 2021). Second a two-minute break was provided between each preview to allow participants to reset mentally and emotionally before viewing the next mode.

3.2 Study Setting and Advertising Materials

To ensure realism and comparability with prior research (Bogicevic et al., 2019; Lo & Cheng, 2020) a professionally produced 360-degree video advertisement of an Airbnb property was selected as the core material. Because Airbnb has not yet launched official VR viewing functions, the 360-degree video was sourced from YouTube (https://www.youtube.com/watch?v=mAOa-KTOv1Y), featuring the Airbnb logo and showcasing a modern apartment interior. This video was chosen based on clear quality, a stable camera position, and suitability for VR viewing using the PICO4 headset, to avoid discomfort or motion sickness. To maintain content consistency across all preview modes, the same apartment was shown in all three formats:

- VR Mode (A): Participants viewed the 360-degree video using a head-mounted display (HMD) and controllers, allowing natural head movement and a sense of presence.
- 360-Degree Video Mode (B): Participants watched the same 360-degree video on a standard 2D screen, with manual panning capability but without immersive depth.
- Static Image Mode (C): Following Bogicevic at al. (2021), 20 high-resolution screenshots were extracted from key scenes in the video, proportionally covering the living room, kitchen, master bedroom, second bedroom, and bathrooms. This provided a complete static visual representation equivalent to the video content.

By using the same underlying material across all preview modes, we ensured that any differences in participants' trust and booking intentions arise solely from the presentation format, not from differences in the property itself. To further address the reviewer's suggestions, we have included representative snapshots of the static images and screenshots from the 360-degree video and VR experience as an Appendix. Interactive VR files can be provided to the interested readers upon request, as embedding live VR within the manuscript is technically unfeasible.

3.3 Instruments and Data Collection

The Research was approved by the University Malaya Ethics Unit, and no personal data was collected from the respondents. The questionnaire design in this study was divided into two sections. Section A explored participants' understanding and perceptions of the advertisement content, while Section B collected socio-demographic data and participants' prior experiences. Since this study adopts a within-subject experimental design, each participant was required to answer the questionnaire three times under different conditions. To prevent participant fatigue or lapses in attention due to the prolonged experimental process, which could negatively impact data quality and validity, the number of questionnaire items was minimised. Reducing the number of items effectively improved participant engagement, enhanced data accuracy, and reduced potential biases from lengthy questionnaires (Zhong et al., 2021). The items measuring interactivity were adapted from Jiang et al. (2021) and Park and Yoo (2020). Four items were employed to measure vividness (Ho et al., 2022). Trust in advertising was measured with three items adapted from (Soh et al., 2009) and trust in brand was measured with three items adapted from Chuah et al. (2022) and Li and Tsai (2022). Approach tendency was measured using six items adapted from Deng and Poole (2010) and Lin (2022).

Before data collection, the questionnaire was distributed to 10 doctoral students and 20 university faculty members in relevant fields, who assessed its readability, grammatical accuracy, and overall validity.

Based on their feedback, necessary adjustments were made to improve the questionnaire. A pilot test with 30 participants confirmed that the questionnaire's reliability and validity were satisfactory.

3.4 Sampling and Experiment Procedure

Bogicevic et al. (2019) selected students, faculty, and staff as participants in a study comparing VR, 360-degree, and still images. Following this approach, this study recruited 102 students, staff and faculty members from a university in Malaysia. To mitigate potential order effects in this within-subject experimental design, data collection strictly followed the experimental protocol, using a counterbalancing technique that randomly assigned participants to six predefined sequences. Before each preview, the moderator set the scenario "You are travelling recently and planning to book a room on Airbnb. When you enter the website, you will see the following advertising". Each sequence was equally represented to ensure balanced exposure across participants. Participants viewed different types of advertisements in a specified order, completed a questionnaire after each viewing, and waited two minutes before proceeding to the next ad preview. Since each participant completed three questionnaires, this study ultimately collected 306 valid questionnaires.

3.5 Data Analysis

The research model was examined using partial least squares structural equation modelling (PLS-SEM) following the procedure outlined by Hair and Alamer (2022). There are two key assessments in the systematic methodological steps of PLS-SEM: measurement model evaluation and structural model evaluation. First, measurements model was assessed for composite reliability, item loading, average variance extracted (AVE), and discriminant validity. It is recommended that subsequent studies use the Heterotrait-monotrait ratio (HTMT) to assess the discriminant validity of the model. Then, the structural model was evaluated based on the coefficient of determination (R^2), path coefficient, and cross-validated redundancy (Q^2).

4. Results

4.1 Demographic Profile

Frequency analysis showed that there were similar numbers of male and female participants, 50 males (49.02%) and 52 females (50.98%). The age distribution was youthful, with 77.45% of participants aged 18-34 years. The participants consisted of postgraduate students (90.20%), staff (6.86%), and faculty (2.94%). More than half of the 102 participants had used Airbnb (64.71%), 78.43% indicated prior experience watching 360-degree videos, and close to half (49.02%) had experience with VR devices.

4.2 One-Way ANOVA

To evaluate whether VR and 360-degree video are more effective than static images in influencing customer trust and behavioural responses, an analysis of variance (ANOVA) was performed on trust in advertising, trust in brand, and approach tendency (Table 1). There were statistically significant differences in trust in advertising, trust in brand, and approach tendency across the three stimuli ($P<0.01$).

Post-hoc analysis with Bonferroni adjustments demonstrated that trust in advertising was significantly higher for VR (Mean = 4.34) and 360-degree video (Mean = 4.13) compared to static images (Mean = 3.57). Similarly, trust in brand was significantly higher for VR (Mean = 4.09) compared to static images (Mean = 3.62). Furthermore, approach tendency was significantly higher for VR (Mean = 4.36) and 360-degree video (Mean = 4.09) than for static images (Mean = 3.65).

Table 1. Results of ANOVA

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Sig.
Trust in advertising	SI	360	-0.56209*	<0.001
		VR	-0.76471*	<0.001
	360	SI	0.56209*	<0.001
		VR	-0.203	0.201
	VR	SI	0.76471*	<0.001
		360	0.203	0.201
Trust in brand	SI	360	-0.193	0.17
		VR	-0.46732*	<0.001
	360	SI	0.193	0.17
		VR	-0.27451*	0.021
	VR	SI	0.46732*	<0.001
		360	0.27451*	0.021
Approach tendency	SI	360	-0.44510*	<0.001
		VR	-0.71176*	<0.001
	360	SI	0.44510*	<0.001
		VR	-0.26667*	0.009
	VR	SI	0.71176*	<0.001
		360	0.26667*	0.009

Note: *$p<0.05$, **$p<0.01$, ***$p<0.001$
Source: Own Elaboration

4.3 Measurements Model

Table 2 displayed the results for loading, composite reliability, and average variance extracted (AVE). The factor loadings of all measurement items exceed the recommended threshold of 0.70, indicating that each item strongly represents its corresponding latent construct. Composite reliability values are also above 0.70, reflecting high internal consistency and reliability within each construct. The AVE values were above the cut-off point of 0.50, demonstrating adequate convergent validity. Table 3 presents the HTMT ratio results used to assess discriminant validity. Hair and Alamer (2022) recommend using a threshold of < 0.90 for HTMT to verify discriminant validity. The HTMT values in this study were below 0.9, confirming good discriminant validity for all constructs.

Table 2. Results for the Measurement Model

Construct	Items	Outer Loading	Composite Reliability	AVE
Interactivity	Interactivity1	0.775	0.890	0.676
	Interactivity2	0.834		
	Interactivity3	0.795		
	Interactivity4	0.872		
	Interactivity5	0.831		
Vividness	Vividness1	0.728	0.881	0.710
	Vividness2	0.859		
	Vividness3	0.885		
	Vividness4	0.890		

Trust in advertising	TrustA1	0.930	0.920	0.862
	TrustA2	0.940		
	TrustA3	0.915		
Trust in brand	TrustB1	0.917	0.888	0.817
	TrustB2	0.888		
	TrustB3	0.907		
Approach tendency	AT1	0.822	0.903	0.720
	AT2	0.888		
	AT3	0.868		
	AT4	0.860		
	AT5	0.803		

Source: Own Elaboration

Table 3. Heterotrait-monotrait Ratio (HTMT) in Model

	AT	Interactivity	Trust A	Trust B	Vividness
Approach Tendency					
Interactivity	0.690				
Trust in advertising	0.799	0.710			
Trust in brand	0.802	0.536	0.741		
Vividness	0.723	0.855	0.721	0.525	

Source: Own Elaboration

4.4 Structural Model

The structural (inner) model specifies the relationships between the variables in the research model. The results indicated that 63.0% of the variance in approach tendency, 47.9% in trust in advertising, and 45.3% in trust in brand were explained by the model, all exceeding minimum threshold R-square value of 25% (Hair et al., 2011). The Q^2 values were 0.405 (trust in advertising), 0.362 (trust in brand), and 0.444 (approach tendency), all well above 0, indicating the model's predictive relevance (Hair et al., 2011).

Table 4 reveals the path coefficient results for the research model. Interactivity ($ß$=0.368, t=4.772, p<0.001) and vividness ($ß$=0.372, t=4.912, p<0.001) significantly influenced trust in advertising. However, interactivity and vividness have no significant effects on trust in brand. In other words, advertisements with higher interactivity and vividness increased trust in the advertising itself but did not directly enhance in brand.

Trust in advertising significantly impacts trust in brand ($ß$=0.618, t=10.676, p<0.001) and approach tendency ($ß$=0.447, t=8.239, p<0.001). Trust in brand had significant influence on approach tendency ($ß$=0.421, t=7.451, p<0.001). Moreover, the results of indirect effect analysis showed that trust in advertising plays an important mediating role in the relationship between interactivity and trust in brand, interactivity and approach tendency, vividness and trust in brand, vividness and approach tendency, and trust in brand with approach tendency.

Table 4. Results of Path Analysis

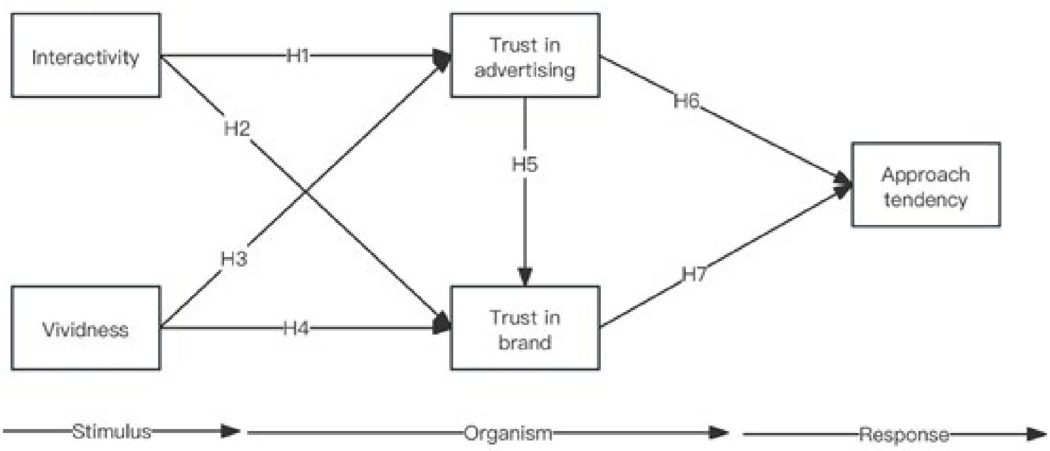
Path Relationship	Direct Effect	Indirect Effect
Interactivity -> Trust in advertising	0.369***	
Interactivity -> Trust in brand	0.066	
Vividness -> Trust in advertising	0.372***	
Vividness -> Trust in brand	0.016	
Trust in advertising -> Trust in brand	0.618***	
Trust in advertising -> Approach tendency	0.447***	
Trust in brand -> Approach tendency	0.421***	
Interactivity -> Trust in advertising -> Trust in brand		0.228***
Interactivity -> Trust in advertising -> Approach tendency		0.165***
Interactivity -> Trust in brand -> Approach tendency		0.028
Vividness -> Trust in advertising -> Trust in brand		0.230***
Vividness -> Trust in advertising -> Approach tendency		0.166***
Vividness -> Trust in brand -> Approach tendency		0.007
Trust in advertising -> Trust in brand -> Approach tendency		0.260***

Note: *p<0.05, **p<0.01, ***p<0.001
Source: Own Elaboration

4.5 Multigroup Analysis

To examine whether the hypothesised relationships held consistently across different preview modes, a bootstrap multi-group analysis was conducted. This approach involves splitting the sample into subgroups based on the preview mode and then estimating the structural equation model for each group separately. Bootstrap resampling with 5,000 iterations was used to obtain robust estimates of path coefficients and their confidence intervals within each group. The results of bootstrap multi-group analysis, displayed in Figure 2, demonstrated that H3 (vividness-->trust in advertising), H5 (trust in advertising-->trust in brand), H6 (trust in advertising-->approach tendency), and H7 (trust in brand-->approach tendency) were supported (p<0.01) across all three conditions (static image, 360-degree video, VR). However, interactivity did not have a significant impact on trust in brand under any condition (p>0.01), and vividness did not significantly impact trust in brand in the static image group or the VR group (p>0.01).

Figure 2. Multi Group Path Relationship Test Results



Note: *p<0.05, **p<0.01, ***p<0.001
Source: Own Elaboration

5. Conclusion

To achieve the first objective, "to explore how the use of VR technology in marketing influences customers' trust in advertising and brand trust in the context of Airbnb." This study assessed the data across the groups. The findings demonstrated that the more interactive (H1) and vivid (H3) the advertising was, the higher the customer's trust in the advertising. These results align with previous research by Wang et al. (2013), and Bao and Wang (2021), which showed that the interactivity and vividness of information can enhance customers' trust. However, the interactivity (H2) and vividness (H4) of advertising did not significantly and directly impact brand trust but had an indirect influence on brand trust through trust in advertising (H5). This finding is consistent with Samarah et al. (2022), who found that interactivity indirectly affects brand trust.

The lack of a direct effect of interactivity on brand trust in VR environments may be attributed to several factors. First, while interactivity enhances user engagement and trust in the immediate advertising content, its impact may not extend to the broader brand perception without repeated or prolonged exposure. In VR contexts, users may focus more on the immersive experience itself rather than associating it with the brand. Second, the novelty of VR technology might lead users to perceive interactivity as a feature of the medium rather than a characteristic of the brand, thereby diluting its direct influence on brand trust. Future research could explore longitudinal designs to examine how repeated VR interactions influence brand trust over time. Although previous studies have discussed the relationship between interactivity, vividness, and trust, this study further refines the categorization of trust. The results indicate that advertising stimuli serve as an antecedent of advertisement trust but do not directly impact brand trust. This nuanced understanding highlights the importance of considering mediating mechanisms when examining the impact of VR advertising on consumer perceptions.

The results of the multi-group analysis show that interactivity is the best predictor of advertising trust in both VR and static image advertising formats. However, in the case of 360-degree video, interactivity did not have a significant impact on advertising trust. This may be because, in this study, participants could adjust the video angle using two different methods: touchscreen controls and device tilting. The use of these two interaction methods may have led participants to feel a lack of consistency and smoothness when controlling the video perspective, thus weakening their sense of control over the interaction and, in turn, affecting the establishment of trust in the advertisement.

The second objective was to explore how VR and 360-degree video compare with static images in enhancing customers' tendency to stay in Airbnb. The findings indicated that trust in advertising (H6) and trust in brand (H7) significantly impact customers' approach tendency across all three conditions. The findings are consistent with previous studies (Zhu et al., 2020a; Lee & Min, 2021; Liu et al., 2022), which demonstrated that customer's trust positively impacts behavioural responses based on the SOR framework. This consistency reinforces the importance of trust as a critical factor in customer decision-making.

However, this study further reveals that different types of trust exhibit varying levels of influence on approach tendency across different advertising formats. In VR and 360-degree video advertisements, brand trust has a more pronounced impact on customers' behavioural response, whereas in static image advertisements, advertising trust plays a more prominent role. This discrepancy may be related to the depth of information and the mode of experience conveyed by each advertising format. VR and 360-degree video advertisements, characterised by immersive experiences and vividness, provide customers with a more realistic perception of the environment, thereby enhancing their trust in brand. In contrast, static images, with their straightforward and intuitive presentation of information, are more effective in fostering trust in the advertisement content. This finding underscores the differing roles of trust in various advertising formats.

5.1 Theoretical Implications

In the context of Airbnb, the antecedents of various dimensions of trust are critical areas for further exploration (Li & Tsai, 2022). Negi and Tripathi (2023) highlighted the pivotal role of trust in shared accommodations, emphasizing the need for future studies to conduct an in-depth analysis of this aspect independently. In response to their call, this research investigates the formation of customer trust, with a particular focus on the distinct roles of advertising trust and brand trust. Unlike previous studies comparing VR, 360-degree videos, and static images in the context of tourism and hotels (e.g. Bogicevic et al., 2019; Lo & Cheng, 2020), this research makes significant theoretical contributions by delineating how interactivity and vividness in advertising serve as critical stimuli that enhance trust in advertisements, which in turn influences brand trust and approach tendency. These findings robustly support the Stimulus-Organism-Response (SOR) framework, offering a deeper understanding of the mechanisms through which advertising elements shape brand perceptions. By focusing on how customers' trust in advertisements influences their overall trust in a brand, this study provides a deeper understanding of the mechanisms through which advertising elements impact brand perception.

Moreover, the study expands on existing literature by highlighting the differential impacts of various media formats. Although previous studies have confirmed the role of trust in shaping and influencing consumer behaviour (e.g., Weismueller et al., 2020), this study advances the field by analysing the effects of advertising trust and brand trust across three distinct formats: VR, 360-degree videos, and static images. The results reveal that in more immersive formats, such as VR and 360-degree videos, brand trust exerts a significantly stronger influence on behavioural responses compared to less immersive formats. These findings can help researchers understand the nuanced mechanisms through which various advertising formats impact customer behaviour response.

5.2 Managerial Implications

The findings of this study offer important implications for three key stakeholder groups in the shared accommodation ecosystem: (1) platform managers (e.g., Airbnb and similar platforms), (2) property owners or hosts, and (3) third-party content producers or advertisers. Each group plays a distinct role in shaping the effectiveness of advertising strategies and in fostering consumer trust. For platform managers, the results underscore the need to invest in advanced advertising technologies and support systems that facilitate vividness and interactivity.

Platforms should integrate immersive tools such as VR and 360-degree video capabilities to allow users to virtually explore listings, interact with property features, and better visualise their stay. In addition, platforms should develop guidelines and technical support for hosts and advertisers to easily produce high-quality immersive content. By doing so, platforms can not only enhance advertising and brand trust indirectly but also improve the overall user experience.

For property owners or hosts, the findings highlight the importance of actively enhancing the vividness and interactivity of their listings. Hosts should prioritise the use of high-resolution images, visually appealing aesthetics, and clear video content that communicates the authenticity and unique features of the property. Creating immersive experience using 360-degree views or VR walkthroughs can significantly enhance advertising trust by allowing potential guests to virtually engage with the space. Hosts should also ensure that all content remains transparent, accurate, and consistent to foster consumer trust and reduce information asymmetry.

Video ads are key to building customer trust by creating more immersive user experiences. Additionally, the shared accommodation platform should enable hosts to upload more interactive advertisements, such as allowing users to “explore” listings in virtual spaces, view different angles, or experience unique features of the property. In terms of vividness, advertisements should focus more on details such as image resolution, aesthetics, and clarity of images and videos.

For third-party content creators and advertisers, the findings suggest a need for tailored advertising strategies based on format. VR and 360-degree video advertisements are particularly effective for building brand trust, especially among more engaged or experienced users. Conversely, static image advertisements play a more prominent role in establishing advertising trust and capturing initial attention or clicks. Content producers should therefore consider aligning their creative approach with the stage of the customer journey and the desired trust outcome.

Finally, given that vividness and interactivity do not directly influence brand trust, but instead work through advertising trust, all stakeholders—platforms, hosts, and advertisers—should focus on enhancing the credibility and authenticity of advertisements as a key objective. This can be achieved through honest portrayals, consistent messaging, and interactive features that build transparency and reduce perceived risk for customers.

5.3 Limitation and Future Research

Despite the contributions of this study, there are limitations that should be addressed in future research. The sample size was limited to 102 participants, primarily postgraduate students, which may raise concerns about the generalization of the findings. While the 18-34 age group is a significant customer segment for Airbnb and VR technology, it does not fully capture Airbnb's diverse customer base. Future studies should consider using a more representative sample, including participants from various demographic groups and different shared accommodation or hotel contexts, to validate these findings. Additionally, this study collected data only from Airbnb users and did not include other competitors in the market. Future studies could gather data from users of other platforms and compare the results to gain a broader understanding of the phenomenon.

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ORCID

Yang Wang https://orcid.org/0000-0002-9104-090X

Seuk Wai Phoong https://orcid.org/0000-0002-9925-0901

Qiuhan Zhang https://orcid.org/0009-0005-5304-8010

Sedigheh Moghavvemi https://orcid.org/0000-0002-0628-6906

Notes on contributors

Yang Wang is a PhD in Department of Decision Science, Faculty of Business and Economics, University of Malaya, Malaysia. Her research focuses on using data analysis to address emerging technology adoption and its application in advertising marketing. She has published articles in journals such as Journal of Tourism and Development, Yunnan Geo-Environmental Studies.

Seuk Wai Phoong is an Associate Professor in the Department of Decision Science, Faculty of Business and Economics, University of Malaya, Malaysia. She is a member of the Malaysian Mathematical Science Society (PERSAMA).

Qiuhan Zhang is a PhD in Department of Decision Science, Faculty of Business and Economics, University of Malaya, Malaysia. Her research focuses on smart tourism, consumer behaviour, and digital marketing.

Sedigheh Moghavvemi is an Associate Professor in Department of Decision Science, Faculty of Business and Economics, University of Malaya, Malaysia.

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15-Minute City concept for healthy tourism during the COVID-19 pandemic crisis. Who for? The city of Lagos, Portugal

Manuela Pires Rosa [1]
Ana Clara Lopes [2]
Esmaeil Aghaeizadeh [3]
André Gomes [4]
Jorge Andraz [5]

1. Research Centre for Tourism, Sustainability and Well-Being & Institute of Engineering, Universidade do Algarve, Faro, Portugal
2. Institute of Engineering, Universidade do Algarve, Faro, Portugal
3. Faculty of Literature and Humanities, University of Guilan, Rasht, Iran
4. Independent Researcher, Faro, Portugal
5. Centre for Advanced Studies in Management and Economics & Faculty of Economics, Universidade do Algarve, Faro, Portugal

ABSTRACT

Urban spatial organization provided an important contribution for healthy tourism in the first COVID-19 pandemic period. The 15-Minute City concept promotes walking which is essential for the development of outdoor activities for a healthier tourism. The tourist city of Lagos (Portugal) is a pilot city of the Interreg Med SuSTowns Project which aims to promote sustainable and resilient territories. This study presents an analysis of the pedestrian accessibility through a specific geographical indicator: the percentage of short-term rentals existing in the surrounding tourist attractions. Ideal standard distances, studied internationally, were considered to assess this close proximity. Different walking speeds were considered to address human diversity and their implications on the 15-Minute City concept. The functionalities of the geographic information systems, in particular the assessment of distances over the pedestrian network were used. The results indicate that in the city of Lagos there is a trend towards an effective 15-Minute City for healthy tourists, promoting walking which could enhance tourism attraction. For tourists with reduced mobility, the use of accessible public transportation is required and needs to be integrated in the 15-Minute City concept.

KEYWORDS

15-Minute City, Walking, Pedestrian Accessibility, COVID-19 Pandemic Crisis, Healthy Tourism, Tourists with Reduced Mobility, Lagos' City.

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CORRESPONDING AUTHOR CONTACT Manuela Rosa mmrosa@ualg.pt Research Centre for Tourism, Sustainability and Well-Being & Institute of Engineering, Universidade do Algarve, Faro, Portugal

1. Introduction

Urban spatial organization provided an important contribution for healthy and sustainable mobility in the first COVID-19 pandemic period that occurred in 2020, in Europe. The 15-Minute City concept, fueled during the COVID-19 pandemic and developed by Carlos Moreno, puts forward a human-scale proposition for how cities have to be planned to change people's mobility and lifestyle during the pandemic. The goal is to give people access to all necessary destinations within 15 minutes from their homes walking or cycling. This is an urban set-up where locals are able to access all of their basic essentials at distances that would not take them more than 15 min on foot or by bicycle (Moreno et al., 2021).

