

How Perceived Sustainability-related Climate Influences Residents' pro-environmental Behavior Intention in Tourism Destinations: An Integration of TPB and NAM

Yaru Huang

Nanyang Technological University,
Singapore, 639798, Singapore;

Abstract:

The environmental issues are vital to the development of tourism. Tourism destination residents take huge responsibility for environmental and problems and need to understand residents' intention to get involved in pro-environmental behaviors. The research focuses on how perceived sustainability-related climate (PSRC) influences the intention of residents to engage in pro-environmental behavior. After data is gathered from different countries via surveys, I used the structural equation model (SEM) to analyze it. Results indicate that PSRC positively influences the residents' intention of pro-environment behavior, mediated by Perceived Behavioral Control, Subjective Norms, Attitude, and Personal Norms, Attribution of Responsibility and Awareness of Consequences. The outcome encourages residents' pro-environmental behaviors.

Keywords: Perceived Sustainability-related Climate (PSRC); Residents' PEBI; Sustainable tourism; Tourism destination.

1. Introduction

Today's tourism industry is facing some serious environmental issues (Khan et al., 2020; Shang et al., 2023; Streimikiene et al., 2021). The environmental footprint was considerably influenced by the residents' actions at tourism destinations (J. Wang et al., 2021). For shaping the residents' behaviors and attitudes, tourism destinations also play a pivotal

role (Budeanu, 2007; J. Wang et al., 2021). So, the environmental damages of tourism activities are obvious (Purwanda & Achmad, 2022; Suryani et al., 2021) we show how environmental concerns, which were once thought to be the most important aspect of sustainable development, are still one of the most important factors to consider when attempting to ensure sustainable growth while taking both economic and social considerations into account worries.”, ”con-

Journal of Environmental Management and Tourism”, “DOI”: “10.14505/jemt.v13.7(63). Among the effects of such impacts are energy and resources, the emissions of greenhouse gases, the degradation of habitats, and the strains on water supplies in the area (Suryani et al., 2021) broadening information access, improving facilities and infrastructure, opening new and diversifying employment. Thus, today tourism is recognized as one of key sectors in development possessing multiplier effects on other sectors and contributing to other development goals attainment. This encourages many communities to initiate and run their local-scale tourism at their kampung. The development of these community-based tourisms need to be strengthened by community capacity to develop their tourism into more sustainable and competitive destinations. Moreover, the Covid-19 pandemic potentially threatens tourism existence and sustainability, especially if the communities do not rapidly respond by improving their tourism capacities. This study aims to explore several factors needed by local community to foster tourism transformation. The study is concentrated on examining WPP Dalegan and Dalegan community tourism transformation needs. The data are collected through community dialog incorporated with community service program. The study identifies three primary transformation elements for fostering WPP tourism improvement. The first factor is transformational and collective community leader who provides empowerment, climate and chance for Dalegan community to participate and orients to community social changes. The second factor is Dalegan community capacity building. Dalegan tourism transformation rests on its local community to learn together and improve the quality of their tourism services and products. The third factor is development facilitation. To successfully transform, Dalegan community needs to expand their networking, build horizontal and vertical partnerships.”

“IPTEK Journal of Proceedings Series”, “DOI”: “10.12962/j23546026.y2020i7.9524”, “ISSN”: “2354-6026”, “issue”: “7”, “language”: “en”, “license”: “IPTEK PROCEEDING SERIES COPYRIGHT AND CONSENT FORM

To ensure uniformity of treatment among all contributors, other forms may not be substituted for this form, nor may any wording of the form be changed. This form is intended for original material submitted to IPTEK Proceeding Series and must accompany any such material in order to be published by IPTEK Proceeding Series . Please read the form carefully and keep a copy for your files.

TITLE OF PAPER/ARTICLE/REPORT, INCLUDING ALL CONTENT IN ANY FORM, FORMAT, OR MEDIA: COMPLETE LIST OF AUTHORS: COPYRIGHT TRANSFER 1. The undersigned hereby assigns to I IPTEK Journal of Proceeding

Series all rights under copyright that may exist in and to: (a. Furthermore, efficient waste management needs to be addressed efficiently, especially in urban surroundings that attract tourists. Meanwhile, non-toxic materials should also be promoted. These measures all put pressure on the environment (Bianchi, 2017; Florido et al., 2019; Garrod et al., 2012; Kollmuss & Agyeman, 2002) this research investigates intentions of potential travelers from two short-haul (Peru and Brazil).

This study focused mostly on sustainable tourism tends to put its emphasis mainly on what travellers do and what they aim for. Attention to what residents do and intend is not so often given and focus on these aspects is less (Stylidis et al., 2014). The concept known as pro-environmental behavioral intention (PEBI) was made, which residents could be encouraged to behave eco-friendly (Filimonau et al., 2018; He et al., 2023). The understanding of what drives these behaviors becomes somewhat significant. Research indicates that social influences, cultural factors, and environmental aspects, are seen as impacting the pro-environmental behavior of residents, which allows for possibilities that could lead to more research, potentially improving sustainable practices in such places (Gössling et al., 2012; Han & Hwang, 2017; Suryani et al., 2021). An increase in PEBI could greatly help in lowering the environmental impacts caused by tourism (Kollmuss & Agyeman, 2002).

When engagement from the community increases regarding sustainable practices, the places where tourism occurs might see an improvement in their sustainability, though this link is not always simple (Suryani et al., 2021). The idea of Perceived Sustainability-Related Climate (PSRC) first appeared in organizations, showing how employees might see their organization as playing some positive role, although how much and in what way this role promotes sustainability can be unclear or different (Leung & Rosenthal, 2019; Lülfs & Hahn, 2014; Mouro & Duarte, 2021). In the context of tourism, the meaning of PSRC shifts slightly, centring on whether the local population sees their tourism area positively, which may or may not lead to better sustainability, even though this connection isn’t always straightforward (Aydn & Alvarez, 2020; Goffi et al., 2019; S. Wang et al., 2020). The research will investigate how Perceived Sustainability-Related Climate (PSRC) might influence residents’ (PEBI) in their local tourism spots, even though the exact impact may not be completely understood.

For the prediction of human behavior, there is the Theory of Planned Behavior (TPB). However, the theory might not fully explain the moral motivations that are behind PEBI, and the focus is on rational considerations of self-interest (Turaga et al., 2010). On the other hand, the

Norm Activation Model (NAM) adds useful value, especially for PEBI, which happens beyond the limits of rationality (Liu et al., 2017). When the two models are combined, it allows an understanding that goes deeper into the PEBs. Ultimately, this combination could possibly offer us a more complete understanding of the different motivations that lie behind PEBI (Chen, 2020; Han, 2014a). Hence, this research combines two theories to explain the mechanism through which PSRC influences PEBI.

