

## Psychological ownership and knowledge sharing: Key psychological drivers of sustainable tourist behavior

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### ABSTRACT

As the green transformation sweeps across industries in the digital age, tourism stakeholders face a pressing need to utilize online platforms and digital influencers for sustainability messaging. Drawing on the Motivation-Opportunity-Ability framework, this study investigates the influence of green ownership psychology and green knowledge sharing on tourists' repatronage intentions. It focuses on the mediating role of cooperative green activity programs and the moderating impact of tourists' green trust in social media influencers. Results from a two-wave survey of 602 tourists in Vietnam show that green practices directly increase repatronage intentions. Cooperative green activity programs significantly mediate this relationship, enhancing the impact of green marketing practices on repatronage intentions. Furthermore, tourists' green trust in social media influencers is a crucial moderating factor. It increases the effectiveness of green ownership psychology and green knowledge sharing in influencing repatronage intentions through cooperative green activity programs. The study highlights how the emotional and cognitive aspects of green marketing contribute to tourists' decisions to revisit or continue using tourism services. Offering original insights into the interplay of these elements in green marketing within the tourism industry, this research enriches the application of the Motivation-Opportunity-Ability framework. It provides valuable implications for tourism companies aiming to foster sustainable practices and enhance customer loyalty, highlighting the role of digital influencer engagement and cooperative sustainability initiatives in green marketing strategies.

### 1. Introduction

Tourism accounted for approximately 8 % of global greenhouse gas emissions between 2009 and 2013, and with rising demand for air travel and longer transit distances, emissions are projected to increase by 161 % by 2035 unless sustainable practices are adopted (Lenzen et al., 2018; Wilkins et al., 2024). Therefore, government and societal pressures are driving businesses to undertake green transformations across their entire value chains, including their digitalization efforts (Ge et al., 2023; Wang & Luo, 2023). The focal point of this green transformation is shifting from internal marketing to external marketing, with customers

at its core (Barbier, 2020; Zheng et al., 2023). In the digital environment, previous research has predominantly focused on green advertising that conveys emotional information rather than the quality of content through green knowledge aimed at customers (Zhang et al., 2022). However, if advertisements primarily evoke emotional responses without providing consumers with factual environmental knowledge, the potential for fostering genuinely sustainable behaviors diminishes. Research indicates that emotional appeals can activate consumer engagement but may not lead to informed decision-making regarding sustainable practices (Shi & Jiang, 2023). For instance, while emotional connections can enhance the attractiveness of green tourism offerings,

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they may fail to convey the necessary knowledge that encourages consumers to choose environmentally friendly options (Liu & Leon, 2023; Zhang et al., 2022). Moreover, the use of emotional appeals without clear, factual backing can lead to consumer skepticism and distrust towards green claims (Font & McCabe, 2017). Therefore, this lack of substantive content can lead to a superficial understanding of sustainability, ultimately undermining the effectiveness of green marketing efforts in tourism (Font et al., 2021; Font & McCabe, 2017). This study addresses this gap by exploring the influence of both advertisements that promotes green ownership psychology (GOP) and green knowledge sharing (GKS) on repatronage intentions (RPI) within the tourism industry through mediating and moderating mechanisms. RPI refers to a tourist's willingness to revisit a destination or reuse the services of a particular tourism provider, like a hotel or airline (Jones et al., 2006). Current research has primarily concentrated on intention in general rather than specific factors in tourism, such as RPI (Huang et al., 2021; Söderlund, 2006). Seeking ways to enhance RPI among tourists is noteworthy due to its benefits, such as customer retention and reduced marketing costs, ultimately bolstering profitability within the tourism sector and fostering customer loyalty.