Based on the review of existing ±15-Minute City studies, the European Institute of Innovation and Technology developed eight associated planning principles: a) Proximity to essential services; b) Proximity to public transport; c) Density; d) Mixed land use; e) Walkable and cyclable streets; f) Liveable public spaces and placemaking; g) Inclusiveness; and h) Ubiquity (EIT Urban Mobility, 2022). This human-centred planning promotes human interaction within local environments. Walking or bike distance accessibility to basic facilities is a prerequisite to avoid excessive movement of people within the main road network (Pisano, 2020).

Since the 1990s, some of these attributes have been discussed around the development of sustainable cities, mainly with the promotion of soft modes and public transportation, in an urban context, linked with low carbon and healthy mobility, e. g. sustainable mobility. The concept of "sustainable mobility" is associated with sustainable development, applied to transport activity, and, therefore, considers environmental protection, social equity and economic development. It, inevitably, implies the necessity of using pedestrian and cycle modes and addressing human diversity. Active travel is considered a sustainable form of urban mobility that is equitable, affordable and inclusive (Grow et al., 2008) and it is significant to today's urban society (Pajares et al., 2021).

At the local level, to meet sustainability, emphasis is placed on an urban design that considers the pedestrian at the top of the access hierarchy, so that people, as residents or as tourists, can make an effective choice. Compact cities and the diversity of land use are promoted, that is, urban mixed use. However, from the tourism planning and management perspective little is known about the use of the ±15-Minute City concept and related concepts of pedestrian accessibility and the role of hotels and short-term rentals in creating sustainable and livable tourist cities. Considering this gap in literature, in the present research, this close proximity strategy is presented through the tourism perspective, defending that the proximity of tourist attractions in relation to short-term rentals, can contribute to shorter trips, making it easier to choose the pedestrian mode.

Accessibility refers to the ability to reach desired goods, services, activities and destinations, i.e. opportunities (Litman, 2021). This accessibility refers to physical dimension. Land use proximity is one of the factors that can affect accessibility and is related with density and mixed urban developments, and, therefore, shorter distances between activities. The "short distance" indicator is crucial to promote good levels of pedestrian accessibility and a proximity urbanism (Rosa et al., 2018).

In the scope of the present study, the argument is that the indicator "short distances" is determinant to promote a healthy tourism in the first COVID-19 pandemic context, as it is associated with the 15-Minute City concept and the associated pedestrian accessibility, and, therefore, contributes to a tourism of proximity. Walking can provide the opportunity to maintain social distancing practice, i. e., the two metres (six feet) rule.

This case study is developed considering the tourist city of Lagos, located in the south of Portugal, in the Algarve Region. This historical and cultural city was one of the pilot cities studied under the Interreg Med SuSTowns Project – Sustainable Tourism in small and fascinating villages in the Mediterranean area – which aims to promote sustainable and resilient territories. This study was developed, too, in the context of the project Summer with Science - Accessible and Inclusive Project (2020) supported by FCT-Foundation for Science and Technology. It is intended to study accessibility through the construction of a geographical indicator: the percentage of short-term rentals that exist in some served areas of tourist attractions. Analysis considers the accessibility to touristic points of interest, considering ideal standard distances studied internationally and different walking speeds to address human diversity, for example, tourists with reduced mobility.

For the analysis of the proximity between the short-term rentals and the tourist attractions, the functionalities of the geographic information systems were considered, in particular in the calculation of distances within the pedestrian network.

2. Literature Review

2.1 The Promotion of Walking as a Mode of Transportation during the COVID-19 Pandemic Crisis

The Covid-19 pandemic has affected and transformed many aspects of human life, including transportation and work (Bornioli, 2022). The fact is that Covid-19 is highly pathogenic in public transport environments (Shen et al., 2020) and this factor revealed the weak points of the transport system and created a great challenge regarding travel, mobility and public health (Tarasi et al., 2021). People considered public transport as dangerous and its use became negative in people's opinion (Genitsaris et al., 2021). The number of public transport passengers in European cities decreased by 80% due to the reduction of public transport operator services (Das et al., 2021). As a result of this process, the face of urban transportation changed, which led to a change in the behaviour of all citizens and transformed their travel patterns (Tarasi et al., 2021). This change can be seen in the report of the International Association of Public Transport, which considered one of the main challenges related to the resumption of public transport, the provision of high quality services to ensure the observance of a safe distance (Gkiotsalitis & Cats, 2021).

The issue of transportation and Covid-19 has affected various aspects of people's lives and work, among which the tourism industry can be mentioned as one of the most important sources of income for many countries in the contemporary.era

Tourism, which has different local, regional, national, and international scales, is especially dependent on the movement of people, or in other words, transportation. In fact, to be successful in tourism, having proper transportation is a basic need, a central and dynamic element, so that during the last decades of the 20th century a significant growth in transportation for tourism occurred (Lumsdon, 2000). This relationship, which is mostly investigated by geographers, finally connects tourism with the subject of the tourist destination (Lew et al., 2008).

Tourism, as a phenomenon related to space with a great impact on society and the national economy during the Covid-19 pandemic (Roman et al., 2020), is one of the most important activities that have been severely affected by the spread of this disease. It has caused long-term changes among visitors by reducing the ability and desire of people to travel, influenced visits and related activities (Delclòs-Alió et al., 2022) and hence has highlighted the importance of organizing tourist trips and factors related to them (Roman et al., 2020).

Due to their limited indoor space, public vehicles were an ideal space for the transmission of infectious diseases amongst humans (Shen et al., 2020) providing crowded and unhealthy transportation. The requirements of social distancing caused by Covid-19 and the necessity of people commuting, in general, and tourists, in particular, highlighted the issue of focusing on the strategy of walking in cities or urban walkability. Also, the existence of some evidence regarding the relationship between environmental factors and physical activity led to the focus of a large part of research on walking (Cerin et al., 2007).

It seems that the existence of previous approaches in the field of new urbanism emphasizing the development of neighbourhoods for pedestrians (Audirac, 1999) has been a great help in the development of pedestrian-based thinking in cities in relation to tourism, too. The choice of transportation options for people is linked to their level of ability, but in almost all trips, either mandatory or optional, a part of the movement is dedicated to walking, which can also be called multimodal walking (Dihingia et al., 2022).

The impact of the restrictions considered to reduce the effects of Covid-19 on the walking behaviour of the community is undeniable (Hunter et al., 2021) and it seems that by studying different societies, different reactions can be encountered, and even studying different sources shows differences in terms of definitions related to walking (Nordin & Jamal, 2021). However in terms of tourism, this issue may be clearer as walking can be seen as an activity that is popular among tourists (Delclòs-Alió et al., 2022). If we consider tourism and recreation as a form of therapy (Buckley & Westaway, 2020), focusing on tourism with urban transportation oriented towards walking as one of the most basic forms of human mobility (Hannam et al., 2021). Walking can provide prosperity and an opportunity to think and rest (Bornioli, 2022), and be an active transportation method (Dihingia et al., 2022) supporting complete, sustainable and healthy cities (Kamelifar et al., 2022).

Therefore, walking and cycling in cities was considered with the aim of increasing resilience in the era of the Covid-19 pandemic (Paydar & Fard, 2021) and the concept of the 15-minute city was expanded in response to this situation, which is actually a type of proximity-based planning that citizens can get the services they need within a 15-20 minute walk (Lotfata et al., 2022).

Engaging contemporary cities with covid-19 and testing their resilience in this process, the concept of the 15-minute city as a supporter of the positive impact of proximity-based planning on releasing cities from the domination of cars, shined brighter (Allam et al., 2022). When the reduction of car dominance in cities is discussed, the tendency towards the concept of scale in cities can be followed, because the walkable city is basically intertwined with the issue of distance and, in light of that, with the concept of time. So basically, the 15-minute city can be described with the concept of scale. This issue of scale is considered an important element in urban planning, and in fact, a neighbourhood will be complete when it can meet the people's requirements on a human scale at different ages and with different abilities in the form of walking and cycling capabilities (Pozoukidou & Chatziyiannaki, 2021). Among the ideas that can affect people's habits in cities is planning to live and work at a suitable distance that provides opportunities for walking and cycling, which in this case can affect people's movement patterns and, in addition, change the use of urban spaces (Di Marino et al., 2023).

The ±15-minute concept is operationally viable for urban centres or even small towns which are able to offer greater variety in a tighter space as part of their mixed-use zoning strategies in downtown areas and its model is viable in neighbourhoods in big cities (EIT Urban Mobility, 2022). Concerning metropolitan cities, an efficient connectivity between neighbourhoods is crucial through public transportation. Public transit is necessary to access spatially distributed opportunities at the local or city level and so, Papadopoulos, Sdoukopoulos and Politis (2023) suggested it be considered within the 15-min city concept. In consequence, the 15-minute city concept can play an important role in bringing together multiple spatial dimensions related to the well-being of people and the environment (Marchigiani & Bonfantini, 2022).

2.2 Close Proximity of Urban Land Uses

The concept of accessibility is strongly linked to a broad set of measurable indicators (Geurs & Van Wee, 2004; Scheurer & Curtis, 2007). Accessibility involves four inter related components: transport, land use, temporal and individual components (Geurs & van Eck, 2001). The transport component refers to the transport infrastructure, location and characteristics, and also to the demand and usage, travel time, costs and efforts to reach a destination. The land use component consists of the locations and characteristics of demand and opportunities, and the temporal component of accessibility is related to the availability of activities at different times (of the day, week, and year). Finally, the individual component refers to social and economic characteristics and people's needs, abilities and opportunities. In general, the selection of the measurable indicators would vary with perspectives, the scale of the analysis, and with the available data.

Urban land use structure has a strong influence on demand management of motorized vehicles and also influences pedestrian and cycle accessibility. The interactions between transport and land use are intrinsically related to residential densification, employment concentration, urban design, spatial orientation of urban sprawl, accessibility and the cost of transport (Wegener & Fürst, 1999).

Traditionally, the spatial distribution of the residential areas were characterized as constituting a mono or polynucleated concentration or a dispersed one. In terms of land use intensity, it is associated with high density or low density. High density generally generates an adequate supply of collective transportation. In monofunctional residential areas, there tends to be a greater dependence on individual motorized means of transport.

The urban areas with a high concentration of activities, that is, having mixed urban uses, encourages a town to maximise the use of soft modes. The urban design influences the physical and functional qualification of urban spaces, which is a fundamental issue in the field of pedestrian and cycling infrastructures in order to promote their use.

The dominant pedestrian destinations are generally places where concentration of employment, commerce and leisure occurs. Thus, high quality pedestrian networks should be created, particularly between key destinations such as residential areas, schools, shopping areas, bus stops, stations and workplaces. In the context of tourist cities, where tourists could be mainly walkers, key destinations are cultural and tourist attractions, hotels and short-term rentals, and the referred shopping areas, bus stops and stations, among others.

According to Barton, Davis and Guise (1995) designing cities for accessibility means ensuring that there is a true choice of modes of transport to meet different needs, and that the location of facilities should be as convenient as possible. When planning new service locations, the distance between two destinations should be short and make it feasible for an opportunity and incentive to use soft modes and public transport in that area. There should be alternative routes and different modes of transport available between two destinations. The movement of people refers to the fact that they want to reach places, which makes their location a very important factor in accessibility, as well as the quality of transport and the route used to reach those places.

In the United Kingdom and the United States of America, a 400 or 600m standard is widely applied for access to local facilities/services as well as for bus services. Barton et al. (1995) recommend standards for a wide range of local facilities to likely catch populations: for example, the distance suggested for bus stops is 300-400m, for train stations is 600-800m, for health centres is 800-1000m, for secondary schools is 1000-1500m, for primary schools is 400-600m, for local shops 400-800m. The starting point is the spatial relationship between the residences and the location of facilities/services. It is desirable that 80% of homes should achieve those distances, minimizing travel lengths, making it easier to travel on foot or by bicycle, thereby increasing sustainable mobility.

2.3 Travel Impedance Considering Human Diversity

Another easy accessibility standard is the travel impedance, as seen through the 15-Minute City concept during the COVID-19 pandemic. The impedance between origins and destinations is operationalized by measuring travel time along the street network. However, the distance covered along the street network in 15-minutes depends on the traveller's speed, which may be influenced by age or the topography (Hosford et al., 2022).

In general, the average walking speed is suggested to be 5 km/h, or 1.4 m/s, which equates to approximately 400m in five minutes (Institute of Highways and Transportation, 2000). However, Barton et al. (2010) recognize that individual speeds vary widely in the range of 3.2-6.4 km/h. In the United States, the Transportation Research Board (2016) proposes walking speeds of 4.8 km/h for younger pedestrians (<65 years) and 3.6 km/h for older pedestrians (≥ 65 years). According to Alves et al. (2020) the estimated walking speed of adults over 65 differs between authors, from 2.16 km/h to 4.34 km/h. Concerning children, the walking speed is about 2.8 km/h at 2 years of age and increases progressively with age up to 5 km/h at 12 and in adults (Cavagna et al., 1983).

Considering other people with reduced mobility, the average walking speeds of a freely moving elderly person, a male using crutches, and a female using crutches are in the range of 2.27-4.86 km/h (Shi et al., 2009). Considering people with disabilities, the walking speed range is from 0.36 km/h to 7.1 km/h (Shi et al., 2009). So, all these examples show that people with reduced mobility, such as persons with disability and older people, are slower compared to that of a healthy younger person (5 km/h).

In consequence, the 15-Minute City concept, usually associated with inclusiveness, infers a broad range of walking distances considering the human diversity from 150m to 1600m (Table 1). In fact, human diversity has been discussed in the context of universal and inclusive design of the built environment and transportation systems.

Table 1. Walking Distances by People Groups Considering the 15-Minute City Concept

People groups	Gait speed (km/h)	Walking distances (m) in 15 minutes
Younger and healthy adult	6.4	1600
Younger age-group pedestrian (< 65 years)	4.8	1200
Children (2 years)	2.8	700
Older age-group pedestrian (≥ 65 years)	1.2	300
People with significantly reduced mobility	0.6	150

Source: Own Elaboration

The distance-time to overcome two points can be measured in a simple straight line (Euclidean distance) or by considering the street network to give a more accurate assessment of the distance/time between two locations (Silva et al., 2020).

The 15-minute city concept requires conditions in the use of urban land to be such that, the general conditions of the city supports all concerned, including residents, those who enter the city for any reason, and tourists in line with the goals of this type of city. If the 15-minute city concept is designed specifically for tourism, it can be planned more favorably for tourists to access the facilities, services and places for which they have come to the city.

2.4 Short-term Rentals

There are residential units that are usually rented or leased for less than 30 days and are referred to as short-term rentals (STR) that people voluntarily share their goods and services for a short period of time (DiNatale et al., 2018). This concept is not a new phenomenon related to recent years, but currently there is a set of scientific knowledge in this field that is mostly focused on tourism and housing (Combs et al., 2020). Usually STR's units can have different types of accommodation: shared rooms, private rooms or entire apartment/houses. In Portugal, STR establishments can take the form of rooms, villas, flats and lodging establishments - including hostels (INE, 2021).

Short-term rentals can enhance cultural heritage tourism by providing authentic local experiences, which are increasingly sought after by travelers looking for immersive experiences, to get an authentic view of the city they are travelling to (Angel & Doganer, 2020). Considering the period 2014 to 2019, O'Neill and Yeon (2021) note that the growth of STRs were particularly pronounced in urban areas.

In fact, in tourist cities, STR have become a significant part of the hospitality ecosystem, influencing both the local economy and the housing market. The demand of STRs is associated with the use of digital accommodation platforms. These digital platforms are associated with certain groups of tourists, such as young people, technologically comfortable tourists and/or budget-conscious tourists (Guttentag, 2015). This aligns with findings from Soh and Seo (2021) that specify that Airbnb customers are generally perceived to be younger, adventurous, and tech-savvy individuals who are looking for more authentic travel experiences offered by STRs. The rise of platforms, like Airbnb, has catered to this demographic by providing authentic, off-the-beaten-path experiences that traditional hotels may not offer (Nieuwland & Melik, 2018).

But the profile of users engaging with short-term rentals is diverse, shaped by various travel preferences, needs, and expectations. Another significant aspect of the STR market is the demographic profile of its users. Soh and Seo (2021) report that approximately 70% of vacation rental listings on major short-term vacation rental booking platforms are two- or more-bedroom properties with an average capacity of six people, suggesting that families and larger groups prefer STRs due to the availability of multi-bedroom properties.

Nelemans (2021) has presented interesting statistics on Airbnb and hotel users: users between the ages of 25 and 40, with an average age of 33, are the largest group of Airbnb users, while the average age of hotel users is 44. Another interesting point that casts doubt on the assumptions is examining the income of users. While it is expected that hotel users are from a higher income group, this is not the case, and Airbnb users, which are known as cheaper accommodations, are from a higher income group than hotel users. Therefore, it should be noted that in identifying the user profile, other reasons should be sought, which are sometimes more important, besides income.

Additionally, according to Bresciani et al. (2021), in a pandemic situation, the type of full flat/house renting of peer-to-peer accommodation types often requires no interaction with others, and allows for full social/physical distancing from other individuals, especially if it is an isolated structure, therefore, travellers tend to choose a full flat accommodation over hotels and shared flats.

2.5 Measuring Pedestrian Accessibility through Geographic Information Systems

Today's geographic information systems (GIS) provide capabilities that enable the creation of spatial databases and the implementation of geoprocessing operations, as well as a wide range of tools for collecting, analyzing and viewing geographic information. The multilayer organization allows the accomplishment of spatial analyzes relating the data of the above components involved in the concept of accessibility, by its geographical position. The production of maps provides tools for analyzing spatial distributions of accessibility indicators, and their relationships with other data. With these characteristics, GIS are suitable tools for accessibility studies at different levels, urban, regional and national, and in different perspectives (Huang & Hawley, 2009).

At the urban level, the walking infrastructure is often represented by a pedestrian network using street center line data, and, to measure spatial separation between origins and destinations or between nodes, the network distance is used (Scheurer & Curtis, 2007). The distance between two points is defined as the length of the shortest path on the network that connects those points, one taken as the origin and the other as destination, and its value can be computed by a GIS software such as ArcGIS Desktop with the Network Analyst extension. Even though one (or both) of the points does not lie over the network. In this case, the network is dynamically extended by adding an arc connecting this point to the closest arc of the network. One of the available tools of this GIS software allows to compute the origin-destination matrix (O-D Matrix), where the rows represent the set of origin points, the columns the set of destinations points and elements of the matrix the distance between each pair of points.

Contour measures allow to compute the catchment areas around a node or a point that enables the counting of the number of a specific type of opportunity within each contour (Geurs & van Eck, 2001). For example, the number of young inhabitants near a school, or the number of buildings close to a bus stop. This measurement is implemented in the Service Area tool of the Network Analyst extension. Given a set of points (services), a network and a distance, this tool identifies the part of the network within the distance from at least one of the services, and generates a polygon. The type of polygon generated (catchment area) is not however suitable for urban scale (Achuthan et al., 2007), thus it should not be used to overlay other layers and to count opportunities. Instead of overlaying, the O-D matrix can be used to identify and/or count all the origin points (opportunities) within a given distance of a specific destination (service).

3. Methodology

Based on what was mentioned earlier, during the early period of the COVID-19 pandemic, many travelers opted for STR to minimize contact with people and maintain physical distancing. So, this study investigates the localization of these types of residences, specifically, and the localization of tourist attractions. Therefore, 14 cultural tourist attractions were the focus of the facilities' accessibility in Lagos city.

GIS is an essential tool to supply measures describing the level of accessibility to spatially distributed activities, such as touristic facilities. With this tool, the results can be well visualized, easily understood and interpreted by urban planners, policy makers and businessmen. Local accessibility must be considered a high priority for service providers.

The development of the present work was done using databases with varied information collected from the OpenStreetMap (OSM) (OpenStreetMap contributors, 2020) and the Tourism Geographic Information System (SIGTUR), a platform developed by the National Tourism Board (Turismo de Portugal, 2020).

The road network dataset was created from data extracted from OpenStreetMap (OSM). Its purpose is to represent the pedestrian network within Lagos city (study area). This pedestrian network was topologically corrected for the purposes of network analysis. No spatial or attribute accuracy analysis were done on the original dataset.

Since this study focuses on the pedestrian network and in the study area there are no roads where the pedestrians are prohibited (e. g. highways) the whole network was used without any restrictions.

Therefore the short-term rentals dataset was created from data extracted from SIGTUR. The georeferencing of the short-term rentals is automatic, obtained from the SIGTUR (2020). No spatial or attribute accuracy analysis were done on the original dataset.

Through geographic information systems (GIS), using the ArcGIS® software by Environmental Systems Research Institute (ESRI, 2020), an analysis was developed of the geographical distribution and pedestrian accessibility of touristic attractions that the city of Lagos offers to its tourists, considering internationally studied standard distances.

The standard distance of 600m and some other walking distances were considered to take into account different groups, to analyse the inclusivity of the 15-Minute City concept.

4. Case Study: Pedestrian Accessibility in the Touristic City of Lagos

4.1 The Municipality and the City of Lagos

The municipality of Lagos is located in the south of Portugal (Figure 1) which is in the south-west of Europe. It is of great tourism importance and is integrated within the region of the Algarve. It has an undeniable Mediterranean climate, ideal for walking and cycling.

The city of Lagos, known as the city of Discoveries, is located in the south-east of the municipality (Figure 2). The urban beaches and the historical centre are reference points for tourists which are walkable and guided through pedestrian infrastructures. The city is crossed by a small river (Ribeira de Bensafrim) and has a Marina, a prominent place in the city. Along the river wetland regions and salt marshes can be found. As a coastal city, the rock surrounded beaches are an attraction point, making this city a reference point in the region for Tourism. The municipality has a resident population of 33494 (INE, 2022).

Prior to the COVID-19 crisis the municipality received thousands of tourists. Even in the summer of 2020, many tourists, mainly Portuguese people, visited Lagos, through important roads, as the Average Daily Traffic can prove - a measure used to understand the intensity of the vehicle traffic. This data can be used for the identification of the levels of attractiveness of the territories with good road accessibility. In fact, Rosa (2022) presented an analysis of the effects of the COVID-19 pandemic on the road traffic of the Algarve Region and in the municipality of Lagos, in particularly. When considering highway A 22, the road session between Bensafrim and Lagos, the study presented an analysis of the Average Daily Traffic of 2020 in August (6 731vehicles per day) compared with the average number that occurred between 2012 and 2019 (6 378 vehicles per day), where there was an increased number of motor vehicles (+5.5%), the biggest on the main important roads located on the Algarve coast. Data of road traffic volumes were obtained from the sites of Portuguese institutions responsible for transportation. The results prove that, in Lagos, there has been a phenomenon of proximity tourism during the summer of 2020.

In fact, when considering the number of overnight stays, that is, nights spent by tourists at tourism establishments, this is an indicator commonly used by territories to more effectively assess the evolution of the tourism sector and the impact on it. In Lagos, the demand for tourist accommodation, reached a value of 526174 overnight stays in 2020 and so, the Tourist Intensity Index is much higher than in Portugal and similar to the Algarve (Table 2).

Table 2. Tourist Intensity Index

	Number of residents 2021 (INE, 2022)	Number of nights in Tourist Accommodation establishments/Annual 2000 (INE, 2024)	Tourist Intensity Index*
Portugal	10.343.066	25.798.299	0.7
Algarve	467.343	7.890.711	4.6
Lagos	33.494	526.174	4.3

*((Annual overnight stays/365)/Total resident population) *100
Source: Own Elaboration

The main avenue (Avenida dos Descobrimentos) follows the river to the sea and has beautiful landscapes. Along this avenue, many small kiosks are found selling souvenirs as well as promoting private maritime-touristic activities. Nearby, there is an underground car park with capacity for approximately 170 cars. On the river, especially in the morning, the nautical traffic can be very intense. This avenue is connected, by a moveable bridge, with the Lagos Marina, a blue space associated with a tourist and high urbanized area, close to the railway station. This bridge allows the passage of pedestrians.

The City Park, a Mediterranean garden, is located in the city centre and it is surrounded on one side by the city walls. This green park is an inviting area, used for recreation and leisure activities. Below the park, an underground car park with capacity for approximately 400 cars can be found. There are some touristic places nearby such as historic monuments and a mini-golf centre. These characteristics have the potential to attract people to the area.