2. Literature review

2.1 Perceived sustainability-related climate (PSRC)

The incorporation of PSRC within tourism holds significance for achieving sustainability in tourist locations by relying on strategies that favor ecological concerns and through communication that places an emphasis on the environment (Marchi et al., 2023). Yet, the manner in which PSRC becomes implemented and grasped within the realm of tourism hinges upon a combination of activities brought together from an array of sectors tied to tourism, among which are sectors such as hospitality, transportation, and the management of tourism operations, though these are not exclusively the only sectors involved (Leung & Rosenthal, 2019; Šegota et al., 2024; J. Wang et al., 2021). The application of PSRC has occurred in studies related to tourism destinations to explore its impact on the PEBI of residents (Das et al., 2019; J. Wang et al., 2021). The effect that PSRC has on the PEBI of residents is significant. It has been shown by studies that recognizing the sustainability efforts of PSRC internally can result in a strong feeling of responsibility toward the environment, along with having passion and commitment (Acquadro Maran et al., 2023; Mónus, 2022). These emotional states and rational conditions caused by PSRC encourage individuals to participate in pro-environmental behaviors (Schneider & van der Linden, 2023). Thus, the following hypothesis is put forward:

H₁: PSRC positively influences PEBI.

2.2 The Theory of Planned Behaviour (TPB)

The Theory of Planned Behavior suggests that the actions of people are mainly driven by what called behavioral intentions (Ajzen, 1980; Ajzen & Madden, 1986). TPB posits that actions are, therefore, based on these intentions towards behavior (Ajzen & Madden, 1986). As per TPB, how much difficulty or ease in executing a behavior is felt by an individual, is what Perceived Behavioral Control (PBC) involves. In connection this, the perceptions that

residents hold about tourism's development alongside environmental protection, are represented by PSRC (J. Wang et al., 2021). When within such a setting, more confidence in their ability to assist the environment might be felt by residents, which results in a rise in their PEBI (Miller et al., 2015). The belief among residents that their actions have a beneficial impact on environmental protection emerges when they view tourists' actions and dedication, this is what researchers assert (Hunter, 1997). For the encouragement of correct environmental behaviors within the community, there must be a more widespread dissemination of sustainable practices, and this must be done by the community collectively (McKenzie-Mohr, 2000). Through enhancement of control and self-efficacy, there could be a positive influence of PSRC on PBC. Hence, the hypothesis proposed is as follows:

H₂: PSRC positively affects PBC.

H₃: PBC positively influences PEBI.

H₄: PBC mediates PSRC and PEBI

Subject Norms (SN) are defined as the perceived social pressure to perform or not to perform the behavior (Ajzen, 1991)1985, Ajzen, 1987. The researchers found that when individuals perceive a sustainable-focused environmental climate, they are more likely to feel expectations from others that motivate them to engage in PEB (Cialdini et al., 1991). In addition, some research has pointed out that community climate and environmental policies can shape residents' environmental norms. And these factors can enhance individuals' sense of environmental responsibility, promoting an increase in pro-environmental behaviors (Bai & Bai, 2020). This indicates that the PSRC indirectly affects behavior by mediating effect of SN (Leung & Rosenthal, 2019). Therefore, I propose the hypotheses:

H₅: PSRC positively influences SN.

H₆: SN positively influences PEBI.

H₇: SN mediates PSRC and PEBI.

Attitude (ATT) was described as "the degree to which a person has a favorable or unfavorable evaluation of the behavior in question" (Ajzen, 1991)1985, Ajzen, 1987. Within the domain of environmental psychology, if the conditions of the environment are perceived by people to be good or favorable in terms of sustainability, then people may have a tendency to want to engage in behaviors that are more environmentally friendly (Kollmuss & Agyeman, 2002; Neves et al., 2024; J. Wang et al., 2021). Moreover, previous research seems to have found that the perception of social responsibility and concern (PSRC) somehow affects the adoption of pro-environmental behavior intention (PEBI) through what could be called a mediating effect of ATT. This means that if people perceive their surrounding environment, as being somewhat aligned with sustainability goals, they could be more in-

clined to adopt attitudes that are positive toward the environment, although this isn't always clearly the case (Eagly & Chaiken, 1993). As a result, these attitudes, which are about the environment, might show up in various ways, such as in recognizing what are thought to be sustainable practices, or even in giving support to efforts or initiatives that are for the environment, which might then push people toward behaviors that are friendly to the environment (Lorenzoni et al., 2007). Additional research also suggests that ATT does not just depend on, but is also shaped or influenced by, not only the information available and the knowledge people have but also by the general climate or surroundings, particularly when this climate is felt to be either supportive or obstructive to ways of living that are sustainable (Kollmuss & Agyeman, 2002). Therefore, I propose the following hypotheses.

H₈: PSRC positively influences ATT.

H₉: ATT positively influences PEBI.

H₁₀: ATT mediates PSRC and PEBI.

2.3 Norm-Activation Model (NAM)

The Norm Activation Model (NAM) explains the foundation mechanisms of pro-social behaviors and is particularly applicable to PEBI and tourism behavior (Han, 2015; Zhang et al., 2020) which was superior to existing theories. Findings also supported the hypothesized relationships among study variables, identified the prominent role of awareness of consequences and normative process in generating intention, and verified the mediating impact of study variables. In addition, the invariance test identified the significant moderating impact of non-green alternatives' attractiveness. Specifically, the role of attitude, perceived behavioral control, and moral obligation in forming intention was found to be more important when customers felt the alternatives were less attractive.”, "container-title": "Tourism Management", "DOI": "10.1016/j.tourman.2014.09.014", "ISSN": "02615177", "journalAbbreviation": "Tourism Management", "language": "en", "page": "164-177", "source": "DOI.org (Crossref). The model is structured around three key constituents, Personal Norms (PN), Attribution of Responsibility (AR), and Awareness of Consequences (AC), which together depict the loop that individuals follow from recognizing the consequences of their actions to taking responsibility for them, to developing internal norms that ultimately lead to pro-environmental behaviors (Aydın & Alvarez, 2020; Han, 2015) most of the literature has followed a supply-based perspective, ignoring the way that tourists view sustainability attributes. Therefore, this research attempts to address this gap in the literature by analyzing tourists' perceptions concerning sustain-