Recent studies in marketing, particularly concerning the integration of GOP and GKS in green marketing practices, have largely overlooked the concept of RPI (Huang et al., 2021; Majeed & Kim, 2022). This paper aims to bridge this gap by examining how GOP and GKS influence tourists' RPI. GOP, originating from emotional motivation, is the sense of ownership individuals feel over a green object, tangible or otherwise (Pierce et al., 2001). This feeling, when applied to natural environments, encourages tourists to preserve these areas, finding enjoyment away from urban settings. GKS, increasingly significant with digital platforms like X/Twitter or Metaverse and enhanced by AI, involves the transfer of sustainable knowledge (Lee, 2001). This process facilitates a more intuitive learning approach for customers, contrasting with the less effective method of memorizing repetitive advertising information (Berezan et al., 2014; Font et al., 2021; Vargo & Lusch, 2018). Despite the apparent importance of these concepts, their impact on RPI within the context of green marketing is not well-established (Huang et al., 2021; Majeed & Kim, 2022). Our study seeks to elucidate the mechanisms and conditions under which GOP and GKS affect RPI, contributing to a more profound understanding of consumer behavior in green marketing.

Since the relationship between green marketing practices (GOP, GKS) and RPI has rarely been examined, our understanding of their interplay, especially in the tourism sector, remains limited. This study aims to bridge this gap by exploring the mediating role of cooperative green activity programs (CGAPs). CGAPs involve collaborative, sustainable efforts between tourism companies and tourists. Positioned as a pivotal component within the Motivation-Opportunity-Ability (MOA) framework, CGAPs serve as a crucial nexus in transforming GOP (motivation) and GKS (ability) into positive RPI (Giebelhausen et al., 2016; Kim et al., 2012). In this context, GOP acts as a motivational driver, enhancing tourists' engagement with green practices, while GKS provides the knowledge and skills for sustainable participation. CGAPs not only bolster the motivational impact of the GOP but also leverage GKS for the effective implementation of green initiatives. This dual facilitation is pivotal in shaping RPI. Prior research has identified elements like green trust as mediators in RPI (Han & Kim, 2010), yet the specific role of CGAPs remains underexplored (Gilal et al., 2022; Schmitt et al., 2018; Vesely et al., 2020; Wang et al., 2020; Xu et al., 2023).

In addition, the MOA framework, encompassing Motivation, Opportunity, and Ability, highlights how the moderation of these elements can significantly enhance the predictability of marketing outcomes. This framework is particularly relevant in green marketing, where the moderation of these factors and their effect on RPI is an underexplored area, suggesting a valuable direction for future research. Our study delves into the role of tourists' green trust in social media influencers (GTSMI) as an opportunity factor within this framework (Batra & Keller,

2016; Han et al., 2023; MacInnis & Jaworski, 1989). Influencers on digital platforms are increasingly pivotal in shaping consumer attitudes towards environmental issues (Masuda et al., 2022). GTSMI is defined as consumer confidence in influencers' environmental commitment, a concept poised to mitigate concerns about environmental impacts and encourage eco-friendly travel practices (Ohanian, 1990). While existing literature, like Lou and Yuan (2019), has explored the direct effects of trustworthiness on purchase intentions, the specific moderating role of GTSMI in the relationship between green marketing practices and RPI remains largely unaddressed. Zhang et al. (2021) highlighted the influence of influencers in engaging consumers but did not fully explore GTSMI's role in this context. Our research seeks to fill this gap by examining how GTSMI influences the effect of CGAPs on the relationship between green marketing practices (GOP, GKS) and RPI.

This study aims to enhance RPI by exploring the interactions between GKS, CGAPs, and GTSMI. Our research is twofold. Firstly, we examine the mediating role of CGAPs between GKS, GOP, and RPI. Secondly, we assess the impact of GTSMI on the relationship between the GOP and GKS-RPI. Our findings contribute to green marketing literature in several key areas. We provide new insights into the MOA framework, particularly the roles of GKS and GOP in green marketing within tourism. By empirically testing the conceptual framework linking these practices to RPI, we highlight the importance of GKS as a competency resource and GOP as a motivational resource. Furthermore, our study advances MOA research by demonstrating CGAPs' mediating role between GOP, GKS, and RPI, emphasizing their pivotal position in green marketing practices. Lastly, by integrating a digital influencer perspective, we offer a more comprehensive understanding of green marketing practices, focusing on GTSMI's moderating role in the GOP and GKS-RPI dynamic.