Figure 1. Portugal Map and the Location of Lagos Municipality

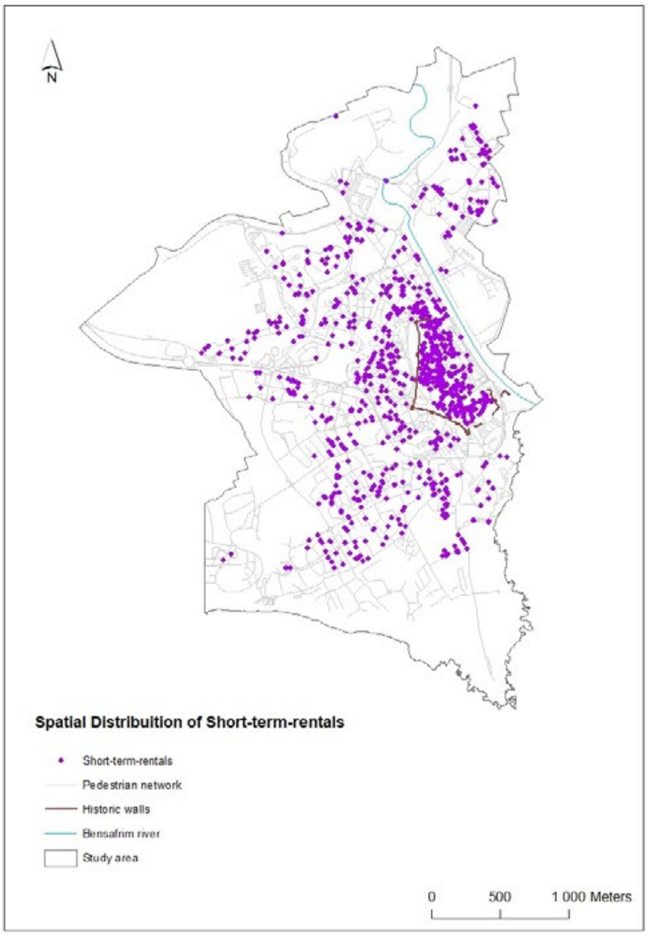
Source: These maps were produced based on Official Administrative Map of Portugal - CAOP 2019, open data provided by Direção-Geral do Território (DGT, 2019)

In terms of tourism supply, in July 2020, according to the National Tourism Registry (Turismo de Portugal, 2020) the municipality offered around twelve thousand beds, considering hotels, hotel-apartments, tourist apartments, tourism villages, rural tourism, camping and caravanning. Most of these tourist enterprises have the seal of a Health & Safety Establishment, created by Turismo de Portugal, which contributes to the perception of a safe destination from the pandemic situation.

In the municipality of Lagos there are 4400 short-term rentals with a capacity for 23 thousand users, distributed by different typologies: apartment (65%), house (27%), room (1%) and accommodation establishments (7%). Inside the city of Lagos (the study area) there are 2246 Short-term rentals with capacity for 11775 users (Turismo de Portugal, 2020).

Figure 2 shows the spatial distribution of short-term rentals located in the city of Lagos.

Figure 2. Spatial Distribution of Short-Term Rentals in the City of Lagos



Source: This map was produced based on SIGTUR (2020) and OpenStreetMap contributors (2020)

The distribution of short-term rentals is strongly related to the urban expansion of the city during the latter decades of 20th century. The sea boarder of the city of Lagos in the southeast and south is the biggest natural factor limiting the physical growth of the city and has played an important role in its spatial structure. On the other hand, the formation of the Bensafrim river in the east, which is a combination of natural and human factors, has limited the development of the city to that side, so the urban expansion occurred towards the west. The highest density of short-term rentals is found in the historic centre and decreases towards the west of the city.

4.2 Strengths and Limitations of the Research

Usually, proximity tourism's studies are developed considering social inquiries regarding the mobility of tourists. The present study gives innovative information related to spatial distribution of short-term rentals and the pedestrian accessibility to tourist attractions for tourists who stay there.

This study has some limitations, such as, the location of some short-term rentals shows some small errors in the perceived location, as some units are within a building and to be visualized, the spatial data allocates them to be in an area close to the building in question. The system assumes some mistakes in terms of georeferencing.

In 2020, in the city of Lagos there were 2246 short-term rentals with a capacity for 11775 users, but the network analysis only locates 2104 because there are situations where access routes to these accommodation units are not identified or the routes that exist do not connect to the remaining ones within the study area.

Another limitation is the existence of another kind of typology of tourist supply such as hotels, hotel-apartments and tourist apartments that were not considered in the present research, because they do not have the formal classification of short-term rentals, listed in Turismo de Portugal (2020). In the present study, short-term rentals were considered as allowed for isolation and strong physical distancing from other people, an important criterion in the COVID-19 pandemic crisis context.

The pedestrian accessibility only considers the measure of walking distances, but there are other conditions that affect the mobility of pedestrians, e. g. gradients of the streets, weather conditions, stairs or other barriers in the streets, etc. These will also affect the distances people are able to walk. According to Alves et al. (2020) elderly people need adequate walking paths, i. e. "heart-friendly route" without significant gradients and stairs.

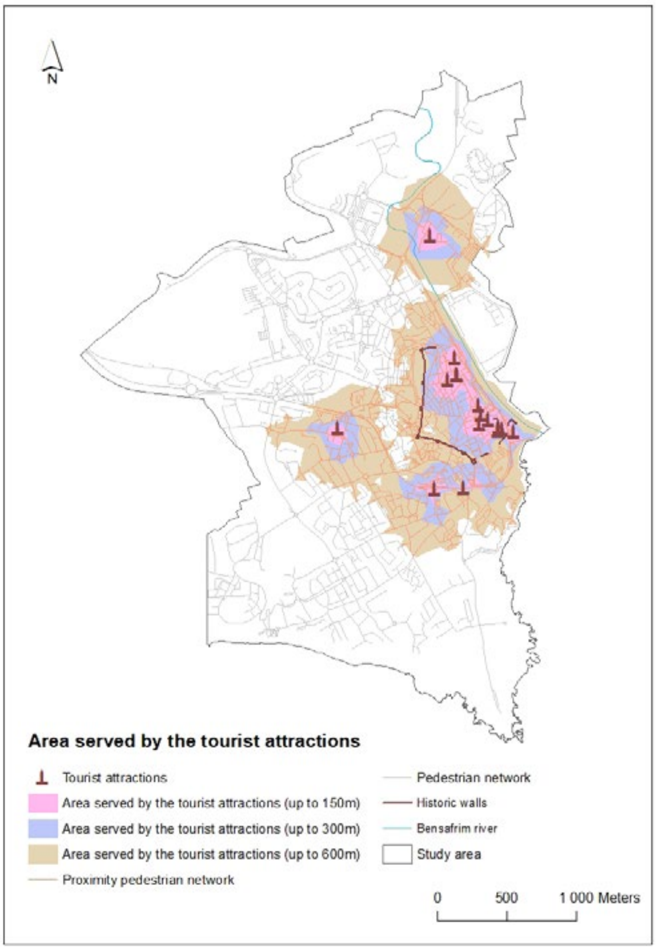
It is suggested that complementary studies should be carried out, to provide a wider and deeper understanding of the means of transportation used by tourists in this pandemic crisis.

5. Results

5.1 Accessibility to Cultural Tourist Attractions

The location and distribution of the most important tourist attractions in the city of Lagos are shown in Figure 3. The majority are located in the historic centre. The closest area served by the tourist attraction can be seen, corresponding to the standard distance of 600m, considering three different zones: the area served by the accessibility of up to 150m from the referred short-term rentals (in pink); the area served by the accessibility of the range 150-300m (in blue) and the area served by the accessibility of the range 300-600m (in brown).

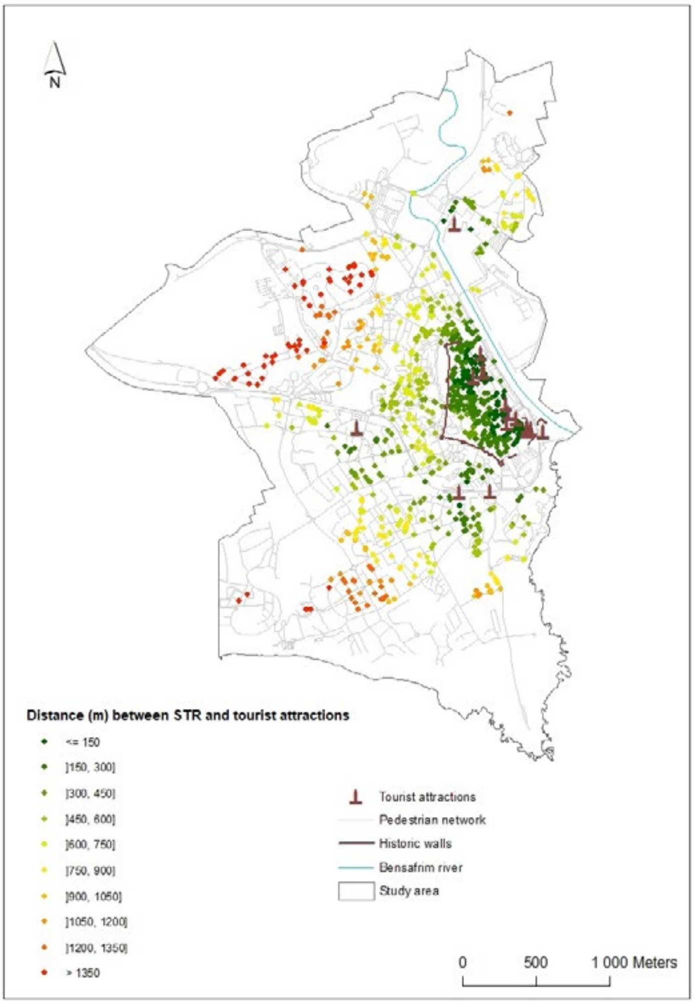
Figure 3. Close Area Served by the Tourist Attractions in the City of Lagos



Source: Own Elaboration. Contains OSM data © OpenStreetMap contributors (2020)

In Figure 4, the short-term rentals with the closest proximity to tourist attractions are represented in green tones (distance up to 600m), units located an intermediate distance are represented in yellow (distance between 600 and 1000m) and units farther from tourist attractions are represented in orange/red tones (distance greater than 1000m). A high density of short-term rentals in the historic centre can be seen. The density decreases with the peri-urban areas.

Figure 4. Accessibility to Tourist Attractions

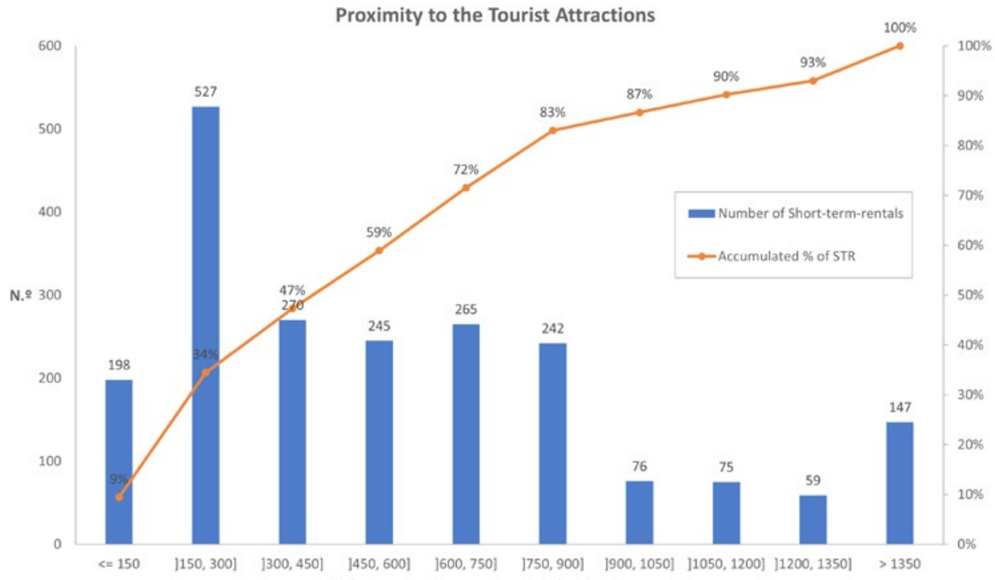


Source: Own Elaboration. Contains OSM data © OpenStreetMap contributors (2020) and data from SIGTUR (2020)

As a result of the accessibility to tourist attractions in the study area, it was found that for tourists staying in short-term rentals, there is a provision of this type of attraction at an average distance of 576m from their accommodation (a value less than the standard distance of 600m), with the furthest short-term rentals being 1960m away. The standard deviation value found for these distances was 422m.

Figure 5 shows the values of accessibility to tourist attractions in the study area, for the short-term rentals, according to distance classes, as well as the cumulative percentage. Thus, it is observed that for short-term rentals, 9% are close to tourist attractions within 150 m distance and that 59% have a tourist attraction up to the standard distance considered (600 m). 90% have a tourist attraction up to a distance of 1200m, that is to say, for younger pedestrians (under 65 years old) this distance is covered very easily.

Figure 5. Pedestrian Accessibility between Short-Term Rentals and Tourist Attractions in the City of Lagos



Distance (m) between Short-term-rentals (STR) and tourism attractions
Source: Own Elaboration

5.2 Discussion

One of the most common activities among tourists is walking, providing visitors with a range of different experiences of the places they visit (Dihingia et al., 2022). Visitors can gain experiences by walking through different parts of the city. Davies (2016) believes that walking along significant routes is effective in increasing the overall experience of tourists. This can be achieved when the destination of tourists has the necessary capacity for walking, in other words, walking should attract tourists like a magnet to experience the place, and in touristic cities, it should be such that they experience these spaces on foot (Hall & Ram, 2018). So, the 15-minute city concept, usually for residents, can be considered from the perspective of tourism, where visitors can access most of their needs within a 15-minute walk or bike ride from their accommodation.

Considering the city of Lagos, most of the cultural tourist attractions are located in the historic centre. This central area integrates a high density of short-term rentals, too. Findings show that the density of short-term rentals decreases with the peri-urban areas.

The city of Lagos has an urban form and dimension that enables younger and healthy tourists (who walk at speeds of 6.4 km/h) to visit all the tourist attractions within distances up to 1600m from the short-term rental where they are staying (Table 3). Even for other younger age-group pedestrians (< 65 years old) who walk at speeds of 4.8 km/h, the main tourist attraction can be accessed in a 15 min walk. Healthy individuals may be willing to walk considerably greater distances than the 600 meters threshold, which is considered standard in urban sustainable planning.

Table 3. Analysis of Lagos as a 15-Minute City

Facilities	Walking distances (m) between Short-term rentals and Facilities	Short-term rentals in the served area (%)
	1600	100
	1200	90
Tourist attractions	600	59
	300	34
	150	9

Source: Own Elaboration

It is assessed that most people, to reach tourist attractions, are willing to walk up to 1200m, which, for most able-bodied adults, can be accomplished within a 15-minute timespan. The results indicate that there is a trend towards urbanism of proximity considering the perspectives of young and healthy adults, and other older pedestrians (< 65 years old). In this case, the city of Lagos can be assessed as a 15-minute walk city.

However, gait speed of travel is a factor in accessibility. For older people (who walk at speeds of 1.2 km/h) and persons with significantly reduced mobility (who walk at speeds of 0.6 km/h), the known walkability standards (600m) are not applicable. They have less opportunities to visit the city by walking, from the short-term rentals to tourist attractions.

In fact, the concept of the 15-minute city has been criticized for being physically deterministic and taking a one-size-fits-all approach (Khavarian-Garmsir et al., 2023). In this urban planning approach, walking distance is considered from the perspective of the average person, when there is the temporal (daily and seasonal) variation in walking accessibility and the realities of vulnerable population groups (Willberg et al., 2023).

6. Conclusion

Around the world, in response to the global pandemic of COVID-19, strategic tourism policy measures have been implemented to limit close human contacts by restricting intensive use of public spaces and public transport, implementing social distancing through tactical urbanism techniques, leading to the prioritisation of pedestrians and cyclists in cities.

During this pandemic, the 15-minute city strategy has been associated with a wide range of benefits (Moreno et al., 2021; EIT Urban Mobility, 2022). Analysis of this proximity city can be developed considering travel impedance between origins and destinations by measuring travel distance or time along the street network.

Using the network analysis method of GIS, the present study analyzed the pedestrian accessibility to cultural touristic attractions in the city of Lagos mapping the areas served by these facilities. This paper presents the tourism perspective considering the visitors that stay in short-term rentals and have the opportunity of visiting the tourist attractions by walking. The issue of pedestrian access is very important in the location of tourism-related services.

The city of Lagos has an urban form and dimension that enables younger and healthy tourists to visit all the cultural tourist attractions. The results indicate that there is a trend towards an urbanism of proximity considering the perspectives of these young and healthy adults. However, gait speed of travel is a factor in accessibility. Older people and other persons with significantly reduced mobility have less opportunities to visit the city by walking, from the short-term rentals to tourist attractions.

According to the World Health Organization (2023) around 1.3 billion people experience significant disability, which is 16% of the world's population, or 1 in 6 of us. Considering the European Union, 5.9 % of the population are aged 80 years and older, in 2020. In consequence, there are many people who have significantly reduced mobility which requires the physical accessibility of pedestrian infrastructure (such as, sidewalks and crossings) and public transport, e. g. accessibility according to the universal and inclusive design. This aims to create safe, accessible and connected pedestrian networks that encourage and facilitate movement to tourist attractions.

The 15-Minute City has been considered a universal concept, a city for all, but some vulnerable people who have reduced mobility may be excluded. In this case, accessible public transportation can increase the opportunities for all people to reach the facilities and amenities. The 15-minute city concept offers a promising framework for sustainable urban living, but its success for individuals with reduced mobility hinges on universal and inclusive design. Ensuring physical accessibility and integrating collective transport options are crucial to making these urban environments truly inclusive and beneficial for everyone.

With the assumption that the transportation systems and pedestrian infrastructure are accessible for all, the 15-minute city concept matches an ideal geography where most people have close proximity to amenities and facilities, which are located within a travel distance of 15 minutes walking or cycling or by public transport.

This research study allowed a better perception of pedestrian accessibility to the facilities studied, considering the indicator "short distance". It has been realized that it is equally important to know the location and distribution in space of public facilities. It can influence the perception to develop relevant solutions of tactical urbanism around short-term rentals. The results facilitate identifying the tourism supply and priority areas for action to improve the built environment associated with pedestrian infrastructure.

These results provide an important contribution to sustainable and healthier tourism, promoting the pedestrian accessibility of cities as a tourist attraction factor that can generate confidence, health, sustainability and resilience. In the present research, travel impedance is presented as an important sustainable and inclusive tourism indicator for the cities. Proximity urbanism should be incorporated in tourism policies in order to contribute to the sustainability and social inclusion of tourist destinations.

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ORCID

Manuela Pires Rosa http://orcid.org/0000-0001-5017-6408

Ana Clara Lopes http://orcid.org/0000-0003-1418-4739

Esmaeil Aghaeizadeh http://orcid.org/0000-0001-9547-9226

André Gomes http://orcid.org/0000-0002-8576-3087

Jorge Andraz http://orcid.org/0000-0001-9209-3344

Notes on contributors

Manuela Pires Rosa is an Associate Professor (Professora Coordenadora) at the University of Algarve, Institute of Engineering and a fully integrated member in CINTURS. She holds a PhD in Spatial Planning and Environmental, an MA in Renovation of Architectural and Landscape Heritage and a five-year degree in Civil Engineering. She coordinated the Research Project ACCES4ALL - Accessibility for all in Tourism, she co-coordinated the final phase of the Projet SuSTowns – Enhancing Sustainable Tourism in Small Fascinating Med Town, Program Interred Med, and the project Summer with Science - Accessible and Inclusive Project (2020) supported by FCT- Foundation for Science and Technology.

Ana Clara Lopes is an Adjunct Professor at the University of Algarve, Institute of Engineering. She holds an MSc in Geographic Information Systems (from Instituto Superior Técnico) and a five-year degree in Geographic Engineering (from Universidade de Coimbra). She collaborated in the Projet SuSTowns – Enhancing Sustainable Tourism in Small Fascinating Med Town, Program Interred Med, and in the project Summer with Science - Accessible and Inclusive Project (2020) supported by FCT- Foundation for Science and Technology.

Esmaeil Aghaeizadeh Gourabi is an associate professor of Geography and Urban Planning at the University of Guilan, Iran (2014-Present). For the three years from 2012 to 2014, prior to joining the University of Guilan, he was a faculty member at the University of Sistan and Baluchestan, Iran. He has been serving as a Senior Consultant of Urban and Rural Planning at “Arman Shar Consulting Engineers Inc” (2006 to 2012). He graduated from Kharazmi University, Tehran, Iran, with an M.A. degree in Geography and Rural Planning (2007) and a PhD degree in Geography and Urban Planning (2012).

André Gomes is an expert in Geographic Information Systems (GIS). He holds a BA in Topographic Engineering. He collaborated on the GIS project “Mapping of the facilities of the University of Algarve (UAlg) facilities” within the Project InLUT - Integration of Land Use and Transport in Medium-sized Cities, and on the Summer with Science project, which aimed to provide accessible and Inclusive Access to Science, supported by FCT - Foundation for Science and Technology.

Jorge Andraz is a Full Professor of Economics at the University of Algarve, Faculty of Economics, and a fully integrated member of the regional branch of the Centre for Advanced Studies in Management and Economics at the University of Algarve (CEFAGE-UAlg). He holds a PhD in Economics from the University of Algarve, an MA in Economics and Management Sciences from the same university, and a BA in Economics from the Lisbon Catholic University. He is currently the Coordinator of the Technical Unit of the Algarve Sustainable Tourism Observatory. He has been involved in several nationally and internationally funded research projects.

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Beyond Borders: Exploring Digital Nomadism through the Push-Pull Lens

Elif Acuner [1]
Bilgen Mete [1]
Kübra Özer [1]

1. Recep Tayyip Erdogan University, Ardesen Tourism Faculty, Ardesen, Rize, Türkiye

ABSTRACT

This research aims to identify the factors influencing the travel tendencies of digital nomad tourists within the framework of push–pull theory. A qualitative research approach was adopted, employing a phenomenological design. Semi-structured, in-depth interviews were conducted with ten digital nomads selected through purposive sampling, and the data obtained were analysed using descriptive analysis. The findings indicate that the push factors motivating digital nomads to leave their current locations include flexibility and the pursuit of freedom, escape from monotony, the search for new experiences and exploration, psychological and personal development, work–life balance and motivation, and professional opportunities. Conversely, the pull factors attracting digital nomads to specific destinations comprise internet and technological infrastructure, the availability of co-working spaces and a digital nomad community, affordable living costs, visa facilitation and legal regulations, environmental qualities and an inspiring atmosphere, touristic attractions and activities, the openness of local communities to interaction and cultural integration, as well as health, hygiene, and safety conditions. This study contributes to the literature by conceptualising digital nomadism as a holistic lifestyle and offers valuable insights into how destinations can better accommodate this expanding segment of travellers.

KEYWORDS

Digital Nomad, Digital Nomad Tourist, Travel Tendencies, Push Pull Theory.

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CORRESPONDING AUTHOR CONTACT Elif Acuner elif.acuner@erdogan.edu.tr Recep Tayyip Erdogan University, Ardesen Tourism Faculty, Ardesen, Rize, Türkiye

1. Introduction

The rise of the internet and technological advances has reduced people's dependence on time and place. During the COVID-19 pandemic, office workers were compelled to work remotely, which enabled them to experience and adapt to different work–life arrangements. As a significant outcome of these transformations, digital nomadism has emerged, allowing workers to leverage the freedom of working from anywhere with an internet connection. This shift has enabled individuals to live and travel across different regions of the world while continuing their professional activities without being tied to a physical office (Ji et al., 2024).

Digital nomads are commonly described as young, work-oriented professionals who reject the traditional 9-to-5 office structure, prioritising autonomy, flexibility, and the ability to travel while working (Cook, 2020). Consequently, they gain the freedom to choose their place of residence, with the duration of their stay in a particular country or location becoming independent of employer or company restrictions (Müller, 2016). This mobility and autonomy have generated an increased demand for tourism services among digital nomads (Gupta et al., 2024), and their participation in touristic activities at their destinations has led to their classification as tourists (Hall et al., 2019).

The digital nomad movement has rapidly become a growing segment of the global tourism market. According to a 2024 study by MBO Partners, 18.1 million American workers identify as digital nomads, representing a remarkable 147% increase since 2019 (MBO Partners, 2024). Another study estimates that the global number of digital nomads has exceeded thirty-five million (Localyze, 2024). This substantial rise, coupled with evidence of their positive socio-economic impact on host countries, has prompted destinations to explore strategies for attracting a share of this emerging tourism market (Jiwasiddi et al., 2024). In 2020, sixteen countries, including Estonia, Georgia, Spain, and Germany, introduced digital nomad visas, thereby opening their borders to this new group of travellers (Schengen News, 2020). By 2023, this number had increased to fifty-four (World Tourism Organization, 2023). As of 2024, Türkiye has also joined the list of countries offering a digital nomad visa (Go Türkiye, 2024).