ability attributes in tourist destinations. This research aims to determine which of these traits are seen as most important by the tourists and to ascertain their willingness to pay for these aspects. The study is quantitative, based on an online questionnaire administered to Turkish cultural tourists. Exploratory and confirmatory factor analyses are used to obtain insights into how tourists consider sustainability aspects in tourist destinations. Thus, this research concludes that tourists view sustainability from a more varied perspective than that embraced by the classic definition of the concept, which comprises economic, environmental and socio-cultural dimensions. The findings of the study also determine that tourists favor sustainability attributes that are instrumental in enhancing their own tourist experiences. This information may be useful for destinations, providing guidance about how to market sustainable tourist destinations and encourage responsible tourism choices.”, "container-title": "Sustainability", "DOI": "10.3390/su12218846", "ISSN": "2071-1050", "issue": "21", "language": "en", "license": "http://creativecommons.org/licenses/by/3.0/", "note": "number: 21\nnpublisher: Multidisciplinary Digital Publishing Institute", "page": "8846", "source": "www.mdpi.com", "title": "Understanding the Tourists' Perspective of Sustainability in Cultural Tourist Destinations", "volume": "12", "author": [{"family": "Aydın", "given": "Begüm"}, {"family": "Alvarez", "given": "Maria D."}], "issued": {"date-parts": [[2020, 1]]}, {"id": "1281", "uris": [{"http://zotero.org/users/local/EFLWdria/items/3AK22TJX"}, {"http://zotero.org/users/13827853/items/3AK22TJX"}], "itemData": {"id": "1281", "type": "article-journal"}, "abstract": "This research was designed to provide a comprehensive understanding of the formation of travelers' proenvironmental intentions in a green lodging context by merging value-belief-norm theory and the theory of planned behavior into one theoretical framework and by considering the moderating impact of non-green alternatives' attractiveness. Results of the structural analysis from a sample of 402 guests showed that our unified model includes a satisfactory level of prediction power for pro-environmental intention, which was superior to existing theories. Findings also supported the hypothesized relationships among study variables, identified the prominent role of awareness of consequences and normative process in generating intention, and verified the mediating impact of study variables. In addition, the invariance test identified the significant moderating impact of non-green alternatives' attractiveness. Specifically, the role of attitude, perceived behavioral control, and moral obligation in forming intention was found to be more important when customers felt the alternatives were less attractive.”, "container-title": "Tourism Man-

agement”, ”DOI”: ”10.1016/j.tourman.2014.09.014”, ”IS SN”: ”02615177”, ”journalAbbreviation”: ”Tourism Management”, ”language”: ”en”, ”page”: ”164-177”, ”source”: ”DOI.org (Crossref).

The link between AC and PSRC can be analyzed from two aspects. One is from the social perspective. The other is from the environmental perspective, which emphasized individual behavior (Lülfes & Hahn, 2014). When individuals feel strongly about climate sustainability, this emphasises their AC. They are also more aware of the expectations of society for responsible behavior (Mouro & Duarte, 2021; J. Wang et al., 2021) so this field still lacks studies of the role of organisational policies and practices in workers’ adoption of these behaviours and of psychosocial processes that contribute to more sustainable workplaces. The present research examined how perceptions of

organisations’ environmental policies and practices (i.e., organisational climate or injunctive norms. Therefore, I propose the hypotheses:

H₁₁: PSRC positively influences AC.

When tourism destination residents realize that their failure to perform pro-environmental behaviors will result in more negative impacts on the destination, they will perceive more responsibility to perform pro-environmental behaviors, which will activate their norms and lead them to perform more pro-environmental behaviors. Therefore, I propose the hypotheses:

H₁₂: AC positively influences AR.

H₁₃: AR positively influences PN.

H₁₄: PN positively influences PEBI.

H₁₅: The positive effect of PSRC on PEBI is serially mediated by AC, AR, and PN.

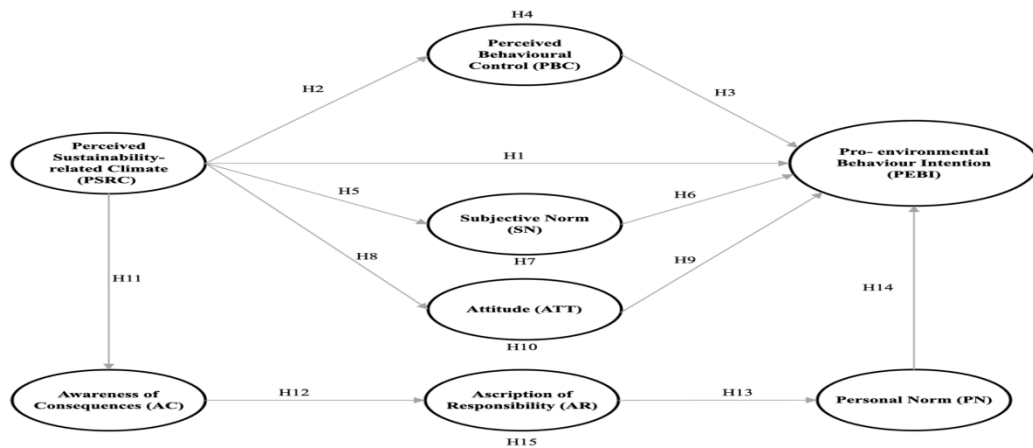


Figure 1 Theoretical model

3. Methodology

3.1 Measurement instrument

Based on previous literature, the survey items have been refined and adapted to meet the specific objectives of this research. The measurement item of PSRC consists of ten items (Leung & Rosenthal, 2019). Three items are used to measure Attitude (ATT) (Kim & Hwang, 2020). In terms of the measurement item of Subjective Norms (SN), three items are finally determined (Fishbein & Ajzen, 2009). The three items of Perceived Behavioral Control (PBC) are determined (Norton et al., 2014). The four items of Consequence Awareness (AC) are adopted (Schwartz, 1977). Three items are used to measure the item of attributable responsibility (AR) and three items of Personal Norms (PN) are measured (Han, 2014b; Kim & Hwang, 2020; Onwezen et al., 2013) we incorporated attitude and social norm as antecedents of intention and

we also integrated the anticipated feeling of pride and guilt into this normbased theoretical framework. Results of the structural model with 340 samples of convention travelers obtained from an online survey distribution provided excellent empirical support for the proposed model. Our model included greater sufficiency and accuracy than the original NAM and other competing models. Findings also showed that the interpretation of the NAM as a sequential model was more adequate; the hypothesized relationships among the eight constructs were all supported; ascribed responsibility, anticipated emotions, and the personal norm had a significant mediating impact had a prominent role. The implications regarding these findings are discussed.”, ”container-title”: ”Journal of Environmental Psychology”, ”DOI”: ”10.1016/j.jenvp.2014.10.006”, ”ISSN”: ”02724944”, ”journalAbbreviation”: ”Journal of Environmental Psychology”, ”language”: ”en”, ”page”: ”462-471”, ”source”: ”DOI.org (Crossref). The items measuring PEBI are based on Li et