## 2. Literature review

### 2.1. Theoretical background

The MOA framework serves as a robust theoretical foundation for this study (Hoyer et al., 2023), offering a comprehensive lens to understand the behavioral processes underpinning sustainable tourism practices. This framework posits that behavior emerges from the dynamic interplay of three critical components: motivation, ability, and opportunity. Motivation refers to the intrinsic or extrinsic desires that drive individuals towards specific behaviors; ability encompasses the knowledge and skills necessary to perform the behavior; and opportunity represents the external conditions that facilitate or hinder the behavior (Hoyer et al., 2023). The MOA framework assumes that the convergence of these factors amplifies the likelihood of desired behavioral outcomes, while the absence or weakness of any component can impede behavioral execution.

In the context of this research, the MOA framework is particularly relevant as it aligns with the study's objective of understanding RPI in sustainable tourism. By integrating GPO as the motivational driver (Hoyer et al., 2023), GKS as the ability-enhancing mechanism (Font et al., 2021), and GTSMI as the opportunity facilitator (Han et al., 2023; MacInnis & Jaworski, 1989), the framework provides a structured approach to examine how these constructs interact to influence RPI. GPO fosters tourists' emotional attachment and sense of responsibility towards eco-friendly destinations, motivating them to engage in sustainable behaviors. GKS equips tourists with the necessary knowledge and skills to implement green practices, thereby enhancing their ability to act sustainably. GTSMI offers credible external validation and social proof through trusted influencers, creating opportunities that encourage and reinforce sustainable behaviors among tourists. This theoretical foundation supports the development of the research model by positing direct and mediated relationships between GPO, GKS, GTSMI, and RPI, articulated through specific hypotheses. By situating these constructs within the MOA framework, the study provides a cohesive conceptual

model that bridges emotional, cognitive, and contextual dimensions, ensuring a comprehensive understanding of sustainable tourist behavior. This alignment not only enhances the explanatory power of the research model but also contributes to the broader literature on sustainable tourism by elucidating the mechanisms through which motivation, ability, and opportunity coalesce to influence repatronage intentions.

Psychological ownership is an individual's perception of an object, tangible or intangible, as their own (Pierce et al., 2001). This concept is pivotal in marketing, particularly for fostering positive attitudes and behaviors (Pierce et al., 2001). Psychological ownership arises through intimate knowledge of the target, personal investment, and control over the target (Pierce et al., 2001). For instance, regular interactions with a place, such as frequent visits to a local public park, can instill a sense of ownership in consumers (Pierce et al., 2001). Similarly, personal dedication and the integration of one's identity with a subject lead to feelings of ownership (Kirk et al., 2018). Additionally, exercising physical control over a product (Atasoy & Morewedge, 2018) or influencing the behavior of a subject (Kirk, 2019) are also significant contributors to this sentiment.

In the context of green tourism, it refers to the feeling of belonging that tourists develop towards eco-friendly destinations (Pierce et al., 2001). GPO enhances green practices among travel firms and positively impacts eco-destinations through collaborative green initiatives (Lieberman, 2021; Peck & Luangrath, 2023). For tour operators, fostering GPO is crucial for cultivating cooperative values (Peck & Luangrath, 2023). Despite its significance, current tourism research often overlooks GPO, particularly in digital tourism experiences (Lieberman, 2021; Peck & Luangrath, 2023). This gap limits our understanding of GPO within the tourism sector. Highlighting the importance of GPO, Li et al. (2020) demonstrated that guests' psychological ownership significantly influences their engagement in social discussions and knowledge sharing in the hotel industry. Similarly, Xu et al. (2023) found that perceived impact shapes the relationship between destination ownership feelings and tourists' eco-friendly actions. While innovative, GPO in tourism studies remains underdeveloped and relatively unexplored (Xu et al., 2023). This research aims to decode the motivations behind tourists' eco-conscious choices based on the concept of destination psychological ownership. It responds to Kumar and Nayak's (2019) call for enriched discussions in this field, seeking to bridge the gap in understanding GPO, particularly in the context of digital tourism experiences.