In this context, digital nomadism has become a phenomenon that not only transforms individuals' lifestyles but also reshapes countries' tourism and economic policies. However, despite the growing global interest, research on digital nomads remains limited.

Existing studies in the literature have examined various aspects of digital nomadism, including its advantages and disadvantages (Mouratidis, 2018; Hensellek & Puchala, 2021; Zaki, 2024), work–life balance (Orel, 2019; Arifa et al., 2022), social and economic impacts on destinations (Jiwasiddi et al., 2024; Lazarevic-Moravcevic et al., 2024), nomadic lifestyles and the effects of co-working spaces on tourism (Putra & Agirachman, 2016; Chevtaeva & Denizci-Guillet, 2021), and the differences between digital nomads and traditional tourists (Kozak et al., 2024; Kaya-Sayarı & Coşkun, 2024). However, most of the studies on digital nomadism rely on quantitative data or remain at a conceptual level (Winarya & Pertiwi, 2020; Dreher & Triandafylidou, 2023). Hannonen (2020) emphasised that in order to better understand digital nomads' tourism behaviours, more attention should be given to the characteristics of individuals. In line with this, the primary aim of this study is to contribute to the literature by conducting an in-depth analysis to identify the push and pull factors influencing digital nomads' travel decisions.

1.1 Digital Nomad Tourists and Travel Tendencies

The flexibility that allows individuals to choose their workplace and, to some extent, their working hours also enables them to select their country of residence. Their ability to move freely from one country to another, independent of a fixed workplace (Müller, 2016), has led to their classification as digital nomad tourists (Situmorang, 2022). However, the existing definitions lack clarity and precision.

The concept of the digital nomad was first introduced by Makimoto and Manners (1997), who envisioned a lifestyle liberated from geographical and temporal constraints through technological advancements. The authors predicted a future in which individuals would be able to communicate via video link from any location in the world, access documents and images remotely, and scan global information sources regardless of their physical position. Within this framework, people would be able to sustain both their personal and professional lives independently of a fixed location and could thus become what they termed “global nomads.” This early conceptualisation offered a visionary outlook on mobility and work styles before the widespread adoption of remote technologies. Makimoto and Manners (1997) defined digital nomads as individuals who, enabled by technology, are freed from spatial and temporal limitations: “A lifestyle freed from geographical and temporal constraints by technology, allowing individuals to live and work from wherever they choose” (Makimoto & Manners, 1997). This definition presents digital nomadism not merely as a travel behaviour, but as a comprehensive lifestyle. A contemporary reflection of this vision is found in Hannonen (2020), who defines digital nomads as “individuals who adopt a location-independent lifestyle supported by technology, allowing them to work remotely while travelling.” This characterisation substantiates the modern form of digital nomadism and aligns with the foundational foresight of Makimoto and Manners. Similarly, Thompson (2019) defines digital nomadism as a technology-driven lifestyle that enables individuals to travel the world while working remotely, emphasising the spatial and economic freedom such individuals can attain. This perspective illustrates that digital nomadism is not merely a work modality, but also deeply intertwined with personal autonomy and lifestyle choices.

Reichenberger (2018) categorises digital nomads into three different levels based on their degree of mobility. The first-level digital nomads are those who do not travel but have flexibility in choosing their workplace. The second-level digital nomads maintain a permanent residence but take advantage of travel opportunities. The third-level digital nomads choose to abandon their permanent residence entirely and commit themselves to a fully mobile lifestyle (Reichenberger, 2018). According to this classification, second- and third-level digital nomads can be considered digital nomad tourists.

Similarly, Toussaint (2009) categorised digital nomads into three groups: (1) The Continuous Travellers, individuals who are constantly on the move because they enjoy travelling, striving to live as simply as possible to save money, often relying on donations or sponsorships; (2) The Independent Working Travellers, individuals who choose a profession that enables them to travel while managing their work through various communication technologies; and (3) The Business Travellers, individuals who travel worldwide for work, attending client meetings and establishing a suitable living environment to meet their professional needs (Toussaint, 2009). This last group can be considered the closest category to the traditional nomadic lifestyle, and it is particularly relevant to modern digital nomads, especially those who operate as online entrepreneurs.

While the classifications of Reichenberger (2018) and Toussaint (2009) both focus on the mobility levels of digital nomads, Reichenberger’s typology is grounded in spatial flexibility, whereas Toussaint’s centres on lifestyle motivations. A synthesis of these two approaches reveals that digital nomadism is shaped not only by physical mobility but also by psychosocial factors such as self-efficacy and life philosophy.

Cook (2020) positioned digital nomads and other travellers on a two-dimensional scale based on “mobility” and “work orientation.” According to this classification, unlike migrants (who have low mobility), backpackers (who have low work orientation), and occasional business travellers (who have moderate mobility), digital nomads exhibit both high mobility and high work orientation (Cook, 2020). Although digital nomads are both travellers and workers, they differ from traditional business travellers in certain aspects. The travel expenses of business travellers are mostly covered by their employers (Noone & McGuire, 2016), and they tend to take shorter trips with less participation in tourism activities (Hall et al., 2019). Additionally, while business travellers do not have flexibility in choosing their destinations, they may have some degree of flexibility in scheduling their programmes (Harris & Pressey, 2021). In contrast, digital nomads generally cover their own travel expenses, have a high degree of flexibility in selecting their destinations, and tend to stay longer while engaging more in local activities (Hall et al., 2019; Kozak et al., 2024).

Similarly, Nash et al. (2018) define digital nomadism through four core elements: digital work, short-term (gig) employment, nomadic labour, and a desire for global travel. They emphasise that these four components are intrinsically intertwined with digital technologies, framing digital nomadism not merely as physical mobility but as a work practice rooted in production within digital environments and based on flexibility.

On the other hand, it has been argued that digital nomads can be classified under the category of “slow tourism” due to their tendency to stay in destinations for extended periods (Putra & Agirachman, 2016).

Moreover, their long-term stays allow them to interact more with local communities and adopt certain aspects of the local culture, distinguishing them from traditional tourists (Kozak et al., 2024). In terms of destination preferences, digital nomads typically choose locations that offer cultural and recreational opportunities, as well as natural beauty, while also ensuring proximity to urban centres. This preference is largely driven by their need for advanced technological infrastructure to sustain their work (Pecsek, 2018).

From a social and economic perspective, digital nomads do not merely travel as tourists; rather, they represent a group that can stay in the regions they visit for months, make regular contributions to local businesses, and increase demand for various services (Richards, 2015). Therefore, understanding which destinations digital nomads prefer, the factors they consider while travelling, their travel frequency, and their lifestyle choices is expected to provide valuable insights into the tourism industry, destination management, and local economies. Identifying the factors influencing individuals' destination choices is crucial for the effective planning of tourism activities, making it highly significant for the industry as a whole (Kassean & Gassita, 2013). One of the theories used to explain tourists' travel tendencies is the Push and Pull Theory, introduced by Graham Dann in 1977. Dann (1977) posed the question, "What motivates people to travel?" and conducted interviews with 422 tourists to investigate their reasons for travelling. His findings suggested that individuals' motivations stem from two key concepts: anomie (a sense of weakened social ties and isolation) and ego enhancement (the pursuit of self-esteem, status, and recognition). The first group consists of individuals who travel to escape their daily routines, while the second group includes those who travel to expand their knowledge about the world (Dann, 1977).

Most discussions on tourist motivation tend to revolve around the concepts of push and pull factors (Antara & Prameswari, 2018; Liro, 2020). Push factors refer to socio-psychological needs that drive individuals to travel, whereas pull factors are the motivations stimulated not by the traveller themselves but by the destination (Crompton, 1979). These factors explain how individuals are pushed to make travel decisions by their intrinsic motivational variables and pulled by the characteristics of a destination (Yoon & Uysal, 2005).

While the Push and Pull theory has traditionally been employed to explain conventional tourist behaviour, it also holds significant potential for adaptation to the travel patterns of digital nomads, which are often characterised by multiplicity, circularity, and flexibility. In this context, "push" factors—such as the desire to escape corporate work or pursue greater personal autonomy—tend to form the core motivations for adopting a digital nomad lifestyle. Conversely, "pull" factors—such as robust internet infrastructure, affordable living costs, and a sense of community—play a critical role in destination choices. Therefore, an adapted application of the theory should not only address destination appeal but also integrate considerations of work–life balance and technological infrastructure.

Although most existing studies are grounded in quantitatively oriented conceptual frameworks, a deeper understanding of digital nomads' motivations calls for qualitative inquiry—particularly through phenomenological approaches. Current research tends to emphasise economic and technological variables when explaining why digital nomads choose certain destinations, often overlooking more subjective dimensions such as individual experiences, identity transformations, and feelings of community belonging.

2. Literature Review

Digital nomadism has garnered increasing attention in tourism literature, particularly as a rapidly expanding lifestyle trend in the post-COVID-19 era. In this context, existing studies have explored the lifestyle (Reichenberger, 2018; Kozak et al., 2024), motivations (Hall et al., 2019; Prabawa & Pertiwi, 2020; Zaki, 2024), and destination selection criteria (Kocaman, 2021; Poulaki et al., 2025; Uğur, 2025) of digital nomads through various theoretical lenses. Notably, the push and pull theory has frequently been applied to better understand the travel decision-making processes of this group (Prabawa & Pertiwi, 2020; Zaki, 2024). Studies utilising platforms such as Nomad List have investigated digital nomads' perceptions of destinations (Demirel İli, 2023; Taşdelen, 2023). Findings from these studies—particularly those focusing on Turkey—highlight a positive perception of cultural and natural richness, alongside concerns regarding infrastructure, security, and bureaucratic processes. As a result, strategic planning aimed at attracting digital nomads is gaining increasing importance for destinations (Ji et al., 2024; Zhou et al., 2024). Unlike traditional tourist typologies, digital nomads tend to prioritise long-term liveability, working conditions, and a sense of community (Düzgün & Akın, 2022; Khodabandeh Tousarvandani, 2024). Some researchers approach digital nomadism from a postmodern perspective, positioning nomads as post-tourists who transcend conventional binaries (Kaya-Sayarı & Coşkun, 2024). Gender-focused research has also emerged, highlighting stimuli specific to female digital nomads (Özoğul Balyali, 2024), while other studies explore food preferences and attitudes towards local brands (Miocevic & Kvasina, 2025; Miocevic et al., 2025). Contemporary methodologies such as social media analysis and netnography have been used to examine the discourse, mobility patterns, and communal aspects of digital nomadism (Tiberius et al., 2024; Bahri, 2024). Additionally, the structural dimensions of the phenomenon—such as visa policies and governmental strategies—are receiving growing scholarly attention (Poulaki et al., 2023; Bednorz, 2024).

Taken together, these studies underline that digital nomadism is a multidimensional phenomenon situated at the crossroads of tourism, migration, lifestyle, and digitalisation. Building upon this foundation, the present study aims to examine digital nomads' travel motivations through the lens of the push and pull theory, offering a structured framework to better understand their destination choices

Existing studies on the travel tendencies of digital nomads are largely conceptual and predominantly rely on quantitative research methods, limiting the ability to explore their motivations in depth. Therefore, this study aims to examine digital nomads' travel tendencies within the framework of push and pull theory. Accordingly, the main research question of this study is formulated as follows:

"What are the push and pull factors influencing the travel tendencies of digital nomads?"

3. Research Methodology

This study was designed using a qualitative research approach and a phenomenological research design. The phenomenological design seeks to explore how individuals experience and make sense of a particular phenomenon, aiming to reveal the essence of their lived experiences. Additionally, phenomenological research focuses on the experiences of participants who have encountered the same phenomenon (Creswell, 2014; 2020). To understand the motivations behind tourists' travel behaviours, the Push–Pull Theory provides a significant theoretical framework. This theory examines the internal (push) motivations that drive individuals to travel and the external (pull) factors that make a particular destination attractive. Push factors arise from an individual's intrinsic desires, such as the urge to explore, the pursuit of new experiences, or the need to escape routine life. In contrast, pull factors are external influences related to a destination's offerings, including natural attractions, cultural appeal, economic opportunities, or technological infrastructure. These two factors represent fundamental elements in shaping individuals' travel decisions (Dann, 1977). In this context, the study employs a deductive approach to identify the travel tendencies of digital nomad tourists and, based on these tendencies, determine the push and pull factors influencing their travel behaviour.

Qualitative research focuses on achieving a deep understanding of the reality of events, which is why it is generally framed around "what" and "how" questions (Creswell, 2020). In this context, the main research question and its related sub-questions have been formulated as follows:

Main Research Question:

- What are the push and pull factors influencing the travel tendencies of digital nomads?

Sub-Research Questions:

1) What are the key differences between digital nomad tourists and traditional tourists?
2) What are the primary purposes of digital nomad tourists' travels?
3) What are the advantages and disadvantages of travelling as a digital nomad?
4) What are the main challenges encountered while travelling as a digital nomad?
5) How does being a digital nomad tourist impact individuals' lives?
6) How would you describe your previous travel experiences as a digital nomad?
7) What are the expectations of digital nomad tourists from a destination?

The population of this study consists of approximately 13,000 Turkish digital nomads registered on NomadList, the largest digital nomad platform. The sample includes individuals who have travelled at least once under the identity of a digital nomad. In line with the purpose of the study—to explore the travel motivations of digital nomad tourists in depth—purposive sampling was employed. The selection of participants aimed to reach individuals who have embraced the digital nomad lifestyle and have first-hand experience with it. Accordingly, three main criteria were used for inclusion: (1) participants must self-identify as digital nomads, (2) they must have travelled at least once as a digital nomad, and (3) they must be capable of articulating their travel motivations based on these experiences.

To reach potential participants, collaboration was established with the "Digital Nomad Türkiye" community, an active platform for digital nomads based in Turkey. From among the community members, 20 individuals who voluntarily agreed to participate were initially contacted for preliminary interviews. Following these interviews, 10 participants who met the selection criteria, demonstrated experiential diversity, and were able to provide rich and relevant responses were chosen for the main data collection process. Additionally, to minimise potential challenges in accessing participants, snowball sampling was also utilised. The final sample size was determined in accordance with qualitative research principles—based on research questions, the richness of the data, and the process of data analysis (Merriam, 2013)—and in-depth interviews were conducted with ten participants.

The data for the study were collected through semi-structured interviews using an interview form. The questions included in the interview form were developed by the researchers based on relevant literature and sources such as Chevtaeva (2021), Prabawa & Pertiwi (2020), Rakhmadi (2021), Thompson (2021), Vagena (2021), and Wiranatha et al., (2020). The interview form consists of two sections. The first section includes questions about participants' demographic information, while the second section contains eleven open-ended questions and their follow-up questions, designed to identify push and pull factors based on the travel tendencies of digital nomads.

Participants were clearly informed about the purpose of the study, and their voluntary participation was requested. All interviews were conducted online between April and May 2024 by the researchers. The interviews lasted approximately 30–45 minutes, and audio recordings were taken with participants' consent. The collected data were transcribed, and to prevent data loss, each researcher independently verified the transcriptions against the audio recordings. To ensure participant confidentiality, participants were coded as "P1, P2...P10".

To ensure the validity and reliability of the study, data triangulation was achieved by verifying the data obtained from the interview forms with relevant literature. Additionally, participant validation was conducted during the interviews to prevent misunderstandings and minimise data loss. Following the transcription process, the data were analysed using MAXQDA 20 software. A deductive approach was employed, applying the descriptive analysis method to categorise the data into codes and themes. To ensure accuracy and prevent coding loss, the coding process was meticulously reviewed by the researchers. Furthermore, to enhance the consistency of the findings, the data analysis was conducted separately by the researchers, followed by a comparison to identify common findings, thereby implementing researcher triangulation. Direct quotations from participants were included to further strengthen the validity of the study, ensuring that their perspectives were accurately represented.

4. Findings

An analysis of the participants' profiles reveals that the majority are single, male, and hold an undergraduate degree. Their professions predominantly fall within online-based fields such as software development, digital marketing, digital design, media, advertising, e-commerce, and digital content creation. Regarding their places of residence outside travel periods, most participants reside in major Turkish cities, particularly Istanbul, Antalya, and İzmir. Additionally, they engage in both domestic and international travel. While some participants spend the entire year travelling, others undertake three to four trips annually.

Table 1. Demographic Characteristics and Additional Information

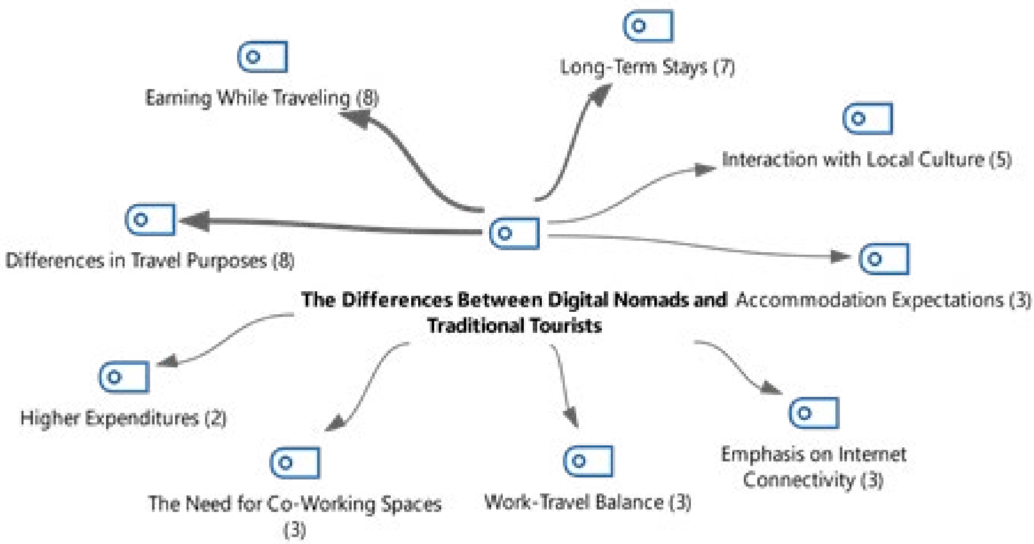
Participant	Gender	Age	Marital Status	Educational Background	Occupation	Place of Residence	Travelled Destinations	Frequency of Travel
P1	Male	22	Single	Bachelor's Degree	Software and IT	Istanbul	Domestic and international	3 times
P2	Male	28	Single	Bachelor's Degree	Digital Marketing Specialist	Ardahan	Domestic	3-4 trips
P3	Female	33	Married	Bachelor's Degree	Digital Design	Istanbul	Primarily international	Entire year
P4	Male	25	Single	High School	Digital Marketing Specialist	Antalya	International	Entire year
P5	Male	26	Single	Associate degree	Video Editing	Manisa	Domestic and international	2 times
P6	Female	27	Single	Bachelor's Degree	Media and Advertising	Istanbul	Primarily international	20 times
P7	Male	30	Single	Bachelor's Degree	Software Developer	Ordu	Primarily domestic	3-4 trips
P8	Male	23	Single	Bachelor's Degree	Digital Content Creator	Izmir	International	Entire year
P9	Male	31	Single	Bachelor's Degree	E-commerce	Adana	Domestic and international	1-2 international, 3-4 domestic
P10	Male	33	Married	Bachelor's Degree	E-commerce	Istanbul	Primarily international	Entire year

Source: Own Elaboration

In the study, participants were asked to identify the distinguishing factors between digital nomad tourists and traditional tourists to gain a clearer understanding of their travel motivations. Accordingly, the question *"What are the key differences between digital nomad tourists and traditional tourists?"* was posed to the participants. The responses indicated that the most prominent differences between traditional tourists and digital nomad tourists include earning while travelling (f=8), differences in travel purposes (f=8), long-term stays (f=7), and interaction with local culture (f=5) (Figure 1).

Participant P6 expressed their thoughts as follows: *"Digital nomads generally stay longer in the places they visit. This is due to both the continuity of their work schedule and the limited amount of free time they have."* Similarly, P8 stated: *"Traditional tourists travel for vacation; they go to a destination for a short period to relax, have fun, and explore, and then they return home. Digital nomads, on the other hand, work while travelling."* Emphasising the importance of internet access, P4 noted: *"Traditional tourists usually do not experience issues when there is no internet connection, whereas for digital nomads, internet access is a crucial criterion."* This statement clearly highlights the priorities of digital nomads.

Figure 1. The Differences between Digital Nomad Tourists and Traditional Tourists

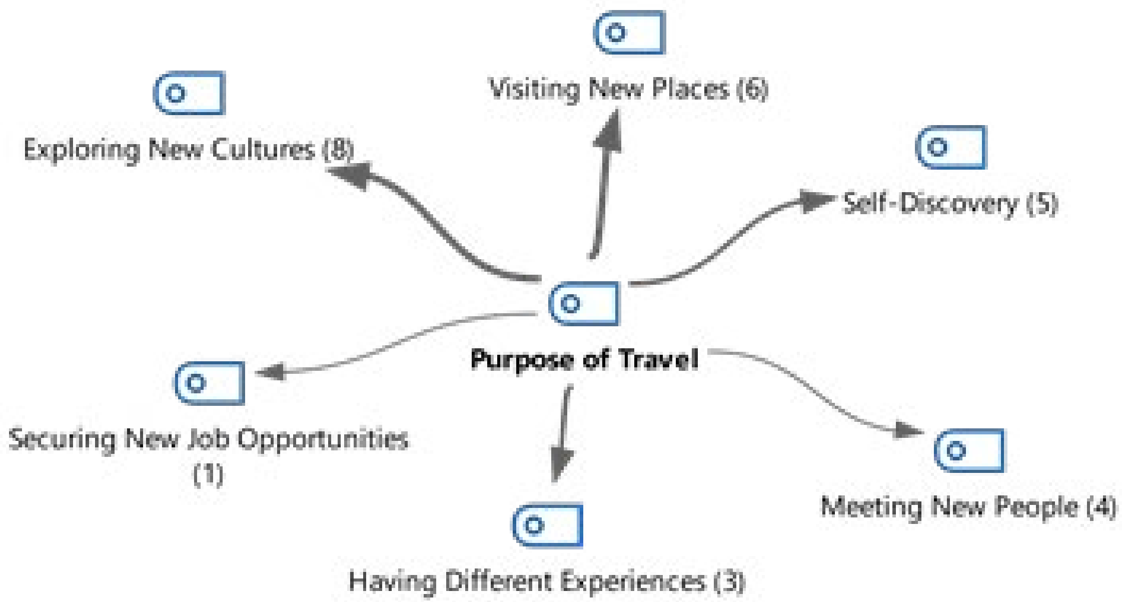


Source: Own Elaboration

Participants were asked the question: *"What are the primary purposes of digital nomad tourists when travelling?"* The responses revealed that the main purposes of travel among digital nomads include exploring new cultures (f=8), visiting new places (f=6), self-discovery (f=5), meeting new people (f=4), and experiencing different lifestyles (f=3) (Figure 2).

Participant P4 described how their travel motivations evolved over time: *"At first, my goal was to see new places and try new flavours, but over time, it shifted towards meeting people, hearing different stories, and sharing my own. Now, my travels are mostly about getting to know more people."* Similarly, P3 emphasised multiple aspects of their motivation: *"I choose to travel to learn through experience, explore new cultures, connect with new people, and create business opportunities."* Participant P1 highlighted the role of digital nomadism in balancing work and travel, stating: *"I wanted to see new places, but working five days a week made it impossible. Digital nomadism is the perfect way to use my time efficiently while exploring new destinations."* The travel motivations of digital nomads, which focus on cultural exploration and social interaction, necessitate the development of cultural events and community-based experiences in destinations.

Figure 2. Purpose of Travel



Source: Own Elaboration

Participants were asked the question: *"What are the advantages and disadvantages of travelling as a digital nomad tourist?"* Among the advantages of being a digital nomad, flexible working conditions (f=7), the opportunity to travel the world (f=5), and meeting new people and cultures (f=5) were the most frequently mentioned benefits (Table 2).