al., (2021) and Zhang et al., (2020) and numerous studies have been conducted. The exhibition may influence the audience's behaviors through the dissemination of information and ideas, but few researchers have looked into this further. There is a distinct lack of research on the process of exhibition influencing people's behavioral intentions. Based on the belief–emotion–norm theoretical model, this study integrates environmental beliefs, exhibition attachment, and an audience's environmental behavior intentions into a research model to explain how the exhibition affects the audience. The Macau International Environmental Cooperation Forum & Exhibition attendees served as the research object in the current empirical study. The study's findings suggest that audiences' environmental beliefs may have a significant and positive impact on their attachment to environmentally themed exhibitions as well as their environmental behavioral intentions. This study also confirmed that attachment to exhibitions, a temporary space, can play an important mediating role between environmental beliefs and intentions to engage in pro-environmental behavior. The exhibition dependency, in particular, acts as a mediator between environmental beliefs and pro-environmental behavior intentions. Although the mediating effect of exhibition identity is insignificant, exhibition dependence–exhibition identity as a whole has a partial mediating effect in the process of influencing exhibition audiences' environmental behavior. This research helps to improve our understanding of how environmentally themed exhibitions influence audience behavior. It also has implications for exhibition organizers in terms of better exhibition planning, more effective information transmission, and influencing audience behavior.”, “container-title”: “SAGE Open”, “DOI”: “10.1177/21582440211027966”, “issue”: “2”, “note”: “_eprint: https://doi-org.remotexs.ntu.edu.sg/10.1177/21582440211027966”, “page”: “21582440211027966”, “title”: “Environmental Beliefs and Pro-Environmental Behavioral Intention of an Environmentally Themed Exhibition Audience: The Mediation Role of Exhibition Attachment”, “volume”: “11”, “author”: [{"family": “Li”, “given”: “Xi”}, {"family”: “Yu”, “given”: “Runzhe”}, {"family”: “Su”, “given”: “Xinwei”}], “issued”: {“-date-parts”: [{"2021"}]}, “label”: “page”, “id”: “1237”, “uris”: [“http://zotero.org/users/local/EFLWdria/items/FN-QBLXVG”, “http://zotero.org/users/13827853/items/FN-QBLXVG”], “itemData”: {“id”: “1237”, “type”: “article-journal”, “abstract”: “This study compares the predictive power of the Theory of Planned Behavior (TPB, emphasizing the key role of residents. A seven-point Likert scale is used in the questionnaire, from “strongly disagree” to “strongly agree”. Following the pre-test, language, and formatting issues are adjusted based on expert feedback. The final

questionnaire includes an introduction, overview, demographic survey section, and questions related to the study topics, with detailed items listed in the appendix.

3.2 Data collection

Questionnaires were sent to the research sample from an online survey research platform Credamo. The members came from different geographical areas and processed a total of 600 invitations. Include a check-out question in the email invitation about whether you live in the travel destination. A total of 500 people completed the survey, and 498 eligible participants were rewarded for completing the survey. After excluding non-responsiveness and outliers, a total of 450 cases were finally retained for data analysis. The other part was collected offline. The collection areas were mainly concentrated near tourist attractions in Macau and Singapore. A total of 80 people completed the survey, and 70 eligible participants were rewarded for completing the survey. After excluding non-responses and outliers, 50 samples were used to analysis. Then, I collected a total of 500 valid samples.

3.3 Data analysis

Conduct descriptive statistical analyses and reliability assessments utilizing SPSS29.0 initially. Next, a confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) were undertaken applying AMOS 26.0 to validate the adequacy of the measurement model. Models were then constructed and validated through structural and validated through structural equation model (SEM) to further test the fit of the measurement and structural models. The entire analytical process included reliability testing of latent variables, model fit assessment, and path analyses to validate the plausibility of each hypothesis. For further verification of the mediation effect PSRC has on PEBI, this research used Bootstrap technology to run 5000 iterations in AMOS 26.0 and verified whether the bias-corrected 95% confidence interval contains zero in order to determine whether the indirect effect is significant.

4. Results

4.1 Exploratory Factor Analysis

The Cronbach's α coefficients ranged from 0.610 to 0.874, with all values exceeding 0.6. The total Cronbach's α coefficient was 0.921, which suggests that the sample data had a high reliability. Due to some items in the original questionnaire not passing the reliability test, they were removed. The specific results are shown in Table 1.

Table 1 EFA Results

Variable	Cronbach's Alpha	N
PSRC	0.874	8
PBC	0.696	3
AC	0.637	2
AR	0.824	3
PN	0.610	2
PEBI	0.621	4
SN	0.682	2
ATT	0.644	3

4.2 Confirmatory factor analysis

In this study, I used SEM to test the model and to evaluate the factors influencing residents' PEBI in tourism destinations. I conducted a confirmatory factor analysis to enhance model fit and ensure the robustness of measurement model by removing PSRC1,3; SN2; AC1; PN1; PEBI3,4. The model fit evaluation results show an acceptable mod-

el fit ($\chi^2/df = 3.967$, RMR = 0.114, GFI = 0.856, AGFI = 0.822, PGFI = 0.695, NFI = 0.802, IFI = 0.844, TLI = 0.822, CFI = 0.843). The results of the average variance extracted (AVE) and composite reliability (CR) calculations for latent variables indicate strong reliability and validity. The AVE are above 0.4, and the CR values exceeded 0.6 for each variable. Table 2 displays the specific outcome.

Table 2 Latent Variables Analysis

Latent Variable	Mean	Standard Deviation	AVE	CR
PSRC	3.75	0.54	0.50	0.90
PBC	4.02	0.62	0.50	0.70
SN	3.86	0.58	0.50	0.70
ATT	3.80	0.55	0.40	0.70
PEBI	3.90	0.57	0.40	0.60
AC	3.78	0.53	0.50	0.60
AR	3.85	0.59	0.60	0.80
PN	3.82	0.56	0.40	0.60

Table 3 Correlation Matrix

	PSRC	PBC	PEBI	PN	AC	ATT	AR	SN
PSRC	0.687							
PBC	0.625	0.675						
PEBI	0.577	0.499	0.568					
PN	0.592	0.549	0.517	0.626				
AC	0.399	0.373	0.363	0.505	0.685			
ATT	0.451	0.426	0.42	0.596	0.538	0.616		
AR	0.368	0.317	0.311	0.276	0.35	0.199	0.781	
SN	0.623	0.518	0.521	0.511	0.348	0.468	0.323	0.72

4.3 Path analysis

Most of the path coefficients in the model reach statistical significance levels ($p < 0.05$), validating the rationality of each hypothesis. Specifically, the positive effect of PSRC on PEBI is significant ($\beta = 0.555$, $p < 0.001$), validating H_1 . Additionally, PSRC significantly positively affects PBC ($\beta = 0.833$, $p < 0.001$), supporting H_2 . SN is also significantly positively affected by PSRC ($\beta = 0.852$, $p < 0.001$), supporting H_5 . The effect of PSRC on ATT is also significant ($\beta = 0.697$, $p < 0.001$), further supporting H_8 . However, the effect of PBC on PEBI does not reach sta-

tistical significance ($\beta = 0.194$, $p = 0.106$). Its effect is not significant. This result does not support H_3 . Similarly, the effect of SN on PEBI is significant ($\beta = 0.555$, $p < 0.001$), supporting H_6 . The effect of ATT on PEBI is also significant ($\beta = 0.211$, $p = 0.041$), supporting Hypothesis H_9 . Additionally, PSRC has a notable positive effect on AC ($\beta = 0.685$, $p < 0.001$), supporting Hypothesis H_{11} . Similarly, AC exerts a significant influence on AR ($\beta = 0.625$, $p < 0.001$), validating H_{12} . The positive effect of AR on PN is significant ($\beta = 0.514$, $p < 0.001$), supporting H_{13} . Finally, PN positively affects PEBI ($\beta = 0.361$, $p < 0.001$), supporting H_{14} .