Repatronage intentions (RPI) are a reflection of the possibility that a customer will choose the same service or destination again in the future (Jones et al., 2006). Repatronage intentions in the green tourism industry refer to the likelihood of tourists choosing to revisit environmentally responsible or sustainable tourism destinations or services (Huang et al., 2021). Studies have identified various factors that influence repatronage intentions in green tourism. For instance, factors like green attitude, green personality, and personal norms were found to significantly influence post-COVID-19 intention to return to green hotels (Hasan & Rahman, 2022). Tourists' environmental commitment, influenced by their psychological connection to nature, can play a vital role in shaping their repatronage decision (Fauzi et al., 2022). However, intentions related to repatronage are particularly salient in existing literature in the green tourism sector (Huang et al., 2021; Söderlund, 2006). Moreover, in the tourist context, prior research has paid little attention to antecedents on social media, such as GKS, and influencers affecting RPI (Spaid et al., 2019).

Knowledge sharing involves intentionally transferring knowledge from one entity to another, be it individuals, groups, or organizations (Lee, 2001). Vargo and Lusch (2004) emphasize the necessity for customers to learn various aspects of a product, such as its use, maintenance, and customization to their unique needs and behaviors. In the hospitality industry, the practice of knowledge sharing is multifaceted, encompassing two fundamental approaches: treating tourists as quasi-

employees, as suggested by Ford and Heaton (2001), and viewing them as partners, a concept highlighted by Font et al. (2021). This dual approach is vital for maintaining a long-term competitive advantage, as it aligns with evolving tourist expectations and enhances engagement (Font et al., 2021; Ford & Heaton, 2001). In the digital age, Charband and Jafari Navimipour (2016) argue for the centrality of digital collaboration in knowledge dissemination, enhancing participant engagement in this exchange. Expanding on this, van Doorn et al. (2010) suggest that firms can draw customers by developing platforms like knowledge-sharing systems and online training. These platforms facilitate consumer learning about the firm's experiences and applications, thereby deepening their understanding and engagement (Berezan et al., 2014). Kotler et al. (2021) advocate for broadening knowledge sharing through online platforms, extending beyond intra-business exchanges to include interactions between businesses and customers, thereby improving collaborative performance.

In the context of environmental sustainability, the concept of firms' green knowledge sharing (GKS) has evolved from the broader idea of knowledge sharing within businesses (Font et al., 2021; Lee, 2001). GKS is characterized as a mutual process where businesses and customers exchange environmentally-focused knowledge, thereby collaboratively creating green value (Font et al., 2021). Central to this idea is the role of social media as a platform for businesses to share their green initiatives, a practice that significantly contributes to the cultivation of environmentally conscious customers. This is substantiated by van Doorn et al. (2010), who highlight the impact of GKS on enhancing customer awareness and behavior towards environmental sustainability. Notably, the development of GKS is instrumental in empowering customers, as it enables them to integrate a firm's green practices into their own lives, potentially leading to a reduction in environmental impact.

Cooperative green activities programs (CGAPs) are initiatives where multi-actors such as tourism companies and tourists collaborate to promote and participate in sustainable tourism practices (Giebelhausen et al., 2016; Kim et al., 2012). These programs are rooted in the broader movement towards environmentally responsible travel and tourism, which emphasizes low-impact, eco-friendly practices that protect and enhance natural and built environments and consider the social and economic impacts of tourism activities (Rubright et al., 2016). CGAP is pivotal in guiding various participants, including nations, enterprises, and private individuals, towards reputational enhancement and future collaborative opportunities (Vesely et al., 2020). CGAPs are recognized for fostering enhanced collaboration, being sought-after as partners, and stimulating increased cooperative engagement from other parties (Vázquez-Vílchez et al., 2021). These programs often emerge from a complex interaction of various elements, including competency, psychological drivers like ecological values and attitudes, and contextual elements such as opportunities for behavioral change (Bamberg & Möser, 2007). The primary objective of CGAPs in tourism, as outlined by Skibins et al. (2016), is twofold: firstly, to offer experiences that conscientiously respect and preserve natural resources, tailoring these programs to the unique needs of delicate ecosystems, and secondly, to motivate tourists to engage in practices that positively impact the environment during their visit.