Participant P8 highlighted the privilege of constant travel, stating: *"The biggest advantage is that we get to travel the world, what could be better than that?"* Similarly, P2 emphasised the professional opportunities that arise through networking: *"I can build a network and establish collaborations. For example, when I travel, I can contribute significantly to the social media management or marketing of the hotel I stay at. In this way, my digital nomad travels create new job opportunities for me."* Additionally, P3 emphasised the freedom that digital nomadism offers, stating: *"You don't have to wake up early in the morning. There are no dictated time slots—you simply enjoy the freedom."*

Among the disadvantages of being a digital nomad tourist, the most frequently mentioned challenges were feelings of loneliness (f=6), difficulties in adaptation and cultural integration (f=5), and psychological and work management challenges (f=4).

Participant P5 described the challenges of loneliness and self-motivation, stating: *"Since you are completely on your own, the feeling of loneliness can sometimes be overwhelming. You have to motivate yourself."*

Additionally, P8 highlighted the difficulties digital nomads face due to constant travel: *"You need to have strong adaptation skills because you are always on the move. Loneliness can be an issue since you are frequently in different countries. You might meet new people in a destination, but after a while, you are no longer there. For me, this is the biggest disadvantage."*In addition to flexibility and travel freedom, loneliness and adaptation challenges are also critical for digital nomads; therefore, destinations should offer services that foster social connection and enhance psychological resilience.

Table 2. Advantages and Disadvantages of Being a Digital Nomad Tourist

Theme	Code	Frequency	Percentage (%)	Theme	Code	Frequency	Percentage (%)
Advantages of Being a Digital Nomad	Flexible Working Conditions	7	33.36	Disadvantages of Being a Digital Nomad	Feelings of Loneliness	6	28.6
	Opportunity to Travel the World	5	23.8		Difficulties in Adaptation and Cultural Integration	5	23.8
	Meeting New People and Cultures	5	23.8		Psychological and Work Management Challenges	4	19.04
	New Job Opportunities	2	9.52		Internet Infrastructure	4	19.04
	Increased Creativity	2	9.52		Health, Security, and Border Protocols	2	9.52

Souce: Own Elaboration

Another sub-research question posed to participants was: *"How would you describe your previous travel experiences as a digital nomad tourist?"* To address this question, participants were asked about their past travel experiences (Table 3), travelled destinations (Figure 3), reasons for choosing these destinations (Figure 4), and how they spent their leisure time at these locations (Figure 5).

A significant number of digital nomads stated that they prefer less popular destinations (f=7) when selecting their travel locations. Participant P10 expressed this preference, stating: *"I try to choose places that are not frequently visited by tourists."* Similarly, P5 highlighted their avoidance of mainstream locations, saying: *"I try not to choose popular places. For example, when I went to Thailand, I never visited highly touristy places like Phuket or Pattaya because they are pure chaos."* This response emphasises how overcrowded destinations can negatively impact the travel experience. Conversely, participant P4, who prefers popular locations, noted the challenges of working in such environments: *"Yes, very popular places can be attractive. For instance, the reason I went to Bali was that there were so many people there. However, I realised that in such places, it is difficult to focus on people, and even harder to concentrate on work."* This statement highlights the drawbacks of crowded destinations for digital nomads.

Among the types of accommodation preferred by participants during their travels, mid-range accommodation establishments (f=9) and shared accommodation services (f=8) emerged as the most frequently chosen options.

Participant P3, who has experienced various accommodation types, shared their perspective: *"We stayed in hostels; we also carried a tent and occasionally camped. In villages, the locals often invited us into their homes, allowing us to spend time with them and stay there. However, in popular cities, we mostly preferred hostels where we could meet new people and engage in shared experiences."* Participant P4, who predominantly chooses shared accommodation services such as Airbnb, emphasised the need for personal space and comfort: *"We usually prefer staying in Airbnb accommodations because we are people who need our own space. Having my own space is important for conducting meetings comfortably and staying in a more convenient environment. Additionally, our budget allows for this choice. I have also stayed in hostels from time to time.*

The results indicate that digital nomad tourists generally prefer to stay in their chosen destinations for one month or longer (f=7). Participant P5 described how their travel duration preferences evolved over time: *"During my first trips abroad, I usually stayed for seven to ten days, sometimes even just two or three days were enough. However, now I make an effort to stay for at least a month in the places I visit. I believe this duration is necessary to build deeper relationships with the local people and better understand their way of life."*

Regarding expenditure categories, participants reported that their travel expenses were primarily allocated to accommodation, food and beverage, activities, and transportation. Participant P2 emphasised the necessity of basic needs, stating: *"The largest portion of my spending goes to accommodation and food because these are essential needs."* Similarly, P1 highlighted the significance of transportation costs, explaining: *"Generally, my biggest expenses are flight tickets and accommodation. Apart from that, food costs are also quite high; however, the cost of activities varies depending on the destination."* Digital nomads' preference for less crowded destinations, mid-range and shared accommodation options, and long-term stays necessitates the adaptation of tourism infrastructure and services to align with these preferences.

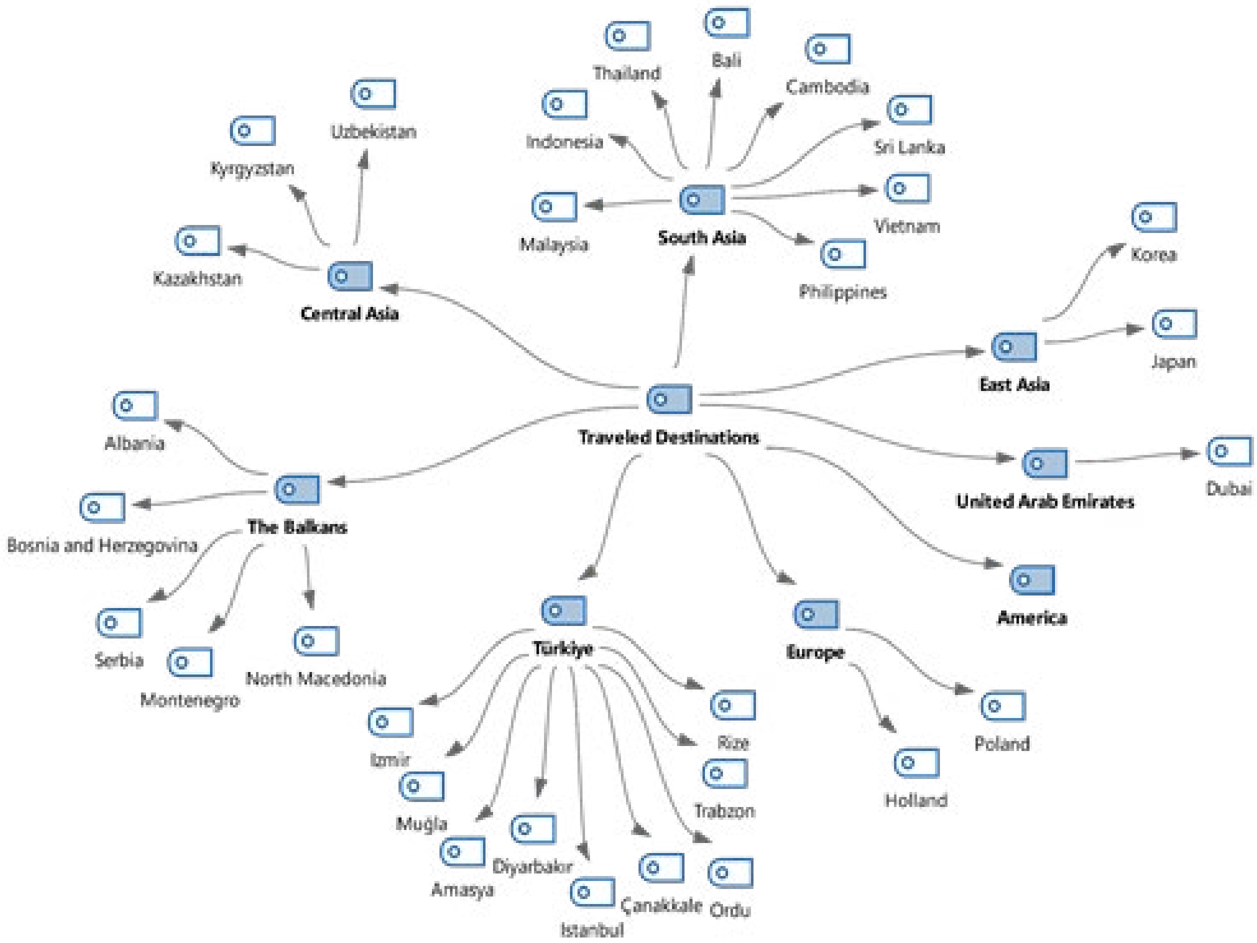
Table 3. Information about Previous Trips as a Digital Nomad Tourist

Category	Theme	Code	Frequency	Percentage (%)	Theme	Code	Frequency	Percentage (%)
Information about the undertaken trip	Popular destination	Preferred	3	30	Expenditure categories	Accommodation	8	40
		Not preferred	7	70				
	Accommodation type	Shared accommodation services (e.g., Airbnb)	8	47.06		Food and Beverage	6	30
		Mid-range accommodation establishments	9	52.94		Activity	3	15
	Duration of stay	1 month or longer	7	70		Transportation	3	15
		Less than 1 month	3	30				

Souce: Own Elaboration

The destinations visited by participants as digital nomad tourists are presented in Figure 3. Participant P10 shared their preference for Southeast Asia, stating: *"I specifically chose Southeast Asia. Over the past year, I have frequently travelled to this region, and for the past year and a half, I have also been visiting Central Asia. I spent around six months in countries like Kyrgyzstan and Kazakhstan. Southeast Asia stands out due to its affordability and its vibrant 24-hour social life."* Similarly, P4 expressed a preference for visa-free destinations, explaining: *"In Türkiye, I have travelled to Ordu, Trabzon, and Rize. Abroad, I usually choose visa-free countries. For this reason, this year I preferred the Balkans and visited Serbia, Bosnia and Herzegovina, Albania, Kosovo, Montenegro, and North Macedonia. Later, I travelled to Asia, visiting countries such as Malaysia, Indonesia, Thailand, Cambodia, Vietnam, and Sri Lanka at the beginning of 2020."* Digital nomads' preference for destinations offering affordable living costs and visa convenience highlights the importance of incentivising visa policies and strategies that balance living expenses in destination management

Figure 3. Travelled Destinations



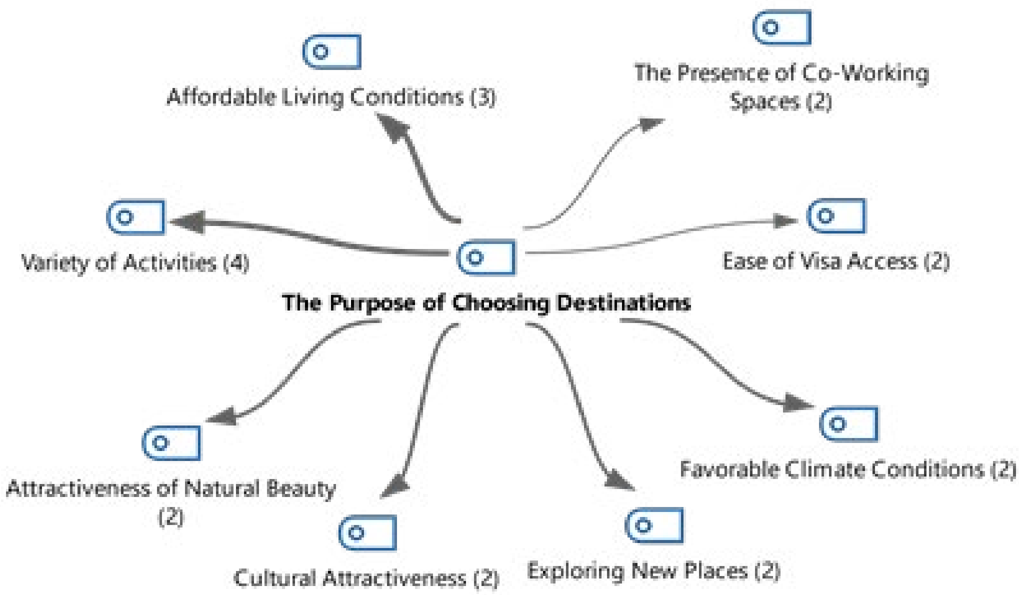
Souce: Own Elaboration

To determine the pull factors of the destinations preferred by digital nomads, participants were asked about their reasons for choosing these locations. The responses are presented in Figure 4. The most prominent reasons include variety of activities (f=4), affordable living conditions (f=3), cultural attractiveness (f=2), attractiveness of natural beauty (f=2), favourable climate conditions (f=2), and ease of visa access (f=2).

Participant P3 described their trip as fulfilling a childhood dream, stating: *"I have a passion for Asia, so I wanted to ride horses in Kyrgyzstan. It was a childhood dream, and I finally made it happen."* Highlighting the importance of low living costs, P6 shared: *"I mainly prefer Europe because the flights are shorter. However, my second choice is definitely Asia, due to both the time zone advantage and the much more affordable living conditions compared to Europe."*

Since factors such as low cost of living, cultural and natural appeal, and visa convenience are decisive in digital nomads' destination choices, emphasising these features in destination strategies can provide a competitive advantage.

Figure 4. The Purpose of Choosing Destinations

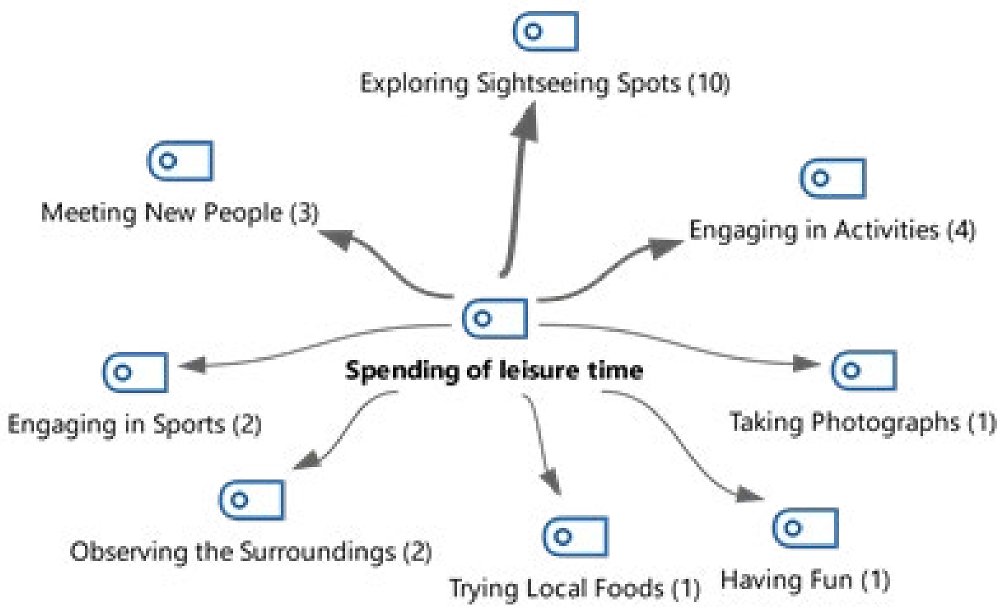


Souce: Own Elaboration

Information regarding how participants spend their leisure time in the destinations they travel to as digital nomads is presented in Figure 5. Participants primarily spend their free time exploring sightseeing spots (f=10), engaging in activities (f=4), meeting new people (f=3), and observing their surroundings (f=3).

Participant P4 shared their experiences, stating: *"I usually go surfing. That is why I have been into surfing in Bali and Sri Lanka for the past few years. Besides surfing, I spend my time enjoying natural attractions, waterfalls, and hiking."* Similarly, P5 emphasised the importance of discovering new places and meeting people, explaining: *"The main reason I travel is to see the people and lifestyles of the places I visit. I know the world is vast, so exploring new places and meeting new people helps me broaden my perspective."* Digital nomads' preference for nature-based and socially interactive activities during their leisure time necessitates that destinations expand such experience offerings and integrate them into their promotional strategies.

Figure 5. Spending of Leisure Time



Souce: Own Elaboration

Participants were asked the question: *"How does being a digital nomad tourist impact individuals' lives?"* The responses indicate several positive effects, including providing work motivation (f=6), enhancing performance (f=5), and establishing collaboration (f=3). On a psychological level, while an increase in happiness (f=3) was reported, some challenges such as adaptation difficulties (f=3) and mental fatigue (f=2) were also noted (Table 4).

Participant P10 emphasised the sense of vitality and renewal brought by the digital nomad lifestyle, stating: *"Being a digital nomad tourist has a highly positive impact on my work performance because I am constantly in motion. Meeting new people in a new country positively affects my life in every aspect."* Similarly, P5 highlighted the role of intrinsic motivation in shaping performance, stating: *"As humans, we are not always happy; we go through different emotions. However, I can say that being a digital nomad significantly enhances my performance."* Participant P4 discussed the personal growth aspect, explaining: *"Perhaps not physically, but mentally and spiritually, it develops my mind and personality. When I return to Türkiye, my family and friends notice the changes in me."* Additionally, P1 noted both the psychological benefits and mental exhaustion that come with digital nomadism: *"It has a really positive psychological impact; it increases my happiness. Although it can be mentally exhausting at times, overall, the effects are positive in every way."* Lastly, P3 expressed how avoiding a sedentary lifestyle contributes to their happiness, stating: *"It is often said that travellers are happier, and I completely agree. Staying in one place is against my nature; I cannot find the same level of joy in anything else as I do in travelling."* The positive effects of digital nomadism on work motivation, performance, and psychological well-being highlight the need for developing social and digital infrastructures in destinations that support the productivity of nomads.

Table 4. The Impact of being a Digital Nomad Tourist on Individuals' Lives

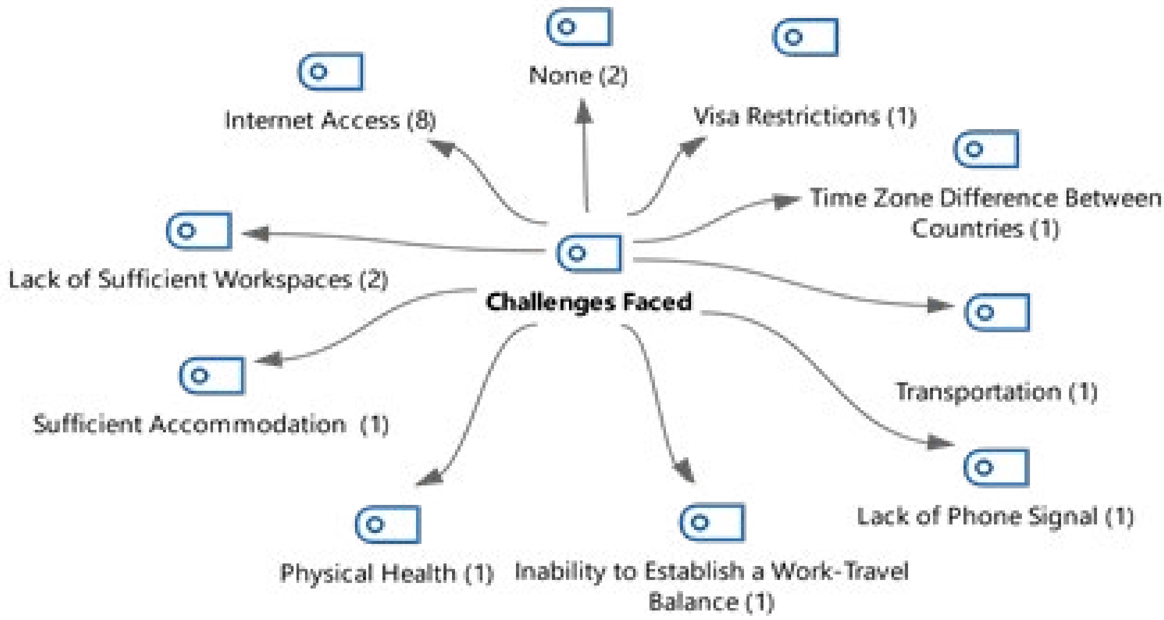
Category	Theme	Code	Frequency	Percentage (%)	Theme	Code	Frequency	Percentage (%)
Impact on Life	Work-Life	Providing motivation	6	37.5	Psychological	Increase in happiness	3	27.27
		Enhancing performance	5	31.25				
		Establishing collaboration	2	12.5		Adaptation difficulties	3	27.27
		Risk of financial hardship	2	12.5		Disconnected relationships	2	18.18
		Establishing work-life balance	1	6.25		Mental fatigue	2	18.18
	Mental	Relaxation	1	20				
		Positive impact	3	60		Longing for the past	1	9.09
		Staying fit	1	20				

Souce: Own Elaboration

Participants were asked the question: *"What are the main challenges faced while travelling as a digital nomad?"* (Figure 6).

Among the most significant challenges, internet access emerged as an essential requirement for digital nomads. Participant P2 highlighted the issues related to internet connectivity, stating: *"Internet access can sometimes be problematic; it is not always available everywhere, or the connection may not be sufficient. That is why I arrange my own connection while travelling. However, my expectation is that the places I visit provide reliable internet access."* Additionally, visa restrictions were mentioned as a major limitation affecting freedom of movement. Participant P1 explained: *"Visa regulations can be challenging because they directly impact the length of my stay. If I want to stay longer, I am often forced to change countries."* Another key issue was the lack of sufficient workspaces, which affects productivity. Participant P6 expressed their frustration, stating: *"Not having an appropriate or sufficient workspace is one of the challenges I face when trying to get my work done."* This response underscores the importance of adequate working environments for maintaining efficiency as a digital nomad. Digital nomads' essential needs—such as internet access, visa restrictions, and lack of adequate workspaces—necessitate that destinations strengthen their digital infrastructure and implement regulations suitable for long-term stays.

Figure 6. Challenges faced as a Digital Nomad Tourist



Souce: Own Elaboration

Participants were asked the question: *"What are the expectations of digital nomad tourists from a destination?"* The results indicate that the highest-rated factors are internet quality (4.5), local culture (4.3), and natural attractions (4.2), suggesting that digital nomads prioritise reliable internet for work while also seeking cultural engagement and immersive experiences in their surroundings. Additionally, safety and hygiene (4.1) and the variety of restaurants and cafés (4.1) emerged as key expectations, highlighting the importance of a secure environment and diverse dining options. Furthermore, affordable cost of living (3.5) reflects a preference for budget-friendly experiences. However, factors such as local people's foreign language proficiency (2.7), social media-friendly locations (2.7), and shopping opportunities (2.6) were ranked lower in importance compared to other expectations (Table 5).

Participant P2 outlined their primary expectations from a destination, stating: *"Hygiene is a top priority for me. The variety of food, the quality of restaurant and hotel dining services, and the availability of activities and natural attractions significantly influence my destination choices. The presence of local cultural events also plays a role in my decision-making process. Moreover, a high-speed internet connection is essential, as it enables me to interact and collaborate with other travellers. Accessibility is another important factor; while I don't necessarily prefer remote locations, ease of transportation to my destination is a key consideration for me."*Digital nomads' expectations from destinations—such as internet quality, cultural experiences, natural attractions, and hygiene—necessitate prioritising these elements in destination marketing and infrastructure investments

Table 5. Participants' Expectations from the Destination

Factors	Average	Factors	Average
Internet Quality	4.5	Affordable cost of living	3.5
Local culture	4.3	Networking opportunities	3.4
Natural attractions	4.2	Variety of public transport options	3.4
Safety and hygiene	4.1	Hosting of international guests by the destination	3.3
Variety of restaurants/cafés	4.1	Ease of access to the destination	3.1
Interaction with other digital nomads	4.0	Beaches	3.0
Day trip opportunities	3.9	Entertainment venues	3.0
Leisure activities	3.7	Local people's foreign language proficiency	2.7
Co-working spaces	3.7	Social media-friendly locations	2.7
Climate	3.6	Shopping opportunities	2.6

Source: Own Elaboration

5. Conclusion

This study examined the travel motivations of digital nomads based on the Push and Pull Theory. The findings identified the push factors that encourage digital nomads to leave their current locations as follows:

- Flexibility, Pursuit of Freedom, and Escape from Monotony: The desire to work independently of a fixed office – preference for flexible working hours – willingness to work location-independently – avoidance of routine and monotonous life – inclination towards continuous new experiences.
- New Experiences and Exploration: Interest in discovering different cultures and meeting new people – desire to explore various cities and countries – aspiration to experience local cultures.
- Psychological and Personal Development: The pursuit of happiness – sense of renewal – pursuit of mental well-being – desire for self-discovery – acquisition of new skills – access to personal growth opportunities.
- Work–Life Balance and Motivation: The opportunity to work with greater motivation – desire to enhance productivity – urge to explore inspiring and creativity-enhancing spaces.
- Professional Opportunities: The opportunity to establish new collaborations – chance to expand professional networks – ability to explore new job opportunities.