Table 4 Hypothesis Testing Results

Hypothesis	Independent Variables	Dependent Variables	Standardized Estimates	t-Values
H_1	PSRC	PEBI	0.555	11.887**
H_2	PSRC	PBC	0.833	12.035**
H_3	PBC	PEBI	0.194	1.617
H_5	PSRC	SN	0.852	13.213**
H_6	SN	PEBI	0.555	4.395**
H_8	PSRC	ATT	0.697	9.559**
H_9	ATT	PEBI	0.211	2.040*
H_{11}	PSRC	AC	0.685	15.598**
H_{12}	AC	AR	0.625	14.045**
H_{13}	AR	PN	0.514	7.138**
H_{14}	PN	PEBI	0.361	4.095**

Note: * indicates $p < 0.05$, ** indicates $p < 0.01$.

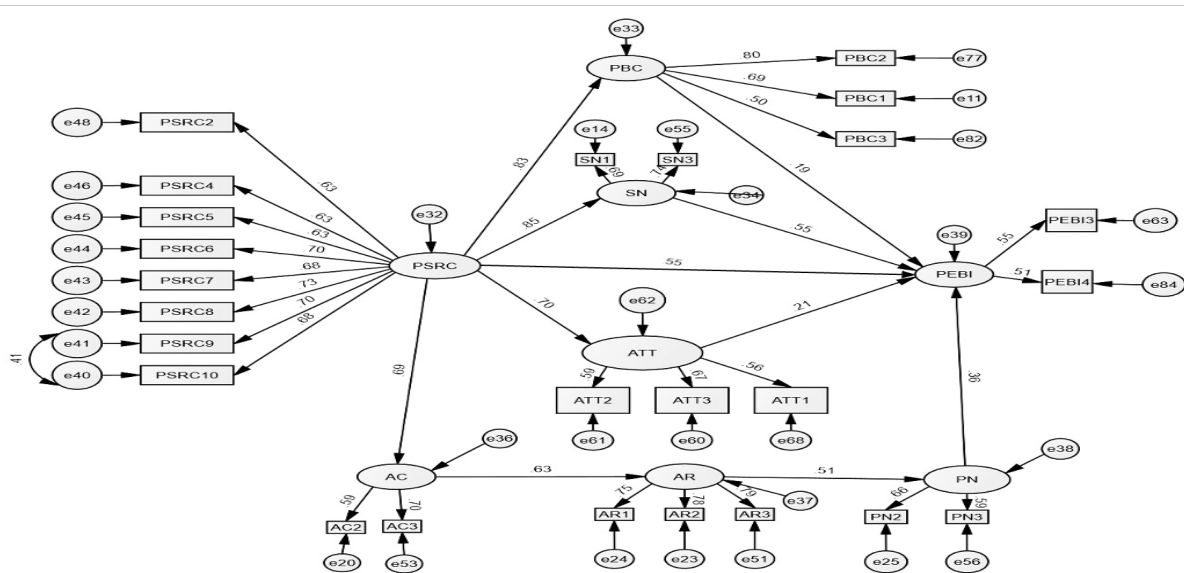


Figure 2 Structural Equation Modelling (SEM) Path Diagram

4.4 Mediation effect

The analysis findings suggest that PSRC has a significant indirect impact on PEBI via SN (indirect effect = 0.188, CI95 = [0.102, 0.303], excluding zero), which tested H₇. PSRC indirectly impacts PEBI through ATT (indirect

effect = 0.147, CI95 = [0.075, 0.245], not including 0), which supports H₁₀. Furthermore, private sector involvement in PSRC’s indirect effects on PEBI via AC, AR, and PN is also significant (indirect effect = 0.122, CI95 = [0.056, 0.214], not including 0), which verified H₁₅.

Table 5 Results of mediating effect test.

Hypothesis	Indirect effect	Estimate	Lower	Upper
H ₇	PSRC SN PEBI	0.188	0.102	0.303
H ₁₀	PSRC ATT EBI	0.147	0.075	0.245
H ₁₅	PSRC AC AR PN PEBI	0.122	0.056	0.214

5. Conclusion

This research aims to explore the connection between the PSRC in tourism destinations and the residents’ PEBI. It provides theoretical support for the key role played by the climate in promoting residents’ pro-environmental behavior intention. This research not only expands the application of PSRC in the tourism context but also combines TPB and NAM to provide a comprehensive perspective of residents’ PEBI. The study explores the antecedents of PEBI from a new perspective.

5.1 Theoretical implications

An important theoretical advancement can be made by the conclusions of this study about understanding PEBI of residents in tourism destinations. Firstly, the study pioneered the expansion of Perceived Sustainability-related Climate its concept from corporate and organizational contexts to tourism destination scenarios. It not only broadens the theoretical horizon but also strongly confirms the effects of PSRC on PEBI of the residents in tourism destinations positively through the analysis of empirical data. Their positive guiding effects on Perceived Behavioral Control, Subjective Norm and Attitude. Previous literature has focused on the role of PSRC in assessing employees’ perceptions and attitudes towards corporate sustainability initiatives (Leung & Rosenthal, 2019; Lülfs & Hahn, 2014), which have mostly been limited to the context of business organizations, and seldom touched upon the realm of tourism destination residents. Therefore, this research effectively fills the research gap in this area and establishes the validity and far-reaching impact of PSRC concept in the field of tourism research. Secondly, this research combines TPB)and NAM to provide a comprehensive structure which help to understand the drivers of residents’ PEBI. By integrating two theories, this study not only confirms the rational driving effect

of PSRC on PEBI of residents but also analyses in depth its moral role. The dual-path analysis adopted in this theoretical integration reveals that future studies should comprehensively examine the dual mechanism of rational judgement and moral conviction when exploring Pro-environmental Behavior Intention.

5.2 Practical implications

This research has great value to policymakers and destination managers, especially in the practical implications. The results show that enhancing Perceived Sustainability-related Climate in tourism destinations can significantly encourage residents from the perspective of PEBI. Therefore, destination managers should create and convey a strong sustainable climate by implementing significant and effective environmental policies, organizing community sustainable development projects, and promoting the importance of environmental protection through local media and activities. For example, community activities of environmental protection such as garbage sorting competitions, knowledge lectures on environmental protection, and sustainable lifestyle seminars can be regularly held to enhance the environmental awareness and engagement of community members. In addition, the outcome of this research provides some useful guidance for policymakers and destination managers to drive sustainable tourism strategies. Notably, data analysis indicates that perceived behavior control does not exert a strong influence on pro-environmental behavior intentions. This suggests that creating a sustainable climate may be not that effective in enhancing perceived behavior control, but more effective in promoting subjective norms and attitudes. Therefore, efforts should focus more on improving the attitudes and subjective norms within the community. It is also crucial to improve residents’ attitudes towards pro-environmental behaviors through education and awareness campaigns. Instead of only em-

phasizing objective conditions and infrastructure, strategies should give priority to fostering a supportive social environment and reinforcing positive attitudes.

5.3 Discussion

The research's findings align with prior research, showing that PSRC positively impacts PEBI consistent with TPB and NAM (Han, 2015; Leung & Rosenthal, 2019) which was superior to existing theories. Findings also supported the hypothesized relationships among study variables, identified the prominent role of awareness of consequences and normative process in generating intention, and verified the mediating impact of study variables. In addition, the invariance test identified the significant moderating impact of non-green alternatives' attractiveness. Specifically, the role of attitude, perceived behavioral control, and moral obligation in forming intention was found to be more important when customers felt the alternatives were less attractive."

container-title": "Tourism Management", "DOI": "10.1016/j.tourman.2014.09.014", "ISSN": "02615177", "journalAbbreviation": "Tourism Management", "language": "en", "page": "164-177", "source": "DOI.org (Crossref. However, unlike prior studies, this research indicates there is no significant association between PBC and PEBI, suggesting that factors like Subjective Norms and Attitude play more crucial roles in this context.

5.4 Limitations and Future Research Directions

In spite of its contributions, the study has some limita-

tions. Firstly, data collection was conducted in urban tourism destinations such as Macau and Singapore, which usually have well-equipped infrastructure and developed economies. Therefore, this research may be not suitable to apply to some tourism destinations in rural or developing areas with poor infrastructure due to the limitations of these types of developed tourism destinations. In addition, the perceived behavior control in these regions may become a crucial mediating factor affecting tourism destination residents' behavior. So, future research may include more tourism destinations with different levels of economic development and infrastructure construction to verify and extend the funding and explore more possibilities and impact of mediating effects in different types of tourism destinations in more depth. Future research should include a more diverse range of tourism destinations to validate and extend these findings. Secondly, measures that depend on self-reported data may lead to response biases, for example, social desirability bias, where individuals may over-report their pro-environmental behaviors. This limitation could be addressed by using objective measures of pro-environmental behaviors or by combining self-report data with observational studies. Finally, exploring the role of affective and emotional factors in influencing PEB could also be a promising area of research. For example, studying the effects of affective connection to the local environment or eco-anxiety on pro-environmental behaviors could provide new perspectives on the motivational basis of pro-environmental behaviors.

Appendix A. Questionnaire items

Construct	Code	Item
Perceived Sustainability-Related Climate (PSRC)	PSRC1	It is important to protect the environment in my neighborhood.
	PSRC2	People in my neighborhood are interested in supporting environmental causes.
	PSRC3	People in my neighborhood are worried about their environmental impact.
	PSRC4	My neighbors are care about becoming more eco-friendly.
	PSRC5	My recycling behavior at home is supported.
	PSRC6	My community offers incentives for residents who take part in environmental protection efforts.
	PSRC7	I learn about my actions' impact on the environment from people in my neighbourhood.
	PSRC8	I am informed about environmental initiatives happening in my neighbourhood.
	PSRC9	People in my neighbourhood motivate me to participate in activities that protect the environment.
	PSRC10	My neighbours remind me to adopt practices that are environmentally friendly.

Perceived Behavioral Control (PBC)	PBC1	I have the resources (time, money, knowledge) to engage in pro-environmental behaviors.
	PBC2	I have access to the resources I need to engage in pro-environmental behaviors.
	PBC3	In my daily routine, it is feasible for me to carry out actions that have a positive environmental impact.
Awareness of Consequences (AC)	AC1	I am aware that excessive use of non-renewable resources in our daily lives can lead to significant environmental degradation, affecting our local ecosystem's health.
	AC2	I understand that improper waste disposal by our community can contribute to pollution and harm our local environment, including water bodies and land.
	AC3	I recognize that our consumption patterns and lack of sustainable practices can strain our local resources and negatively impact the ecological balance.
	AC4	I am conscious of the potential long-term consequences for future generations if I do not adopt sustainable practices.
Ascription of Responsibility (AR)	AR1	I share responsibility for minimizing the environmental impact caused by tourism in our area.
	AR2	I have a joint responsibility to advocate for and practice more sustainable tourism methods to protect our environment.
	AR3	I consider it partly my responsibility to educate tourists on the importance of sustainable practices within our destination.
Personal Norm (PN)	PN1	I feel a strong obligation to engage in environmentally friendly behaviors when it comes to tourism in my community.
	PN2	Regardless of others' actions, my principles compel me to support and participate in sustainable tourism initiatives.
	PN3	I believe it is crucial for me to demonstrate sustainable behavior as an example for tourists and fellow residents alike.
Pro-environmental Behavior Intention (PEBI)	PEBI1	I am open to accepting inconveniences, like separating my waste into different bins, to help protect the environment.
	PEBI2	I would be willing to walk or use mass transit instead of a car to my next festival to protect the environment.
	PEBI3	I will encourage other attendees to engage in eco-friendly behaviors.
	PEBI4	I am willing to pay more for environmentally friendly products.
Subjective Norm (SN)	SN1	Most people who are important to me believe that I should engage in activities that support environmental causes.
	SN2	Most people who are important to me encourage me to participate in actions that protect the environment.
	SN3	Most people who are important to me have the expectation to contribute to environmental sustainability.
Attitude (ATT)	ATT1	I believe it is crucial for me to adopt sustainable practices for the well-being of the environment.
	ATT2	Supporting environmental sustainability aligns with my personal values.
	ATT3	The long-term environmental benefits of adopting sustainable practices are important to me.