The pull factors that attract digital nomads to specific destinations have been identified as follows:

- Internet and Technological Infrastructure Access: Availability of high-speed and reliable internet – strong technological infrastructure.
- Co-Working Spaces and the Presence of Other Digital Nomads: Availability of co-working spaces – sufficient work environments for digital nomads – opportunities to work alongside other digital nomads.
- Affordable Cost of Living: Reasonable costs for accommodation, transport, and food – price–performance ratio – availability of high living standards.
- Visa Facilitation and Legal Regulations: Long-term visa policies – special visa programmes for digital nomads.
- Environmental Factors and Inspiring Atmosphere: Mild and comfortable climate conditions – natural beauty and environmental attractiveness – an inspiring atmosphere shaped by art, nature, or urban life.
- Touristic Attractions and Activities: Diversity of cultural and touristic sites – experience-driven opportunities for adventure, nature, art, and social activities – variety of accommodation options – ease of access to the destination – availability of alternative public transport options.
- Openness of Local Communities to Interaction and Cultural Integration: Local population's foreign language proficiency, hospitality, and willingness to engage socially – an environment where digital

nomads can integrate into the local community – a setting that is open to cultural exchange and diversity.
- Health, Hygiene, and Safety Conditions: Accessibility of healthcare services – a hygienic, safe, and peaceful living environment

This study examined the travel motivations of digital nomads within the framework of the Push and Pull Theory and identified distinctive push factors such as the desire for freedom, personal growth, psychological well-being, and work–life balance. Likewise, pull factors such as high-speed internet access, affordable cost of living, cultural diversity, and strong digital infrastructure were found to significantly influence destination choices. These findings offer a theoretical extension of the classical Push–Pull Theory by illustrating its applicability to new, digitally enabled forms of mobility and tourism.

While the push–pull framework provided a clear structure for analysing motivations and destination factors, this study further recognises the porous boundaries and interdependencies between these categories. For example, work–life balance simultaneously acts as a push factor (driving departure from rigid routines) and a pull factor (attracting towards destinations that support both productivity and leisure). Similarly, digital infrastructure not only draws nomads (pull), but also enables the greater flexibility and personal development that push them from their current environments. Acknowledging these overlaps enriches the theoretical nuance of the Push–Pull model and better captures the hybrid nature of digital nomadism.

A detailed examination of the study's findings reveals key differences between traditional tourists and digital nomad tourists, primarily in terms of travel purpose, travel duration, the ability to work and earn income while travelling, and interaction with local culture. While the travel motivations of traditional tourists are often driven by curiosity, entertainment, and leisure, digital nomads approach travel as a lifestyle, where maintaining a work–life balance takes precedence. Reichenberger (2018) also highlights that digital nomads adopt a holistic lifestyle that prioritises professional, spatial, and personal freedom, aiming to integrate work and personal life in a balanced and fulfilling way. Another significant difference between these two tourist groups is the duration and timing of their travels. For traditional tourists, holidays are a form of leisure, during which they completely detach from work and do not integrate their professional lives into their travel experiences. In contrast, digital nomads continue working while travelling, allowing them to stay in destinations for longer periods and perceive the cities or countries they visit as temporary homes. This extended stay enables digital nomads to engage more deeply with local cultures. Additionally, total travel duration is another key distinction. Unlike traditional tourists, digital nomads do not need to set aside designated holiday time for travel. Instead, they combine work and travel seamlessly, eliminating the need for extended breaks from their careers. This enables them to travel for longer periods overall. These findings align with those of Betre (2022), who similarly noted that digital nomads' ability to work while travelling allows them to sustain long-term mobility.

This study highlights the key distinctions between digital nomads and traditional tourists in terms of travel purpose, duration, income generation, and cultural engagement, positioning digital nomadism not merely as a travel practice but as a holistic lifestyle. This finding aligns with Reichenberger's (2018) characterisation of digital nomads as individuals who prioritise professional, spatial, and personal freedom. By demonstrating that traditional tourism frameworks inadequately capture the complexity of digital nomad behaviour, the study contributes theoretically to the literature on travel motivation and tourist typologies.

The study also highlights that one of the most defining differences between digital nomads and traditional tourists is their ability to generate income while travelling. Furthermore, digital nomad tourists tend to spend more money at their destinations than traditional tourists, with experience-based spending being a significant factor. However, since their travels are long-term, digital nomads tend to budget carefully and adopt a more frugal approach to expenses. Thompson (2019) also emphasised that digital nomads not only focus on work but also dedicate a considerable amount of time and financial resources to hobbies and leisure activities. Similar to the findings of Jiwasiddi et al*.*, (2024), this study indicates that digital nomads tend to prefer accommodations that foster collective experiences, such as co-living spaces with shared workspaces. Another major distinction is their strong reliance on digital technologies, with uninterrupted internet access being one of their top priorities when choosing a destination. These results are consistent with the findings of İli & Büyükbaykal (2023), Milošević (2020), and Prabawa & Pertiwi (2020), who similarly highlighted the critical role of technological accessibility for digital nomads.

This study demonstrates that one of the most fundamental distinctions between digital nomads and traditional tourists lies in their ability to generate income while travelling. Digital nomads tend to engage in experience-based spending, yet they adopt budget-conscious strategies to sustain long-term travel. Their preference for co-living accommodations with shared workspaces also emphasises the socio-technological nature of this lifestyle. Furthermore, their strong reliance on digital technologies—particularly the demand for uninterrupted internet access—highlights how technological needs significantly shape destination choices. These findings contribute theoretically by underlining the role of digital infrastructure in redefining tourism behaviour in the context of mobile work.

When it comes to destination preferences, digital nomad tourists and traditional tourists approach the factor of popularity differently. Traditional tourists tend to choose well-known, highly developed, and popular destinations, whereas digital nomads often seek less-explored, off-the-beaten-path, or less crowded locations. However, digital nomads also show a tendency to favour destinations that have become popular due to facilities and infrastructure specifically catering to their needs.

The study findings indicate that the primary travel motivations of digital nomad tourists include exploring new places, discovering new cultures and people, gaining diverse experiences, and self-discovery. These results align with several existing studies in the literature (Müller, 2016; Reichenberger, 2018; Thompson, 2019; Stickel, 2020; Hannonen, 2020).

Additionally, the findings reveal that travelling as a digital nomad tourist offers various advantages, such as flexible working conditions, the ability to travel the world without pausing one's career, and opportunities to meet new people and cultures. Furthermore, this lifestyle has been found to create new job opportunities and enhance creativity. One of the most significant insights of the study is that the digital nomad lifestyle also presents notable challenges. The most frequently mentioned difficulty was the feeling of loneliness. Being constantly away from home can lead to a lack of belonging, ultimately causing feelings of isolation. This finding is consistent with the study conducted by Lacárcel et al. (2024), in which digital nomads reported struggling with loneliness due to prolonged separation from family and familiar social circles.

The study reveals that, unlike traditional tourists, digital nomads tend to favour less crowded, lesser-known, and more authentic destinations, although they may also be drawn to popular locations that offer specialised infrastructure catering to their needs. Furthermore, their primary travel motivations—cultural exploration, diverse experiences, and self-discovery—suggest that digital nomadism constitutes not merely a form of travel but a multifaceted lifestyle emphasising flexibility, creativity, and professional growth. However, the study also highlights significant psychological challenges, particularly feelings of loneliness and lack of belonging. These findings contribute theoretically by positioning digital nomadism as a lifestyle that necessitates a reconsideration of the balance between individual freedom and social connectivity in contemporary mobility patterns.

Additionally, while exploring new places and meeting new people were described as exciting aspects of digital nomadism, frequent adaptation to new environments can become mentally exhausting over time. Based on these findings, psychological and work management challenges have been identified as key disadvantages of the digital nomad lifestyle, including difficulties in maintaining self-discipline, lack of motivation, and challenges in focusing on work. In addition to these psychological and work-related challenges, the study highlights issues related to accessing healthcare services in certain countries and security risks as further disadvantages. Furthermore, border crossing regulations and visa procedures can restrict the mobility of digital nomads, complicating their travel experiences. Another critical challenge relates to internet access, which is a fundamental necessity for digital nomads. The need to be constantly connected can become an added burden. Several previous studies have identified additional challenges digital nomads face, including limited access to co-working spaces, noisy work environments, high accommodation costs, and a lack of privacy (Chevtaeva, 2021). Moreover, isolation, time zone differences, financial uncertainty, cultural barriers, limited social life, and health and safety risks have also been listed as common difficulties (Verma, 2023). These findings align with the studies conducted by Cook (2020, 2023) and Zaki (2024), further emphasising that while digital nomadism offers unique opportunities, it also presents significant challenges that must be navigated.

To gain a deeper understanding of the push and pull factors influencing digital nomad tourists, this study collected detailed information about their previous travel experiences. The findings indicate that the data obtained from participants align with the fundamental dynamics distinguishing digital nomad tourists from traditional tourists. Additionally, the study found that digital nomads primarily prefer mid-range accommodation establishments and shared accommodation alternatives. The two main reasons behind this preference are economic considerations and opportunities for social interaction. From an economic perspective, digital nomads typically plan long-term stays, making luxury hotels less financially viable. Instead, they opt for more cost-effective accommodation options that allow them to better manage their expenses over extended periods. Moreover, shared accommodations provide valuable networking opportunities, enabling digital nomads to connect with individuals from diverse professional backgrounds, build new collaborations, and expand their social and professional networks. These findings are consistent with the study by İli & Büyükbaykal (2023), which also revealed that digital nomads prefer shared accommodation due to its potential for fostering social and professional connections.

The study reveals that while exploring new places and meeting new people are cited as exciting aspects of the digital nomad lifestyle, the continuous need to adapt to new environments can lead to mental fatigue. Psychological and work-related challenges—such as difficulties in maintaining self-discipline, loss of motivation, and problems with work concentration—highlight the need to evaluate digital nomadism not only in terms of spatial freedom but also in relation to its psychosocial sustainability. Furthermore, limited access to healthcare services, safety concerns, visa restrictions, and the demand for constant connectivity emerge as structural barriers that complicate mobility. In addition, the preference for mid-range and shared accommodation among digital nomads is driven not only by economic considerations but also by the desire to form social networks. These findings emphasise the multi-dimensional nature of digital nomadism and suggest that it should be conceptualised as a layered phenomenon requiring new analytical categories in tourism theory.

The findings of this study indicate that affordable cost of living and visa facilitation are among the most significant pull factors influencing digital nomads' destination choices. Additionally, factors such as diverse experience opportunities, natural beauty, climate conditions, the availability of co-working spaces, and opportunities to connect with other digital nomads were also highlighted as important considerations. The significance of these destination selection criteria has been emphasised in several studies within the literature (Reichenberger, 2018; Wiranatha et al., 2020; Thompson, 2021; Mira et al., 2024). For destinations seeking to position themselves as digital nomad tourism hubs, understanding and catering to these factors is of great importance, as they play a critical role in ensuring a sustainable and productive digital nomad lifestyle.

Furthermore, participants' responses regarding how they spend their free time at destinations clearly highlight the importance of touristic attractions. Most participants expressed that they make an effort to visit must-see locations and engage in experience-driven activities. The study also suggests that adopting the digital nomad lifestyle is often linked to a personal journey of self-discovery. Exploring different cultures and natural environments allows individuals to push their boundaries, step out of their comfort zones, and develop new perspectives, ultimately guiding their personal growth and transformation.

Understanding the challenges faced by digital nomads is essential for developing solution-oriented approaches that enhance their experience. Among the most significant barriers, participants identified internet access as the primary challenge. While this may be an expected factor, the findings clearly emphasise that internet availability is a non-negotiable necessity for digital nomads. This issue extends beyond internet infrastructure alone—accessibility and reliability must also be taken into account. Additionally, border protocols and visa regulations emerged as another major obstacle. Just as visa policies influence destination preferences, they also determine mobility restrictions for digital nomads. The findings suggest that countries offering visa advantages, such as ease of application and longer stay durations, are more attractive to digital nomads. The study also highlights the importance of co-working and, at times, isolated workspaces, reinforcing the idea that digital nomads seek environments that balance collaboration and focused work. Similar findings were reported by Chevtaeva (2021), who emphasised that co-working spaces are highly valued by digital nomads, as they provide a sense of community, a comfortable work environment, convenience, and opportunities for knowledge-sharing and collaboration.

These findings demonstrate that affordable living costs, visa facilitation, strong digital infrastructure, and opportunities for social interaction are key determinants in digital nomads' destination choices. Digital nomadism is revealed not merely as spatial mobility but as a lifestyle that supports personal growth and productivity. Moreover, addressing structural needs such as internet access, visa procedures, and suitable workspaces is essential for sustaining this lifestyle, requiring a multidimensional reconsideration of digital nomadism within tourism theory.

This study provides a comprehensive analysis of digital nomad tourists' travel motivations, destination preferences, lifestyles, and challenges, highlighting their key differences from traditional tourists. The findings indicate that flexibility, freedom, cultural experiences, and long-term stays are among the primary motivations for digital nomads, whereas internet access, feelings of loneliness, and border-crossing procedures pose significant challenges. Furthermore, cost of living, digital infrastructure, climate, social connections, and visa facilitation were identified as critical factors influencing destination choices. The study's results demonstrate that digital nomadism is not merely an individual lifestyle choice but also an emerging tourism trend with significant economic and social implications for destinations. Supporting sustainable digital nomad mobility is a strategic necessity, both for enhancing individuals' quality of life and for destinations seeking to capitalise on the opportunities presented by digital nomad tourism.

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ORCID

Elif Acuner https://orcid.org/0000-0002-7769-8705

Bilgen Mete https://orcid.org/0000-0002-9126-3337

Kübra Özer https://orcid.org/0000-0002-7876-4698

Notes on contributors

Elif Acuner is a faculty member at Recep Tayyip Erdoğan University, Ardeşen Faculty of Tourism. She holds a Ph.D. in Tourism Management from Gazi University and has dual bachelor's degrees in Business Administration and Tourism Guidance. Her research focuses on tourism marketing, sustainable tourism, and tourism products. She has authored 49 peer-reviewed articles, supervised five theses, and received over 280 citations (h-index: 10). Since 2022, she has served as Associate Professor in tourism and hospitality management.

Bilgen Mete is an Assistant Professor at Recep Tayyip Erdoğan University, Ardeşen Vocational School. She holds a Ph.D. in Business Administration and a B.A. in Tourism Management. Her research focuses on hospitality management, sustainable tourism, organizational behavior, and digital nomad tourism. She has published in national and international journals and contributed to book chapters. Dr. Mete has also coordinated and participated in projects on local culture and destination management.

Kübra Özer is a Research Assistant in Tourism Management at Recep Tayyip Erdoğan University and a Ph.D. candidate in Tourism Management and Hospitality at Atatürk University. She holds two master's degrees in tourism and a B.A. from Dokuz Eylül University. Her research focuses on tourism, sustainability, destination management, and local community perceptions. She has authored 10 academic publications, contributed to several book chapters, and participated in university-funded projects and tourism-focused workshops.

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Tuloy Ka Rito Sa Aming Bolóy! (Step Into Our Home!): A Case Study of Naneng Heritage Village Homestay Potential, Sustainability, and its Underlying Challenges

Maria Katrina C. Alfaro [1]
Yricka M. Alvero [1]
Alanis Dane A. Gedo Cruz [1]
Jochelle D. Panlaqui [1]
Sofia Nicole G. Tolentino [1]
Jhezel Reign M. Vergara [1]
Maria Concepcion A. Ang [2]

1. Alumna of University of Santo Tomas - College of Tourism and Hospitality Management, Manila, Philippines
2. Academic Staff, SWDC Coordinator, and Internationalization member of the College of Tourism and Hospitality Management, University of Santo Tomas, Manila, Philippines

ABSTRACT

Rural homestays are one of the primary keys to immersing guests in the local way of life. With its roots in indigenous culture, support for local communities holds transformative potential to make it a sustainable destination. This study aimed to assess the sustainability of homestays and identify challenges associated with this aspect using the sustainability principles criterion of the ASEAN Homestay Standard Framework in Naneng Heritage Village, Tabuk City, Kalinga. The study is based on qualitative research methods that include a case study and thematic analysis to meet the objectives. Results of this study reveal that offering sustainable and research-based programs boosts the performance of homestays and improves the overall sustainability and well-being of the locals in Tabuk City, Kalinga.

KEYWORDS

ASEAN Homestay Standard, Challenges, Guests, Rural Homestay, Sustainability.

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CORRESPONDING AUTHOR CONTACT Maria Katrina C. Alfaro alfaro.mariakatrina@gmail.com Alumna of University of Santo Tomas - College of Tourism and Hospitality Management, Manila, Philippines

1. Introduction

Given the evolving preferences of travelers, the adoption of various homestay trends has created new opportunities to more effectively meet guest demands. Osman and Zakaria (2020) highlight the integration of technology and social media platforms in homestay development as a means of expanding market reach and enhancing visibility. Additionally, the use of artificial intelligence (AI) has been incorporated into the design and implementation of sustainable development practices within the sector (Dehui, 2023).

In parallel, Bhuiyan (2019) and Phunnarong (2021) emphasize the importance of providing meaningful and engaging tourist experiences through homestay-based learning activities and organized tour programs. These initiatives contribute to more immersive cultural interactions and promote community involvement in tourism.

In the Philippine context, the Department of Tourism (DOT)—the primary government agency responsible for promoting tourism as a key socio-economic driver—along with local tourism offices, has increasingly implemented training programs aimed at elevating the quality of homestay operations. These efforts are aligned with the standards established by the Association of Southeast Asian Nations (ASEAN), a regional organization comprising Indonesia, Malaysia, the Philippines, Singapore, and Thailand, which seeks to foster political and economic cooperation and regional integration (Dagooc, 2019).

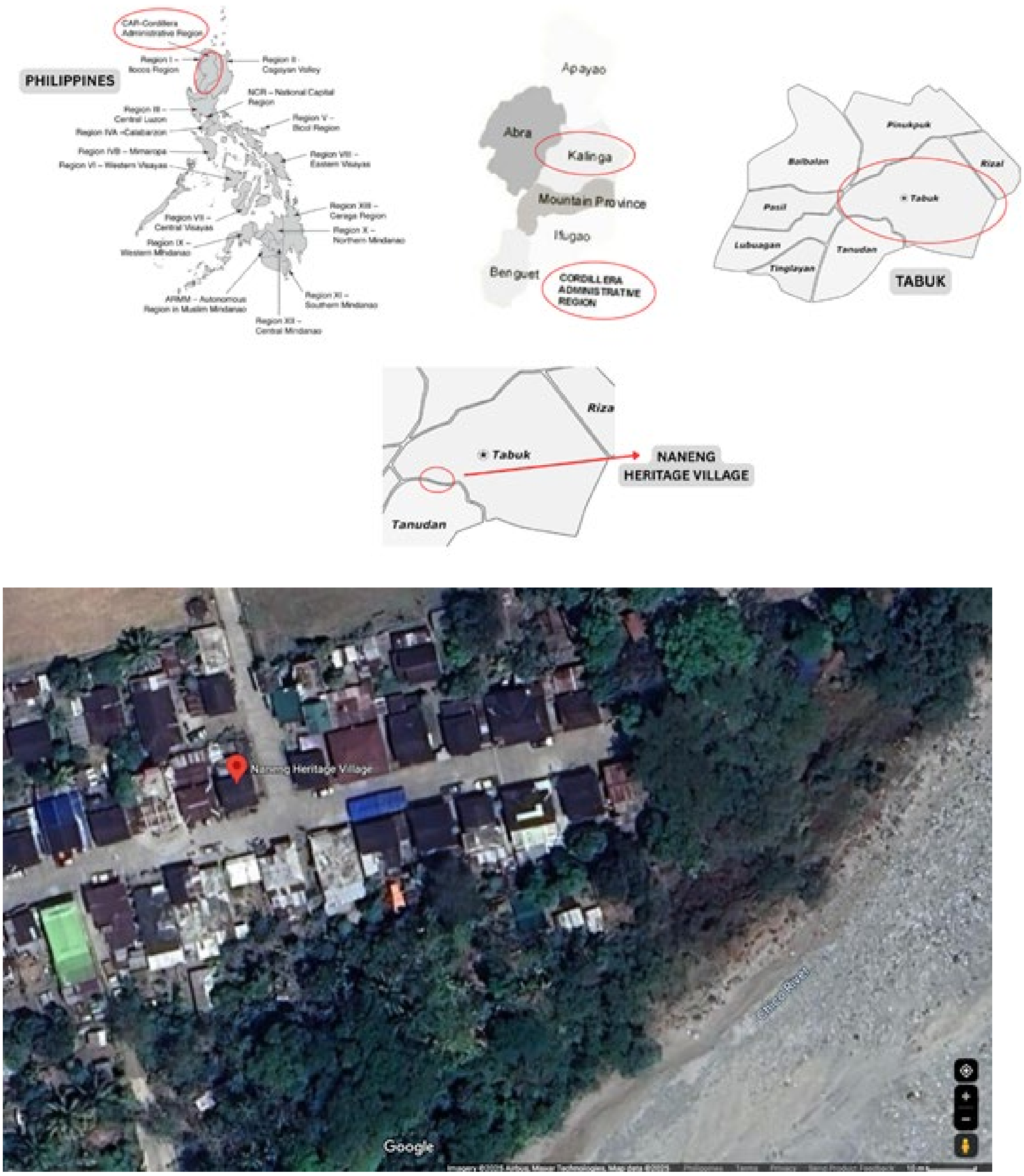
One such initiative is the Community-Based Cookery Program for the Western Tabuk Homestay Organization in Naneng Heritage Village, implemented in partnership with the City Tourism Office, the Department of Tourism–Cordillera Administrative Region (DOT-CAR), and the Technical Education and Skills Development Authority (TESDA) (Gacuya, 2022). Naneng Heritage Village is known for its rich tradition of backstrap loom weaving, with many homestays offering live demonstrations. While elderly women are the primary practitioners of this craft, younger members of the community, including children, are actively involved in preserving and continuing the tradition (Pinili, 2020).

Moreover, increasing guest demand for environmentally sustainable services has led homestay operators to prioritize sustainability over other trends (Eastern Kentucky University Online, 2023). In response, many have adopted sustainable practices across social, cultural, environmental, and economic dimensions, despite the associated financial costs. These innovations are essential for maintaining competitiveness and enhancing guest satisfaction in an increasingly dynamic tourism accommodation landscape.

Conversely, sustainability remains a crucial component in the growth and long-term viability of rural homestays. The comprehensive integration of its dimensions—environmental, socio-cultural, and economic—is essential for ensuring the continued relevance and resilience of these accommodations. However, not all homestay operations successfully address all facets of sustainability. Basak et al. (2021) and Jasrotia et al. (2022) highlight a lack of support in the socio-cultural dimension, often attributed to weak engagement between homestay owners and guests. In terms of economic sustainability, Joshi and Bahuguna (2023) point to the growing threat posed by larger accommodation establishments, such as hotels, in nearby areas. These establishments not only dominate the market but also limit promotional opportunities for smaller homestays. Similarly, Khatter (2023) reports deficiencies in environmental sustainability, noting that some homestay owners remain passive or indifferent toward eco-friendly practices.

Neglecting any one of these sustainability pillars can undermine the credibility of rural homestays as models of sustainable tourism. In light of these challenges, the present study focuses on the intersection of accommodation, tourism, and sustainability. It investigates how homestays, as distinct and community-based accommodation options, contribute to local tourism by offering authentic cultural experiences while advancing responsible tourism practices. By applying the ASEAN Homestay Standard Framework, this research aims to assess sustainability practices, identify prevailing challenges, and provide actionable insights to support the sustainable development of homestays within the village context.

Figure 1. Naneng Heritage Village Location



Source: Own elaboration and Google Maps

Tabuk City is widely recognized for its rice cultivation and for meeting the ASEAN Clean Tourist City Standard, particularly in the areas of solid waste management, health and sanitation, and environmental advocacy (GMA Regional TV News, 2024). Within the city, Barangay Naneng—illustrated in Figure 1—has a population of 778, representing approximately 0.64% of Tabuk's total population as of the 2020 census (Philippine Statistics Authority, 2021). Known as "The City's Seat of Heritage and Culture," Naneng is distinguished by its historic 1920s European-inspired houses, many of which now operate as homestays (Naneng City of Tabuk, n.d.).