Appendix B. Socio-demographic characteristics

Gender	Male	244
	Female	256
Age	18-24	93
	25-34	263
	35-44	113
	45-54	21
	55-64	10
Education	High school graduate	35
	Undergraduate	371
	Postgraduate	71
	Above Postgraduate	23
Income statement	Below 5000 RMB/month	83
	5001 RMB/month -10000 RMB /month	224
	10001 RMB/month -15000 RMB /month	124
	Above 15000 RMB /month	69

References

- (1) Acquadro Maran, D., Butt, M. U., & Begotti, T. (2023). Pro-Environment Behaviors, Efficacy Beliefs, Perceived Individual and Social Norms: A Questionnaire Survey in a Sample of Young Adults From Pakistan. *SAGE Open*, 13(4), 21582440231207444. <https://doi.org/10.1177/21582440231207444>
- (2) Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- (3) Ajzen, I. (with Fishbein, M.). (1980). *Understanding attitudes and predicting social behavior*. Prentice-Hall.
- (4) Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453–474. [https://doi.org/10.1016/0022-1031\(86\)90045-4](https://doi.org/10.1016/0022-1031(86)90045-4)
- (5) Aydın, B., & Alvarez, M. D. (2020). Understanding the Tourists’ Perspective of Sustainability in Cultural Tourist Destinations. *Sustainability*, 12(21), Article 21. <https://doi.org/10.3390/su12218846>
- (6) Bai, G., & Bai, Y. (2020). Voluntary or Forced: Different Effects of Personal and Social Norms on Urban Residents’ Environmental Protection Behavior. *International Journal of Environmental Research and Public Health*, 17(10), Article 10. <https://doi.org/10.3390/ijerph17103525>
- (7) Bianchi, C. (2017). Understanding travelers’ intentions to visit a short versus long-haul emerging vacation destination: The case of Chile. *Tourism Management*.
- (8) Budeanu, A. (2007). Sustainable tourist behavior – a discussion of opportunities for change. *International Journal of Consumer Studies*, 31(5), 499–508. <https://doi.org/10.1111/j.1470-6431.2007.00606.x>
- (9) Chen, Y. (2020). An Investigation of the Influencing Factors of Chinese WeChat Users’ Environmental Information-Sharing Behavior Based on an Integrated Model of UGT, NAM, and TPB. *Sustainability*, 12(7), Article 7. <https://doi.org/10.3390/su12072710>
- (10) Cialdini, R. B., Kallgren, C. A., & Reno, R. R. (1991). A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 24, pp. 201–234). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60330-5](https://doi.org/10.1016/S0065-2601(08)60330-5)
- (11) Das, A. K., Biswas, S. R., Abdul Kader Jilani, M. M., & Uddin, Md. A. (2019). Corporate Environmental Strategy and Voluntary Environmental Behavior—Mediating Effect of Psychological Green Climate. *Sustainability*, 11(11), 3123. <https://doi.org/10.3390/su11113123>
- (12) Eagly, A. H., & Chaiken, S. (1993). *The Psychology of Attitudes*. Harcourt Brace Jovanovich College Publishers.
- (13) Filimonau, V., Matute, J., Mika, M., & Faracik, R. (2018). National culture as a driver of pro-environmental attitudes and behavioral intentions in tourism. *Journal of Sustainable Tourism*, 26(10), 1804–1825. <https://doi.org/10.1080/09669582.2018.1511722>
- (14) Fishbein, M., & Ajzen, I. (2009). *Predicting and Changing Behavior: The Reasoned Action Approach*. Psychology Press. <https://doi.org/10.4324/9780203838020>
- (15) Florido, C., Jacob, M., & Payeras, M. (2019). How to Carry out the Transition towards a More Circular Tourist Activity in the Hotel Sector. *The Role of Innovation. Administrative Sciences*,

- 9(2), 47. <https://doi.org/10.3390/admsci9020047>
- (16) Garrod, B., Fyall, A., Leask, A., & Reid, E. (2012). Engaging residents as stakeholders of the visitor attraction. *Tourism Management*, 33(5), 1159–1173. <https://doi.org/10.1016/j.tourman.2011.11.014>
- (17) Goffi, G., Cucculelli, M., & Masiero, L. (2019). Fostering tourism destination competitiveness in developing countries: The role of sustainability. *Journal of Cleaner Production*, 209, 101–115. <https://doi.org/10.1016/j.jclepro.2018.10.208>
- (18) Gössling, S., Peeters, P., Hall, C. M., Ceron, J.-P., Dubois, G., Lehmann, L. V., & Scott, D. (2012). Tourism and water use: Supply, demand, and security. An international review. *Tourism Management*, 33(1), 1–15. <https://doi.org/10.1016/j.tourman.2011.03.015>
- (19) Han, H. (2014a). The norm activation model and theory-broadening: Individuals' decision-making on environmentally-responsible convention attendance. *Journal of Environmental Psychology*, 40, 462–471. <https://doi.org/10.1016/j.jenvp.2014.10.006>
- (20) Han, H. (2014b). The norm activation model and theory-broadening: Individuals' decision-making on environmentally-responsible convention attendance. *Journal of Environmental Psychology*, 40, 462–471. <https://doi.org/10.1016/j.jenvp.2014.10.006>
- (21) Han, H. (2015). Travelers' pro-environmental behavior in a green lodging context: Converging value-belief-norm theory and the theory of planned behavior. *Tourism Management*, 47, 164–177. <https://doi.org/10.1016/j.tourman.2014.09.014>
- (22) Han, H., & Hwang, J. (2017). What Motivates Delegates' Conservation Behaviors While Attending a Convention? *Journal of Travel & Tourism Marketing*, 34(1), 82–98. <https://doi.org/10.1080/10548408.2015.1130111>
- (23) He, M., Blye, C.-J., & Halpenny, E. (2023). Impacts of environmental communication on pro-environmental intentions and behaviors: A systematic review on nature-based tourism context. *Journal of Sustainable Tourism*, 31(8), 1921–1943. <https://doi.org/10.1080/09669582.2022.2095392>
- (24) Hunter, C. (1997). Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research*, 24(4), 850–867. [https://doi.org/10.1016/S0160-7383\(97\)00036-4](https://doi.org/10.1016/S0160-7383(97)00036-4)
- (25) Khan, N., Hassan, A. U., Fahad, S., & Naushad, M. (2020). Factors Affecting Tourism Industry and Its Impacts on Global Economy of the World. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3559353>
- (26) Kim, J. J., & Hwang, J. (2020). Merging the norm activation model and the theory of planned behavior in the context of drone food delivery services: Does the level of product knowledge really matter? *Journal of Hospitality and Tourism Management*, 42, 1–11. <https://doi.org/10.1016/j.jhtm.2019.11.002>
- (27) Kollmuss, A., & Agyeman, J. (2002). Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239–260. <https://doi.org/10.1080/13504620220145401>
- (28) Leung, Y. W., & Rosenthal, S. (2019). Explicating Perceived Sustainability-Related Climate: A Situational Motivator of Pro-Environmental Behavior. *Sustainability*, 11(1), 231. <https://doi.org/10.3390/su11010231>
- (29) Li, X., Yu, R., & Su, X. (2021). Environmental Beliefs and Pro-Environmental Behavioral Intention of an Environmentally Themed Exhibition Audience: The Mediation Role of Exhibition Attachment. *SAGE Open*, 11(2), 21582440211027966. <https://doi.org/10.1177/21582440211027966>
- (30) Liu, Y., Sheng, H., Mundorf, N., Redding, C., & Ye, Y. (2017). Integrating Norm Activation Model and Theory of Planned Behavior to Understand Sustainable Transport Behavior: Evidence from China. *International Journal of Environmental Research and Public Health*, 14(12), Article 12. <https://doi.org/10.3390/ijerph14121593>
- (31) Lorenzoni, I., Nicholson-Cole, S., & Whitmarsh, L. (2007). Barriers perceived to engaging with climate change among the UK public and their policy implications. *Global Environmental Change*, 17(3), 445–459. <https://doi.org/10.1016/j.gloenvcha.2007.01.004>
- (32) Lülfs, R., & Hahn, R. (2014). Sustainable Behavior in the Business Sphere: A Comprehensive Overview of the Explanatory Power of Psychological Models. *Organization & Environment*, 27(1), 43–64. <https://doi.org/10.1177/1086026614522631>
- (33) Marchi, V., Marasco, A., & Apicerni, V. (2023). Sustainability communication of tourism cities: A text mining approach. *Cities*, 143, 104590. <https://doi.org/10.1016/j.cities.2023.104590>
- (34) McKenzie-Mohr, D. (2000). New Ways to Promote Proenvironmental Behavior: Promoting Sustainable Behavior: An Introduction to Community-Based Social Marketing. *Journal of Social Issues*, 56(3), 543–554. <https://doi.org/10.1111/0022-4537.00183>
- (35) Miller, D., Merrilees, B., & Coghlan, A. (2015). Sustainable urban tourism: Understanding and developing visitor pro-environmental behaviors. *Journal of Sustainable Tourism*, 23(1), 26–46. <https://doi.org/10.1080/09669582.2014.912219>
- (36) Mónus, F. (2022). Environmental education policy of schools and socioeconomic background affect environmental attitudes and pro-environmental behavior of secondary school students. *Environmental Education Research*, 28(2), 169–196. <https://doi.org/10.1080/13504622.2021.2023106>
- (37) Mouro, C., & Duarte, A. P. (2021). Organisational Climate and Pro-environmental Behaviors at Work: The Mediating Role of Personal Norms. *Frontiers in Psychology*, 12. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.635739>
- (38) Neves, C., Oliveira, T., & Sarker, S. (2024). Citizens' participation in local energy communities: The role of technology as a stimulus. *European Journal of Information Systems*, 0(0), 1–24. <https://doi.org/10.1080/0960085X.2024.2302426>
- (39) Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014).

- Organisational sustainability policies and employee green behavior: The mediating role of work climate perceptions. *Journal of Environmental Psychology*, 38, 49–54. <https://doi.org/10.1016/j.jenvp.2013.12.008>
- (40) Onwezen, M. C., Antonides, G., & Bartels, J. (2013). The Norm Activation Model: An exploration of the functions of anticipated pride and guilt in pro-environmental behavior. *Journal of Economic Psychology*, 39, 141–153. <https://doi.org/10.1016/j.joep.2013.07.005>
- (41) Purwanda, E., & Achmad, W. (2022). Environmental Concerns in the Framework of General Sustainable Development and Tourism Sustainability. *Journal of Environmental Management and Tourism*, 13(7), 1911. [https://doi.org/10.14505/jemt.v13.7\(63\).11](https://doi.org/10.14505/jemt.v13.7(63).11)
- (42) Schneider, C. R., & van der Linden, S. (2023). An Emotional Road to Sustainability: How Affective Science Can Support pro-Climate Action. *Emotion Review*, 15(4), 284–288. <https://doi.org/10.1177/17540739231193742>
- (43) Schwartz, S. H. (1977). Normative Influences on Altruism. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 10, pp. 221–279). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60358-5](https://doi.org/10.1016/S0065-2601(08)60358-5)
- (44) Šegota, T., Mihalič, T., & Perdue, R. R. (2024). Resident perceptions and responses to tourism: Individual vs community level impacts. *Journal of Sustainable Tourism*, 32(2), 340–363. <https://doi.org/10.1080/09669582.2022.2149759>
- (45) Shang, Y., Zhu, L., Qian, F., & Xie, Y. (2023). Role of green finance in renewable energy development in the tourism sector. *Renewable Energy*, 206, 890–896. <https://doi.org/10.1016/j.renene.2023.02.124>
- (46) Streimikiene, D., Svagzdiene, B., Jasinskas, E., & Simanavicius, A. (2021). Sustainable tourism development and competitiveness: The systematic literature review. *Sustainable Development*, 29(1), 259–271. <https://doi.org/10.1002/sd.2133>
- (47) Stylidis, D., Biran, A., Sit, J., & Szivas, E. M. (2014). Residents' support for tourism development: The role of residents' place image and perceived tourism impacts. *Tourism Management*, 45, 260–274. <https://doi.org/10.1016/j.tourman.2014.05.006>
- (48) Suryani, A., Soedarso, S., Rahmawati, D., Endarko, E., Muklason, A., Wibawa, B. M., & Zahrok, S. (2021). Community-Based Tourism Transformation: What Does The Local Community Need? *IPTEK Journal of Proceedings Series*, 7, Article 7. <https://doi.org/10.12962/j23546026.y2020i7.9524>
- (49) Turaga, R. M. R., Howarth, R. B., & Borsuk, M. E. (2010). Pro-environmental behavior. *Annals of the New York Academy of Sciences*, 1185(1), 211–224. <https://doi.org/10.1111/j.1749-6632.2009.05163.x>
- (50) Wang, J., Wang, S., Wang, H., Zhang, Z., & Ru, X. (2021). Examining when and how perceived sustainability-related climate influences pro-environmental behaviors of tourism destination residents in China. *Journal of Hospitality and Tourism Management*, 48, 357–367. <https://doi.org/10.1016/j.jhtm.2021.07.008>
- (51) Wang, S., Wang, J., Li, J., & Yang, F. (2020). Do motivations contribute to local residents' engagement in pro-environmental behaviors? Resident-destination relationship and pro-environmental climate perspective. *Journal of Sustainable Tourism*, 28(6), 834–852. <https://doi.org/10.1080/09669582.2019.1707215>
- (52) Zhang, L., Ruiz-Menjivar, J., Luo, B., Liang, Z., & Swisher, M. E. (2020). Predicting climate change mitigation and adaptation behaviors in agricultural production: A comparison of the theory of planned behavior and the Value-Belief-Norm Theory. *Journal of Environmental Psychology*, 68, 101408. <https://doi.org/10.1016/j.jenvp.2020.101408>