Amid the growing popularity of homestays in Tabuk City, it is increasingly important to consider the sustainability dimensions that support long-term viability, particularly in the context of Naneng Heritage Village. Existing disparities in the application and understanding of sustainability—specifically in the socio-cultural, economic, and environmental dimensions—require further clarification. A comprehensive approach that explores the interconnections among these sustainability aspects is essential. Such an approach would enable Naneng Heritage Village to develop more integrated and effective sustainable tourism strategies aligned with both community values and broader regional goals.

The objective of this study is to assess the sustainability of homestays and to identify the challenges associated with implementing sustainable practices, using the sustainability principles outlined in the ASEAN Homestay Standard Framework. To address this objective and cover the components of the sustainability matrix, the following research questions were formulated:

1) In what ways do homestays foster intercultural understanding and appreciation in accordance with the socio-cultural sustainability criteria of the ASEAN Homestay Standard?
2) How do homestays contribute to the village's economic growth, as defined by the economic sustainability principles of the ASEAN Homestay Standard?
3) What practices are implemented in homestays to ensure environmental sustainability based on the ASEAN Homestay Standard?
4) What challenges are encountered in achieving a balance among the socio-cultural, economic, and environmental dimensions of sustainability in homestay management?

Moreover, as part of its objectives, the study aimed to recommend sustainable development programs for Naneng Heritage Village in Tabuk City, Kalinga. Upon achieving its primary objectives, the research also fulfilled the following purpose:

1) Provided homestay owners with actionable recommendations to enhance the overall guest experience, facilitate intercultural exchange, and promote sustainable tourism and economic growth within the local community.
2) Served as a valuable guide for the local government unit (LGU), the City Tourism Office, and the Provincial Tourism Office of Tabuk City in advancing homestay accommodations as a key driver of tourism in the province.
3) Contributed to the enrichment and expansion of Tabuk's homestay sector by examining the gap between actual guest satisfaction and the level of development aligned with sustainability principles.
4) Offered insights significant to future researchers in defining and assessing homestay sustainability, particularly concerning the continued development of Naneng Heritage Village as a recognized homestay destination.

2. Literature Review

2.1 Homestay in the Philippines

A homestay refers to a form of accommodation that originates from private residences, where household facilities are upgraded to accommodate tourists seeking lodging. Beyond providing shelter, homestays offer a unique cultural learning experience. Tourists live under the same roof as local residents, observe and participate in daily routines, and gain firsthand insights into the community's way of life (Demolingo et al., 2021). The expansion of such arrangements across various destinations has led to the emergence of *homestay tourism* as a distinct niche within the broader service industry. Homestay tourism is characterized by personalized hospitality and an emphasis on understanding guest needs—factors that significantly influence tourist satisfaction and loyalty (Si & Bang, 2019). Unlike conventional accommodation, homestays provide a more authentic and meaningful experience, marked by genuine interaction and cultural immersion. As this tourism model gains momentum, it contributes positively to local economies by fostering entrepreneurship and supporting sustainable tourism development initiatives.

The homestay sector plays a pivotal role in improving the socioeconomic conditions of rural communities, particularly through community-based tourism, as emphasized by Zamzuki et al. (2023). This aligns with broader discourses on the intersection of homestay, tourism, and sustainability. Jasrotia et al. (2024) argue that sustainability across environmental, social, cultural, and economic dimensions enhances tourist satisfaction and encourages repeat visitation. While economic sustainability may not directly influence tourist satisfaction, the attitude and involvement of the local community serve as a critical moderating factor. This underscores the necessity for homestay operators to invest in sustainable practices—such as fostering community participation and preserving local traditions—to increase visitor satisfaction and promote long-term engagement.

Tabuk City, the capital of Kalinga Province, is widely recognized for its rice cultivation and is regarded as the regional agro-industrial center of the Cordillera Administrative Region. The city has received commendation from the Association of Southeast Asian Nations (ASEAN) for meeting the ASEAN Clean Tourist City Standard, which acknowledges efforts in solid waste management, health and sanitation, public safety, disaster risk reduction, environmental advocacy, and tourism service quality (GMA Regional TV News, 2024). Within Tabuk, Barangay Naneng had a population of 778 as of the 2020 Census, representing approximately 0.64% of the city's total population (Philippine Statistics Authority, 2021). Officially referred to as "The City's Seat of Heritage and Culture," Naneng is notable for its vintage 1920s European-inspired architecture, which now serves as homestay accommodations. The barangay is also known as the birthplace of "Inabel" weaving, a traditional textile deeply rooted in local heritage (Naneng City of Tabuk, n.d.).

Naneng Heritage Village and the surrounding rice terraces offer visitors a window into the past, featuring traditional houses known as *Ginitob*, many of which were constructed prior to World War II by Belgian carpenters. At the center of the village stands the Saint Joseph Parish, built in 1927, further contributing to Naneng's historical and cultural significance. In recognition of its heritage value, the local government has proposed an ordinance aimed at preserving the village as a cultural landmark (Hernando, 2024).

Furthermore, Naneng represents a vital aspect of the region's heritage and serves as a significant cultural stronghold within Tabuk's rich socio-cultural landscape. As Villareal (2023) notes, homestays are among the most effective ways to understand and experience the local way of life. In this context, the homestays in Naneng Heritage Village promote authentic cultural experiences, allowing visitors to engage directly with local traditions and practices.

Homestay programs across the Cordillera Administrative Region (CAR) of the Philippines emphasize the dual function of cultural exchange and tourist accommodation (Dacles et al., 2018). One notable application is cultural immersion, where tourists and student visitors stay with local families for a designated period. While primarily a form of accommodation, this arrangement facilitates a deeper level of cultural engagement, as guests become immersed in the daily lives, customs, cuisine, and indigenous practices of the host community. Moreover, homestays in CAR contribute to local economic development by providing households with an additional source of income—particularly valuable in rural areas where formal employment opportunities are limited. Given the region's abundance of natural beauty and cultural richness, the homestay program has emerged as a strategic approach to promoting sustainable tourism. By fostering intercultural understanding and generating economic opportunities, homestays in CAR exemplify a community-based tourism model rooted in sustainability and cultural preservation.

2.2 Trends in Homestay Tourism

Previous studies have identified several emerging trends and techniques in homestay development aimed at meeting evolving guest preferences and expectations, particularly through the integration of technology and social media platforms. Osman and Zakaria (2020) found that homestay providers effectively utilize social media to promote their businesses to a wider audience and facilitate seamless online transactions. Complementing this, Dehui (2023) explored the innovative application of artificial intelligence (AI) in homestay design, emphasizing its role in creating comfortable and functional spaces. AI supports eco-friendly design principles by incorporating sustainable materials and technologies that maximize energy efficiency and encourage conservation practices among tourists. This commitment to environmental sustainability not only reduces the ecological footprint of homestays but also enhances customer loyalty and satisfaction. The integration of social media and AI into homestay operations has improved design quality and enabled more personalized guest experiences, thereby increasing the competitiveness of homestays in the tourism market.

Additionally, many homestay owners offer educational activities and tours to provide visitors with engaging and immersive experiences. Phunnarong (2021) highlights that such programs significantly influence the success of homestays by attracting more tourists to local communities. Examples include storytelling sessions, demonstrations, cultural performances, and guided tours focusing on rice farming, fishing, fruit orchard cultivation, handicrafts, historical sites, and community heritage. Bhuiyan (2019) further underscores the importance of cultural education through festivals, traditional events, and artistic expressions. These learning activities not only enrich the visitor experience but also play a crucial role in preserving and revitalizing local culture, thereby enhancing the overall value of the homestay offering.

A notable trend in the Philippines' homestay industry is the increasing implementation of training programs for homestay owners, led by the Department of Tourism (DOT) and local tourism offices, to enhance the quality of accommodation services offered to guests. In Tabuk City, a growing focus has been placed on providing authentic experiences that immerse visitors in the local way of life, foster a hospitable atmosphere, and showcase regional cuisine. For instance, the City Tourism Office (CTO), in collaboration with DOT-Cordillera Administrative Region (DOT-CAR) and the Technical Education and Skills Development Authority (TESDA), initiated a community-based cookery program for the Western Tabuk Homestay Organization of Naneng Heritage Village (Gacuya, 2022). Beyond culinary experiences, Naneng Heritage Village is renowned for its traditional weavers, and many homes offer demonstrations of backstrap loom weaving, allowing guests to observe this cultural craft firsthand (Pinili, 2020). These initiatives seek to elevate the Philippine homestay program to meet the esteemed standards set by the Association of Southeast Asian Nations (ASEAN) (Dagooc, 2019), ensuring guests enjoy exceptional and culturally immersive stays.

In addition to these localized efforts, broader trends in homestay development include the integration of technology and social media to better accommodate evolving guest preferences. Osman and Zakaria (2020) found that homestay providers actively utilize social media platforms to promote their businesses to wider audiences and facilitate seamless online transactions. Complementing this, Dehui (2023) examined the innovative use of artificial intelligence (AI) in homestay design, highlighting AI's role in creating comfortable and functional spaces through eco-friendly materials and energy-efficient technologies. These sustainable design practices reduce the environmental impact of homestays while enhancing customer satisfaction and loyalty. The adoption of social media and AI technologies not only improves homestay operations but also offers personalized experiences, thereby increasing the appeal and competitiveness of homestays in the tourism sector.

Another important approach employed by homestay owners is the provision of educational activities and tours designed to offer tourists engaging and immersive experiences. Phunnarong (2021) identified that the success of homestays is influenced by such programs, which can attract more visitors to local communities. These activities often include storytelling, cultural demonstrations, performances, and tours involving traditional practices such as rice farming, fishing, fruit orchard cultivation, handicrafts, visits to historical sites, and learning about community history. Bhuiyan (2019) further supports this view by emphasizing the importance of educational initiatives that promote cultural awareness through festivals, traditional events, and the arts. Collectively, these learning experiences curated by host families are integral to the overall homestay offering, enhancing visitor engagement while preserving and revitalizing local cultural heritage.

In the Philippines, a notable trend in the homestay industry is the increasing implementation of training programs for homestay owners, spearheaded by the Department of Tourism (DOT) and local tourism offices, to improve the quality of accommodation and guest services. In Tabuk City, this has manifested in efforts to provide authentic experiences that immerse guests in the local way of life, create a welcoming atmosphere, and showcase regional cuisine. For example, the City Tourism Office (CTO), in collaboration with DOT-Cordillera Administrative Region (DOT-CAR) and the Technical Education and Skills Development Authority (TESDA), launched a community-based cookery program for the Western Tabuk Homestay Organization of Naneng Heritage Village (Gacuya, 2022). Beyond culinary initiatives, Naneng Heritage Village is also known for its skilled traditional weavers, with many homes offering demonstrations of backstrap loom weaving for visitors (Pinili, 2020). These combined efforts aim to elevate the Philippine homestay program to meet the high standards set by the Association of Southeast Asian Nations (ASEAN) (Dagooc, 2019), ensuring that guests enjoy exceptional and culturally rich experiences.

2.3 Sustainability for Homestay and its Challenges

Homestays are experiencing significant growth and hold promising potential within the tourism industry. To ensure their long-term development, sustainability efforts must adopt a comprehensive approach that addresses all dimensions—economic, socio-cultural, and environmental—rather than focusing on a single facet (Janjua et al., 2021). However, achieving this holistic sustainability remains challenging, as various issues persist across these interconnected aspects in many homestay operations.

2.3.1 Economic Aspect of Homestay

Homestays cultivated an excellent doorway for income and employment for the local community, fostering economic growth. Zamzuki et al. (2023) note that the homestay industry is a catalyst for uplifting the rural communities' socioeconomic condition by providing investment opportunities for the growth of homestays. Indeed, income was a primary motivator for hosts to connect and engage in this industry, seeing it as an opportunity to increase their earnings. Conversely, tourist expenditure was one of the money-generating factors that significantly added to that contention and homestay development. Revenue generated from tourist expenditure is used to maintain and improve the appearance and services offered by this industry (Thapa, 2021), noting its valuable contribution to the community and quality improvement of homestays, which tourists will also benefit from.

Conversely, homestay operators in rural communities frequently rely significantly on outside assistance from the government (Lim & Lee, 2019). They needed cooperation regarding the adequate funds required to cover the expenses of homestay operators, such as facilities. Thus, collaboration and assistance from the government are paramount because cases of inadequate amenities may not satisfy the needs and expectations of tourists. This is supported by Woli's (2022) study, stating that the government must provide sufficient and satisfactory infrastructures, facilities, and even public awareness through education and training programs to empower visitors and operators.

2.3.2 Socio-cultural Aspect of Homestay

The socio-cultural dimension of sustainability centers on the interactions, behaviors, beliefs, and overall quality of life of homestay hosts and guests. Thapa (2023) observed that rural communities in Nepal have gained improved access to essential services such as better food, healthcare, education, and clothing through homestay tourism, which also strengthened social networks and community awareness, creating household opportunities. In Sirubari Village, daily cultural programs hosted by homestays actively engage tourists, fostering cultural preservation and enhancing the authenticity of the visitor experience (Bhandari et al., 2022). This integration of local traditions not only sustains the cultural essence of homestays but also serves as a key tourist attraction.

Community participation plays a crucial role in sustaining homestays, with the quality of host-guest interactions significantly influencing tourist satisfaction and cultural value recognition (Rabu et al., 2020). Such engagement encourages dialogue and raises awareness of local heritage. However, communication barriers remain a significant challenge. Meunchong (2023) highlights that many homestay operators struggle with English proficiency, hindering effective communication with international tourists, leading to misunderstandings, guest dissatisfaction, and limitations in service delivery.

2.3.3 Environmental Aspect of Homestay

The environmental dimension of homestay sustainability is critical, as the majority of homestay operations, services, and products depend heavily on natural resources (Pasanchay & Schott, 2021). Therefore, implementing environmentally responsible practices is essential both to protect and preserve these resources and to attract eco-conscious guests. Several homestay communities have integrated such practices into their operations, recognizing their importance for sustainability and long-term development. For instance, Nglanggeran Tourism Village in Yogyakarta, Indonesia, enforces a code of conduct that discourages tourists from participating in activities harmful to the environment (Wahyuni & Faisal, 2019). Other communities have promoted recycling, bulk purchasing, and reuse as key components of their environmental initiatives (Kour & Jasrotia, 2022; Zamzuki et al., 2023). Homestays adopting these practices have reported positive impacts on customer experience, which in turn enhances guest satisfaction (Moliner et al., 2019; Agyeiwaah, 2019). However, challenges remain; for example, some homestay owners in the Kodagu District of Karnataka perceive homestay tourism as having a negative environmental impact (Nirmala, 2021). These findings suggest that while environmental measures are being adopted, ongoing attention and action are necessary to address emerging issues and ensure sustainable development.

2.4 Homestay Requirements and Standards

2.4.1 DOT Homestay Standard

The Department of Tourism (DOT) accreditation enhances the credibility of homestay businesses by demonstrating compliance with established standards and a commitment to delivering quality services to guests. A DOT certification signifies that a homestay meets the minimum operational and service requirements within the tourism industry. According to DOT (2022), accreditation is categorized into three levels: basic registration, regular accreditation, and premium accreditation. Table 1 below outlines the specific requirements for each accreditation level (DOT, n.d.).

Table 1. The DOT Standards and Regulations - Accreditation Section

<table>
<tr><th></th><th>Basic Accreditation</th><th>Regular Accreditation</th><th>Premium Accreditation</th></tr>
<tr><td rowspan="5">Homestays</td><td rowspan="5">Not Applicable</td><td colspan="2">Valid Mayor's Permit</td></tr>
<tr><td colspan="2">Proof of attendance to a Homestay Training conducted by DOT or DOT-accredited training institutions within the last two (2) years prior to application for accreditation</td></tr>
<tr><td>Contract between the unit owner and property management allowing such unit to be utilized for commercial purposes (for individual condominium units only)</td><td></td></tr>
<tr><td></td><td>Recognitions / Awards fromlocal, national, or international award giving bodies (government or private institutions)</td></tr>
<tr><td></td><td>Membership to LGU-registered Homestay Association</td></tr>
</table>

Source: Department of Tourism - Accreditation Section

3. Theoretical Framework

3.1 ASEAN Homestay Standard

Wahyuni and Faisal (2019) highlight that a homestay's potential success depends on factors such as community involvement, homestay capacity, official registration, marketing integration, and hygiene standards. They argue that the ASEAN Homestay Standard offers a comprehensive framework that ASEAN member states can adopt. Among the criteria provided, Criterion 9, as presented in Table 2, which focuses on sustainability principles, served as the primary framework for this study's assessment of homestay sustainability in Naneng Heritage Village. The distribution of requirements under each sub-criterion follows the guidelines outlined in the ASEAN Homestay Standard.

Table 2. Criteria No. 9 of ASEAN Homestay Standard

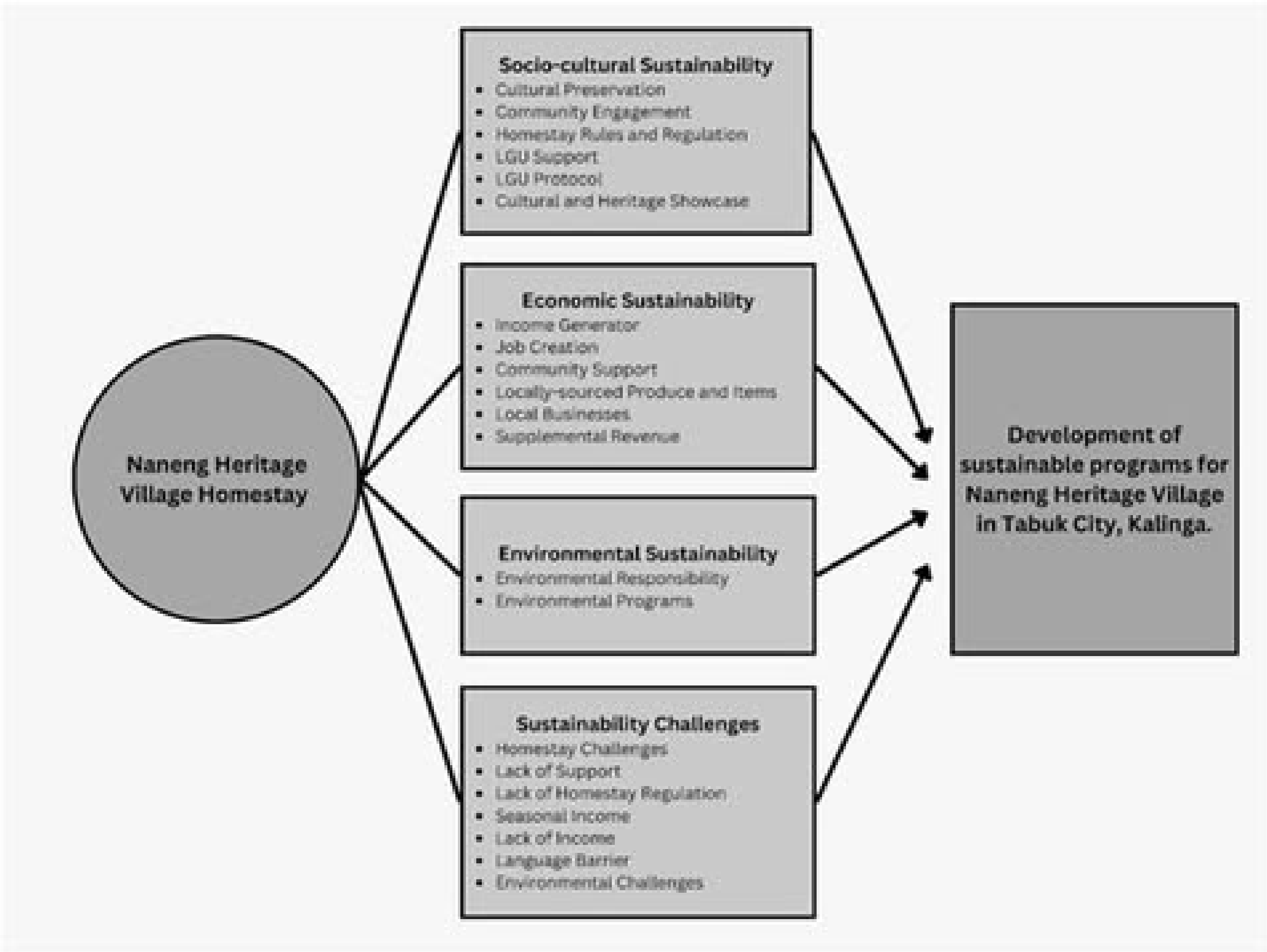
Criteria	Sub-criteria	Nº of Requirement
Sustainability Principles	Economic Sustainability	8
	Environmental Sustainability	6
	Sociocultural Sustainability	4

Source: ASEAN Homestay Standard - Criteria Section

4. Methodological Framework

This research employed the aforementioned framework to evaluate the sustainability of homestays in Naneng Heritage Village and to identify associated challenges.

Figure 2. The Study's Methodological Framework



Source: Own Elaboration

The study focused on the socio-cultural, environmental, and economic dimensions of sustainability, examining specific factors within each category. The framework provided a comprehensive basis for analyzing these challenges and for recommending programs to enhance the long-term sustainability of homestays in Naneng Heritage Village.

5. Design

This study employed a case study approach, a practical and widely used method within the qualitative research paradigm. As noted by Hennink et al. (2020) and Busetto et al. (2020), qualitative methods allow researchers to explore participants' perspectives deeply, understand their concerns, and interpret the meanings they assign to events or phenomena through narrative data rather than numerical analysis. In this context, the case study approach facilitated an in-depth understanding of the views of various stakeholders regarding the sustainability of homestays in the research site, thereby aligning well with the study's objectives.

Furthermore, the case study design enabled the researchers to conduct a detailed investigation of specific programs, events, or activities involving one or more individuals. This approach is especially suited for research questions centered around "how," "what," and "why" (Priya, 2020; Coombs, 2022). By adopting this method, the researchers gained valuable insights into stakeholders' positions within the framework guiding this study, capturing nuanced perspectives that other methodologies might not have revealed.

5.1 Selection and Study Site

The study's participants were individuals who own and operate homestays in Naneng Heritage Village, Tabuk City, Kalinga. Using purposive sampling—a method for selecting participants based on their relevant knowledge and experience (Maggino, 2023)—the researchers identified 14 active homestay owners in the village. Gender was not a selection criterion. Participants were at least 25 years old, consistent with OECD Data (2023) defining prime working age as 25 to 54 years. Additionally, each had operated their homestay for a minimum of five years, following Dhliwayo's (2021) findings that businesses surviving beyond five years are more likely to achieve qualitative growth and enhanced credibility. According to the Department of Tourism's (n.d.) accreditation guidelines, participants were also required to have completed a homestay training program. All participants were members of the Western Tabuk Homestay Organization.

The research was conducted in Naneng Heritage Village, one of the oldest villages in Kalinga Province and known for preserving traditional backstrap weaving (Go, 2023). The village is officially recognized as 'The City's Seat of Heritage and Culture' due to its vintage European-inspired houses built in the 1920s using native materials such as Narra, Guijo, and Lauan (Development of the City and the Environment, n.d.). Naneng also offers Department of Tourism-accredited homestays managed by the Western Tabuk Homestay Organization, which oversees homestay operations in the village.

5.2 Data Measure

The researchers employed in-depth interviews as the primary data collection method. In-depth interviews involve conducting one-on-one conversations with selected participants to elicit detailed information (De La Hera Gomez, 2024). As Rutledge and Hogg (2020) explain, this method aims to uncover participants' emotions, perspectives, and experiences, as well as the personal significance they attach to the research topic. To facilitate openness and rich dialogue, the researchers encouraged participants to freely express their thoughts and reasoning. This approach proved valuable for the qualitative study, providing comprehensive insights into the lived experiences of homestay owners in Naneng Heritage Village, Tabuk City, Kalinga, and aligning with the study's objectives.

5.3 Data Collection Procedure

During the fieldwork, the researchers conducted in-depth interviews with participants, each lasting between 20 to 40 minutes. The interviews were guided by the research questions developed by the researchers and approved by the research adviser. Audio recordings were made to accurately capture the participants' responses for later transcription and analysis.

5.4 Ethical Consideration

5.4.1 Informed Consent

The researchers provided participants with clear and comprehensive information regarding the study's objectives, procedures, potential risks, and benefits. This transparency ensured that participants were fully informed and could make an autonomous decision about their participation. They were also assured that they could withdraw from the study at any time without facing any negative consequences.

5.4.2 Confidentiality and Anonymity

The researchers strictly adhered to the Data Privacy Act of 2012 (RA 10173), ensuring that all information provided by participants remained confidential and was used exclusively for academic purposes. To further protect the participants' identities, codes or pseudonyms were employed in place of their real names in all research data.

5.4.3 Transparency

To ensure the credibility and consistency of the findings, the researchers kept the participants informed about the progress of the study. After data collection, participants were given copies of their responses, the questionnaire, interview transcripts, and a summary of the data analysis. This process helped prevent misinterpretation of the data and safeguarded against falsification of findings.

5.5 Data Explicitation / Mode of Analysis

To gain a comprehensive understanding of homestay operators' experiences with sustainability and the challenges they faced, the researchers employed thematic analysis. This approach involved grouping data according to themes that directly emerged from the research questions. As Caulfield (2019) explains, thematic analysis carefully examines data to identify common ideas, revealing people's views, opinions, and experiences, which were thematically transcribed and interpreted in this study. Specifically, the research utilized a mixed development analysis approach—starting with an existing framework to develop questions, then collecting and analyzing data, and finally refining the framework based on the findings (Ho & Limpaecher, 2024).

Furthermore, the researchers applied the methodological framework, grounded in the ASEAN Homestay Standard and focused on the three sustainability dimensions, to analyze the findings. This alignment allowed for systematic categorization and interpretation of results within the economic, socio-cultural, and environmental sustainability aspects. By mapping the reported challenges within this framework, the study provided a thorough understanding of strengths and gaps in homestay operations, which informed targeted recommendations for enhancing the overall sustainability of homestays in Naneng Heritage Village.

Table 3. Thematic Analysis

Socio-Cultural Aspect		**Environmental Aspect**		**Economic Aspect**	
Categories	**Theme**	**Categories**	**Theme**	**Categories**	**Theme**
Cultural Preservation	Kamalayan (Awareness)	Environmental Responsibility	Gampanin (Role)	Income Generator	Agapay (Support)
Community Engagement		Environmental Programs		Job Creation	
Homestay Rules and Regulation				Community Support	
LGU Support				Locally-sourced Produce and Items	
LGU Protocol				Local Businesses	
Cultural and Heritage Showcase				Supplemental Revenue	

Challenges		**Sustainable Program**	
Categories	**Theme**	**Categories**	**Theme**
Homestay Challenges	Limitasyon (Limitations)	Holistic Homestay Value	Integrasyon (Integration)
Lack of Support (economic aspect)		Livelihood Training Programs	
Lack of Homestay Regulation (socio)		Homestay Preservation	
Seasonal Income		Local Tourism Promotion	
Lack of Income		Local Tourism Infrastructure	
		Local Community Knowledge in Homestay Management	

Source: Own Elaboration

6. Findings

Following the analysis of insights gathered from homestay owners during the data collection process, the researchers conceptualized the Kalinga sa Tahanan: A Homestay Sustainability Framework. This framework is anchored in Criterion 9 of the ASEAN Homestay Standard, which focuses on the sustainable development of homestays. It is specifically designed to support the sustainability of homestays in Naneng Heritage Village, Tabuk City, Kalinga.

Figure 3. The Kalinga sa Tahanan: A Homestay Sustainability Framework

Source: Own Elaboration

The framework highlights five (5) fundamental themes:

1) *Kamalayan (Awareness)* – Reflects the homestay owners' awareness and efforts to educate locals on the importance of preserving their culture, heritage, and history.
2) *Agapay (Support)* – Emphasizes the role of homestays in generating income and creating employment opportunities within the community.
3) *Gampanin (Role)* – Covers the responsibilities and initiatives undertaken by locals and homestay owners to promote environmental sustainability.
4) *Limitasyon (Limitation)* – Identifies the challenges faced by homestay owners in managing their operations effectively.
5) *Integrasyon (Integration)* – Represents the need to integrate all aspects of sustainable development—socio-cultural, economic, and environmental—into a cohesive and viable sustainability program.

This localized framework offers a holistic approach to improving the sustainability of homestay operations, rooted in both community values and regional development standards.

6.1 Kamalayan

Theme 1: *Kamalayan* (Awareness) refers to the consciousness and proactive efforts of homestay owners in ensuring that the local community remains educated about the significance of preserving its culture, heritage, and history. This awareness contributes directly to achieving socio-cultural sustainability and long-term success in homestay operations. Cultural preservation within the homestay context often manifests through the deliberate showcasing of traditions, practices, and heritage—allowing both current and future generations, as well as guests, to understand and appreciate the local identity. A homestay owner shared:

> *"The children, it started with the children, they are taught about cultural dance, tradition and everything. Every time tourists visit the village, they perform and show them the cultural traditions."* (KI #1)

In this aspect, it is also vital to inform guests about the importance of respecting local customs and observing appropriate behavior during their stay. This responsibility forms another crucial dimension of cultural preservation. Homestay owners often implement house rules or follow protocols established by the local government unit (LGU) to guide guest conduct and ensure the safeguarding of local traditions and social norms. These guidelines help foster mutual respect and cultural understanding between hosts and visitors, reinforcing the role of homestays not just as lodging facilities, but as platforms for immersive and responsible tourism. Through these practices, homestays contribute meaningfully to the transmission and protection of intangible cultural heritage within the community:

> *"We're open, but when it comes to household goods, they are allowed to use them. However, for example, the tapis, the tourists are not allowed to disrespect how we use and wear them."* (KI #3)

Moreover, community engagement and local government support in preserving culture and tradition are essential components of socio-cultural sustainability. As one mentioned:

> *"When it comes to preserving the culture, they do contests. Mostly because I am our school's dance troupe coordinator; that's why when tourists visit the village, the LGU funds it and gives financial support through tourism. They provide funds, and the children will present our culture to the tourists."* (KI #3)

6.2 Agapay

Theme 2: *Agapay* (Support) highlights the critical role of sustained assistance in ensuring the efficient operation and long-term viability of homestays. Adequate support and access to resources are essential for homestay operators to manage their businesses effectively. This theme underscores the economic significance of homestays, particularly in generating income and creating employment opportunities within the community. It reflects the value of collaborative support, illustrating how homestays contribute positively by offering financial assistance, fostering job creation, and strengthening social ties. Homestay owners benefit from substantial earnings, which enable them to sustain their operations, while also providing livelihood opportunities for local residents—ultimately helping to reduce unemployment and promote economic stability in the community:

> *"A lot. Because first of all, it's income. Second, we help young mothers. Because other are unemployed. At the same time, we use it at home to buy soap, zonrox, cleaning supplies for the hourse, to help others, and then somehow, the children, and for house maintenance."* (KI #1)

Moreover, homestay owners demonstrate their support by donating a portion of their income during times of crisis, such as natural disasters. When fellow homestay operators face shortages or lack essential resources, they also engage in resource pooling to provide mutual assistance A homestay owner shared that:

> *"In a form of donations, for example, "hey, we have visitors! Please donate something like this" or when I need help, solidarity, it is!"* (KI #8)

Another form of community support is evident in how homestay owners assist one another by promoting and recommending fellow homestay businesses to tourists. As shared by a homestay owner:

> *"Yes, we have. There is Madam Ethel's. And our weavers, they also sell."* (KI #3)

6.3 Gampanin

Theme 3: *Gampanin* (Role) focuses on the diverse responsibilities and initiatives undertaken by the residents and homestay owners of Naneng Heritage Village in pursuit of environmental sustainability. Community members actively collaborate in activities such as proper waste management, clean-up drives, and tree-planting efforts. They comply with barangay ordinances aimed at protecting the local environment and take part in educating visitors about their environmental initiatives. Through these collective actions, they cultivate a strong sense of responsibility and environmental stewardship within the community. A participant shared:

> *"We have clean-up drives, tree planting, and the barangay clean-up drive every quarter or at the end of the month…We usually do tree planting during October…We also inform parents when their children are going to events. Especially when the visitors are children, we need to tell them the rules, but if it's others, they already know."* (KI #8)

Furthermore, the local government unit (LGU) actively participates in various initiatives aimed at cleaning and preserving the environment in Naneng Heritage Village. They support the community by strengthening and enhancing local environmental efforts. As shared by a participant:

> *"But the barangay also helps with cleaning, and so does the LGU, because there are government employees here, like Ma'am Reyna, who keep the area clean. There are two cleaners assigned by the LGU who are tasked with helping the barangay."* (KI #14)

In addition to helping maintain the natural surroundings of Naneng Heritage Village, some homestay owners implement cleanliness regulations for their visitors, while others do not consistently enforce such measures. One owner who established rules regarding cleanliness has shared that:

> *"Yes, because sometimes those who come here don't dispose of trash properly, so it's necessary to have the right trash cans. Especially for plastic bottles."* (KI #2)

6.4 Limitasyon

Theme 4: *Limitasyon* (Limitation) highlights the challenges faced by homestay owners in managing their operations. However, these challenges are not simply barriers; they represent opportunities for growth and development. Rather than constraining homestay owners, these difficulties motivate them to focus on devising strategic solutions. Common challenges include inadequate preparation for visitors, meeting tourists' expectations, and navigating cultural and language barriers. Some homestay owners shared the following statements:

> *"The problem is, the actual, is when visitors suddenly arrive without any preparation. The kind where they just show up, is it possible, "is there a homestay here?" Something that's immediate. Of course, we're not prepared for that."* (KI #1)

> *"Yes, of course, some of our visitors don't understand us, sometimes they speak English, right? It'll just through actions…and there are foreigners who don't understand English, so they struggle, which is why we communicate through actions!"* (KI #8)

Homestay owners encounter several structural challenges that affect the integrity of their properties. Common issues include termite infestations, which compromise wooden structures, as well as the natural deterioration of infrastructure caused by aging and inadequate maintenance. Additionally, the frequent threat of typhoons poses a significant risk, often resulting in damage to the exterior of homestays. Some participants pointed out these concerns, stating that:

> *"Sometimes, of course, it gets slow, and the house gets neglected, especially when the owner doesn't stay there often. It is infested like that."* (KI #2)

> *"Especially during the rainy season, there are leaks that aren't visible or aren't fixed, so it gets damaged."* (KI #8)

In relation to homestay operations, some owners face water shortages that disrupt their day-to-day functions. One shared experience mentioned that:

> *"We lack water source… Because if many people are doing homestays, our water source won't be enough."* (KI #6)

Moreover, some homestay owners experience challenges in securing support from the local government unit (LGU) for funding or financing their operations, while others report receiving assistance. Funding is particularly needed for restoration and maintenance of their properties. When asked about the assistance received from the LGU, those who feel unsupported disagreed, stating that:

> *"There is nothing yet regarding homestays. Despite the number of people who come here, national agencies haven't given anything yet."* (KI #7)

> *"There is no fund for construction."* (KI #6)

In addition to these challenges, homestay owners experience seasonal fluctuations in income, as their operations depend heavily on tourist arrivals. They also face financial strain when earnings are redirected to cover expenses incurred in providing services to tourists, often resulting in insufficient net revenue. Some homestay owners have shared that:

> *"So when we offered homestay, it was minimal. It was just enough to buy food for them, and it didn't feel like we had any income."* (KI #3)

> *"Lacking finances since there are no tourists."* (KI #12)

6.5 Integrasyon

Theme 5: *Integrasyon* (Integration) emphasizes the importance of synthesizing all aspects of sustainable development to overcome challenges and ensure the success and longevity of homestay operations. Central to this process is understanding the holistic values of homestay owners, which is crucial for designing sustainable programs that address all relevant facets and are tailored to the specific nature of their operations. Such an approach empowers homestay owners to implement initiatives they consider essential for the enduring viability of their businesses. Some homestay owners shared the following:

> *"We learn to mingle with people. We learn to make friends. It's like this."* (KI #1)

> *"Homestay is important. Especially for me, when there isn't much income, at least during the season there are [tourists]."* (KI #2)

Considering this, homestay owners are well-positioned to recommend viable and sustainable programs tailored to their needs. Fundamentally, the sustainability of a homestay depends on its physical structure; without an intact and functional facility, the accommodation cannot serve its guests, undermining the viability of the entire operation. One homestay operator shared their cumulative call to action for homestay maintenance:

> *"Restoration of the houses, the heritage village. Many people came here, national agencies, they said…Let's expand in 10 years but they're not coming back. Because it's difficult for us to be alone because there must be a strong official."* (KI #7)

Moreover, livelihood training programs and the integration of local community knowledge in homestay management are essential for providing guests with a meaningful and authentic experience. These programs also support homestay owners by offering alternative sources of income during the off-season. They stated that:

> *"Maybe seminars, how to mingle. Seminars on how to prepare. How to entertain visitors, seminars on how to cook food. Trainings, of course finance, fundings for purchasing things they need like foods, materials that visitors really need."* (KI #8)

> *"What would it be like if there weren't so many people [tourists], I hope it's for livelihood…"* (KI #2)

Lastly, promoting local tourism and developing tourism infrastructure are crucial for enabling homestay owners to operate efficiently and meet guests' expectations. Such initiatives not only enhance the overall guest experience but also highlight the potential of homestays as an alternative form of accommodation. This, in turn, can increase homestay owners' income while raising tourist awareness of diverse lodging options. They suggested that:

> *"I think there's still a lack of equipment, there should be a museum. We have a museum there at elem but it was only used for the DepEd contest."* (KI #3)

> *"I hope the weaving can be helped. Weaving center, ma'am."* (KI #6)

7. Discussion

7.1 Theoretical and Practical Implications

The theme Kamalayan (Awareness) traces the socio-cultural dimension of sustainability. It reflects homestay owners' recognition of the importance of educating the community and informing both Filipino and foreign tourists about the local culture in Naneng Heritage Village. However, Meunchong (2023) notes that limited communication skills and inadequate English proficiency often lead to miscommunication and guest dissatisfaction. Despite these challenges, homestay owners demonstrate considerable effort to engage effectively with guests—especially foreigners—through gestures, body language, and cultural displays. These strategies foster host-guest relationships and ensure that visitors gain insight into the local culture. Engaging tourists in this manner is vital for the sustainability of homestays, as it promotes cultural recognition and raises awareness through meaningful interactions (Rabu et al., 2020).

From a practical standpoint, Kamalayan is enacted through cultural activities conducted within each homestay, such as traditional dances, the preparation and sharing of indigenous dishes, and artistic presentations. These cultural expressions entice guests and encourage interaction between operators and visitors (Bhandari et al., 2022). Such cultural movements motivate homestay operators to strengthen their commitment to preserving heritage by enhancing tourists' understanding of local customs.

Economic sustainability is equally critical, as underscored in Agapay (Support). Homestay operations generate income and create employment opportunities for local residents. Thapa (2021) highlights that homestay operators reinvest their earnings to maintain and improve both the physical appearance and services offered by their establishments. Participants in this study further report that a portion of their income is donated to the barangay, particularly during times of crisis, supporting the wider community and reinforcing collective assistance through donations. More broadly, earnings from homestay operations contribute not only to personal livelihoods but also to local economic growth, consistent with Zamzuki et al. (2023) assertion that the homestay industry serves as a catalyst for social and economic development.

Moreover, homestay operations benefit local community members, particularly young mothers, who assist with tasks such as cleaning and cooking in exchange for a share of guest payments. This arrangement strengthens community ties and provides supplemental income, underscoring the integral role of economic sustainability in the overall success of homestays.

As part of the sustainability principle addressing environmental sustainability, Gampanin (Role) represents the responsibilities and initiatives undertaken by homestay owners to protect the environment. This theme emphasizes the duties and actions essential to achieving environmental sustainability. Pasanchay and Schott (2021) underscore the importance of homestay owners' active participation in environmental practices as a means to safeguard their surroundings. In practice, fulfilling these responsibilities and supporting local government unit (LGU) initiatives—such as tree planting, street sweeping, and clean-up drives—can significantly contribute to fostering a thriving and environmentally conscious community. Homestay owners acknowledge that LGUs play a pivotal role in these environmental protection efforts.

Environmental sustainability is broadly defined by Moliner et al. (2019) and Agyeiwaah (2019) as maintaining a balance between human activities and the surrounding environment. Despite these positive efforts, homestay owners face various challenges, as highlighted by the theme Limitasyon (Limitation), which reflects the obstacles encountered by operators and calls for concerted action from both homestay owners and LGUs to enhance services. Woli (2022) emphasizes the government's responsibility to provide adequate infrastructure and facilities to empower both operators and visitors.

The findings identify several critical areas requiring attention, including structural maintenance and visitor management. Stakeholders play a vital role in addressing these challenges through financial and programmatic support. Joshi and Bahuguna (2023) note that government-backed homestay programs significantly motivate owners to initiate and sustain their operations. Nonetheless, homestay owners report difficulties maintaining their property structures, and Meunchong (2023) stresses the importance of effective communication—particularly with foreign tourists—to ensure satisfactory guest experiences. Language barriers continue to be a significant concern.

Moreover, homestay owners face water shortages and environmental challenges. Nirmala (2021) points out that homestays can also have negative environmental impacts. However, the local community's practices, particularly improper waste disposal by some residents—especially elderly individuals who discard garbage near the river—are identified as primary contributors to environmental degradation.

Thus, Integrasyon (Integration) within the framework underscores the necessity of encompassing all facets of sustainability to effectively address the challenges faced by the homestay industry and its operators. Janjua et al. (2019) emphasize that sustainability goals should not be limited to a single dimension but must holistically cover socio-cultural, economic, and environmental aspects. These recommendations, aligned with sustainable programs and the values perceived by homestay owners, are essential for achieving sustainable development, enhancing the quality of house structures and local tourism infrastructure, and improving awareness and quality of life for both residents and tourists. The holistic value attributed by homestay owners to their operations motivates them to pursue tailored sustainable initiatives—such as home renovations, training programs, and additional amenities—addressing their specific needs. This perspective echoes Janjua et al. (2021), who argue that sustainable development in homestays must integrate economic, socio-cultural, and environmental components. Such integrated approaches enable homestay operators to develop resilient and adaptive solutions, thereby nurturing the sustainability of the sector within their communities. Moreover, government support and active involvement are critical to these efforts. Insufficient funding can lead to dissatisfaction among tourists due to inadequate services and facilities, as well as among local operators struggling with maintenance, environmental program consistency, and cultural preservation.

Theoretically, the Kalinga sa Tahanan: A Homestay Sustainability Framework articulates the core dimensions of sustainability—socio-cultural, economic, and environmental—while identifying the challenges and sustainable interventions based on the perceptions and experiences of homestay owners. By integrating multiple theoretical perspectives, this framework offers a comprehensive resource for evaluating and addressing present and future sustainability challenges in the homestay sector.

Practically, the framework captures the key sustainability issues and challenges experienced by homestay owners in Naneng Heritage Village, Tabuk City, Kalinga. It provides actionable recommendations for homestay owners and stakeholders, fostering the ongoing development and resilience of the homestay industry amidst dynamic and evolving conditions.

8. Conclusion

This study assessed the sustainability of homestays and identified associated challenges. The researchers concluded that homestays play a significant role in promoting and practicing sustainable actions within Naneng Heritage Village. The socio-cultural, economic, and environmental dimensions of sustainability illuminate how homestay programs can foster intercultural understanding, stimulate local economic growth, and encourage environmental stewardship. Despite setbacks such as infrastructure limitations, cultural barriers, and environmental risks, homestay owners and the community demonstrate resilience and adaptability, contributing to a balanced and sustainable approach to tourism.

Through the "*Kalinga sa Tahanan: A Homestay Sustainability Framework*" aligned with the ASEAN Homestay Standard Sustainability Principle (Criteria 9), five key themes—Kamalayan (Awareness), Agapay (Support), Gampanin (Role), Limitasyon (Limitation), and Integrasyon (Integration)—reveal the dynamic interplay among stakeholders, including local residents, homestay operators, and government entities, in advancing sustainability in the area. These collaborative efforts highlight the community's commitment to preserving heritage while fostering economic and environmental resilience. Furthermore, this framework holds potential for broader application across the Cordillera Administrative Region (CAR), as it resonates with the region's cultural, economic, and environmental contexts. Its five dimensions provide a structured approach to preserving culture, promoting local livelihoods, ensuring environmental responsibility, addressing operational challenges, and integrating sustainability principles. These elements are particularly relevant to other indigenous and heritage-rich communities in the region—such as Benguet, Ifugao, and Mountain Province—where traditional practices, community livelihoods, and environmental conservation are deeply intertwined with tourism activities.

By adopting this framework, local government units (LGUs), tourism offices, and homestay associations within CAR can evaluate and enhance their homestay programs, making them more sustainable, culturally grounded, and community-driven. In response to the framework's recommendations, the researchers developed a sustainable program designed to further support these objectives.

8.1 Recommendation

The researchers recommend a sustainable program titled *"Bahay, Buhay: Balanseng Pag-unlad sa Kalikasan, Kita, at Kultura"* (Home, Life: Balanced Growth in Environment, Livelihood, and Culture), designed to address the challenges identified in this study and to provide benefits for both homestay owners and the broader community.

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ORCID

Maria Katrina C. Alfaro https://orcid.org/0009-0008-4757-135X
Yricka M. Alvero https://orcid.org/0009-0006-7983-1932
Alanis Dane A. Gedo Cruz https://orcid.org/0009-0003-2432-0543
Jochelle D. Panlaqui https://orcid.org/0009-0002-7773-6609
Sofia Nicole G. Tolentino https://orcid.org/0009-0005-3986-9322
Jhezel Reign M. Vergara https://orcid.org/0009-0009-7329-6416
Maria Concepcion A. Ang https://orcid.org/0009-0006-0450-980X

Notes on contributors

Maria Katrina C. Alfaro is an alumna of the University of Santo Tomas with a degree of Bachelor of Science in Tourism Management Major in Travel Operations and Service Management. She is currently working as a Receptionist at Hi-Precision Diagnostics, applying her customer service skills and supporting front-desk operations.

Yricka M. Alvero is an alumna with a degree of Bachelor of Science in Tourism Management Major in Travel Operations and Service Management from the College of Tourism and Hospitality Management of the University of Santo Tomas. Currently, she is working as a Customer Trade and Sales Support of British Airways at HT & T Travel Philippines Inc. practicing the skills that she has acquired throughout her studies. This shows her dedication and commitment to serving and helping the industry in her own ways.

Alanis Dane A. Gedo Cruz is an alumna with a degree of Bachelor of Science in Tourism Management Major in Travel Operations and Service Management from the College of Tourism and Hospitality Management of the University of Santo Tomas. She is a driven student who has consistently maintained being a Dean's Lister from her first year up to the present. During her third year, she took on the role of assistant secretary for her block's MICE event, "KulTuri: Turismong Pasiklaban at Pistang Pangkalahatan." With this, she currently pursues a career related to her degree, possessing strong people skills, which she views as essential qualities in her current endeavor.

Jochelle D. Panlaqui is an alumna with a Bachelor degree in Tourism Management degree, majoring in Travel Operations and Service Management. She is a consistent Dean's lister at the Pontifical and Royal University of Santo Tomas. She was an active student leader for three consecutive years with the UST CTHM Student Council organization as a Co-Director of the Events and Logistics Committee in the highest position aimed at being a student leader and a year with Student Tourism Society as creative staffer. With this, she currently pursues a career related to her degree, while aiming to travel the world with fascinating different cultures and traditions to be discovered and continue to grow as a digital creator in social media.

Sofia Nicole G. Tolentino is an alumna with a degree of Bachelor of Science in Tourism Management Major in Travel Operations and Service Management from the College of Tourism and Hospitality Management of the University of Santo Tomas. She interned at HT & T Travel Philippines Inc. with abilities, knowledge, and skills acquired. She was absorbed and is now working as a Customer Trade and Sales Support for Greater Bay Airlines.

Jhezel Reign M. Vergara is an alumna with a degree of Bachelor of Science in Tourism Management Major in Travel Operations and Service Management from the College of Tourism and Hospitality Management of the University of Santo Tomas. She was the Integrated Marketing Communication Campaign Manager for her course Destination Management and Marketing, which is a collaboration with the Colegio de San Juan de Letran that aims to build competitive branding for the province of Bataan. In line with that field, she currently works at Korea Tourism Organization Manila Office Inc. as a Marketing Coordinator, promoting Korea as a premier leisure, incentive, and medical travel destination to Filipinos.

Maria Concepcion A. Ang is an Assistant Professor, MBA, CHE, CGSP and a graduate of BS Tourism from the University of Santo Tomas. From the same university, she also graduated with a Master's in Business Administration and is currently taking up her Ph.D. in Human Resource Management. At present, she is an Academic Staff, SWDC Coordinator, and Internationalization member of the College of Tourism and Hospitality Management and an owner of the food business Tastify Corp., and Managing Partner of the brand BAG OF CHICKEN. Her field of research interests are farm tourism, sustainable tourism, special interest tourism, entrepreneurship, and marketing.