Trustworthiness is defined as the degree of confidence that consumers place in influencers' intentions to convey assertions they consider valid (Ohanian, 1990). Caldwell and Clapham (2003) expand on this by describing trustworthiness as the accumulation of perceptual experiences leading to trust, which is vital for maintaining the link between influencers and customers. In the online sphere, the trustworthiness of social media influencers, denoting perceptions of their believability, integrity, and honesty, is identified by Lou and Yuan (2019) as crucial for forming long-term successful relationships between influencers and followers. In the context of green marketing, the green trustworthiness of social media influencers (GTSMI) is understood as the level of environmental confidence consumers have in the intentions of social media influencers to accurately communicate about green

activities linked to the influencers' environmental commitments and concerns. This suggests that if a follower trusts an environmentally-committed social media influencer related to a green brand, they are likely to develop a favorable opinion of the brand as well. Building on findings from Ramkissoon et al. (2018), trust in influencers who advocate for sustainability provides a sense of social validation, particularly within eco-destinations. This validation is instrumental in influencing RPI by increasing tourists' engagement with green practices promoted by trusted figures. GTSMI plays an essential role in enhancing green behavioral intentions among consumers. Studies by Nekomahmud et al. (2022) emphasize that influencers on social media, when perceived as credible and environmentally committed, can significantly impact eco-conscious behaviors and increase customer loyalty intentions (e.g., RPI) within the tourism sector. Although GTSMI has been playing a significant role in influencing behavioral intentions, there is still a gap in research regarding the role of digital influencers in repatronage intentions (Han et al., 2023; Masuda et al., 2022).

## 2.2. Hypothesis development

### 2.2.1. The direct effect of green psychological ownership on tourists' repatronage intentions

This study posits that GPO directly influences RPI, particularly in hospitality. Motivation, Opportunity, and Ability (MOA) framework underscores roles of motivations referring to the internal drives, desires, needs, or wants that propel an individual towards a particular action (Batra & Keller, 2016; MacInnis & Jaworski, 1989). In the context of sustainable tourism, GPO captures the emotional or psychological sense of ownership and belonging that individuals feel towards eco-friendly destinations. This sense of ownership can be a strong motivational driver for tourists, influencing their attitudes and behaviors in favor of green practices. This framework is highly relevant for understanding GPO's role as a motivational factor. GPO aligns tourists' personal values and environmental commitments with the ethos of the destination. When tourists develop a sense of GPO towards an eco-friendly destination, they are more likely to express a desire to revisit or continue supporting that destination. Thus, this may increase the tourists' likelihood to repatronize. Additionally, when tourists develop a sense of psychological ownership towards a green destination, their increased personal belonging often translates into a higher likelihood of returning. Research has demonstrated that psychological ownership can enhance pro-environmental behavioral intentions. For instance, Felix and Almaguer found that individual-oriented psychological ownership positively correlates with pro-environmental behavioral intentions, suggesting that when individuals feel a personal stake in the environment, they are more likely to engage in protective behaviors (Felix & Almaguer, 2019). She et al. highlight that activating psychological ownership over environmental targets, such as natural reserves, leads to stronger intentions to protect these areas compared to mere legal ownership (She et al., 2022). Additionally, Felix et al. (2022) have recently discussed psychological ownership's role in driving positive intentions such as revisit intention, WoM, and relocation intention. The ensuing hypothesis is consequently formulated:

**H1.** GPO has a direct effect on RPI.

### 2.2.2. The direct effect of firms' green knowledge-sharing on tourists' repatronage intentions

Based on the MOA framework (Batra & Keller, 2016; MacInnis & Jaworski, 1989), ability reflects tourists' capacity to process and utilize the green knowledge shared by the firm. This includes their cognitive ability to understand green knowledge and the practical ability to apply it in making green choices. When tourists possess the green ability — the knowledge and skills to engage in sustainable practices — they are likely to feel more confident in their travel choices (Liu et al., 2023). This confidence can translate into a satisfying experience, increasing the

likelihood that they will choose the same service or destination again, thus positively impacting RPI. Moreover, tourists with shared knowledge of green practices can engage more deeply with a tourism service's eco-friendly initiatives, leading to increased satisfaction and an emotional connection with the service provider. Satisfied customers with a strong emotional bond are more likely to return, which directly influences RPI. For instance, if a tourist understands the impact of reducing water usage and is provided with the means to monitor their consumption at a green hotel, this can enhance their sense of participating in sustainability, leading to greater satisfaction and a higher likelihood of repatronage. The ensuing hypothesis is consequently formulated:

**H2.** GKS has a direct effect on RPI.

### 2.2.3. The mediating roles of cooperative green activities programs between green psychological ownership and repatronage intentions

To explain the effect of GPO on CGAPs, the MOA framework points out that PO serves as a critical motivational factor that impacts customer intentions/behaviors (Batra & Keller, 2016; MacInnis & Jaworski, 1989). Individuals with a strong sense of GPO are likely to be more motivated to engage in activities that they perceive as beneficial to the environment. This heightened motivation can lead to increased participation and enthusiasm in CGAPs (Xu et al., 2023). Specifically, tourists with high GPO are more likely to participate actively in, support, and promote CGAPs. Their psychological ownership of environmental concerns can lead to a deeper commitment to these programs, potentially influencing others to participate as well (Peck & Luangrath, 2023). The successful engagement of individuals with high GPO in CGAPs can create a positive feedback loop (Li et al., 2021). As these individuals contribute to and benefit from CGAPs, their RPI may be further reinforced (De Giovanni & Zaccour, 2022), leading to sustained or increased engagement in such programs over time (Xu et al., 2023), increasing the likelihood of consumers repatronizing firms that offer such programs. This is also because CGAPs provide a concrete avenue for consumers to express their environmental values (Beall et al., 2021), reinforcing the connection between their green psychological ownership and their patronage decisions.

As stated above, based on the MOA framework, motivations and abilities are essential to enhancing CGAPs as a way of increasing tourists' green engagement. We argue that enhancing CGAPs can lead to reciprocal behavior, such as RPI. Accordingly, tourists can apply their green ability acquired and have higher green psychological ownership through the firm's GKS programs to boost green behaviors in the cooperative green program that, in turn, can improve behavioral intention in the future (e.g., RPI) (Geng et al., 2019; Hartmann et al., 2017). Most previous work shows that green activities can significantly increase behavioral intention (e.g., supporting intention, green purchase intention in the future) (Giebelhausen et al., 2017). For example, Ramkissoon and Mavondo (2017) investigate pro-environmental behaviors as they relate to satisfaction and place attachment as motivational drivers framing GPO in natural tourism contexts. Their findings on the environmental commitment among park visitors can provide a critical lens through which to examine how GPO and RPI are linked within eco-destinations. Eco-friendly behaviors may increase behavioral intention when tourists have a high level of psychological ownership or gain green knowledge from the green travel shared by tourist companies (Felix & Almaguer, 2019). Thus, it is suggested that.

**H3.** CGAP mediates the effect of GPO on RPI.

### 2.2.4. The mediating roles of cooperative green activities programs between a firm's green knowledge sharing and repatronage intentions

MOA framework suggests that when GKS is used as a source of ability, it provides essential knowledge and skills related to environmental sustainability and green practices (Batra & Keller, 2016; MacInnis & Jaworski, 1989). This knowledge equips participants with the



ability to understand and engage in green initiatives more effectively (Sari et al., 2021). This framework is highly relevant, as GKS allows businesses to empower customers by enhancing their “green ability,” or capacity to make informed, sustainable decisions. According to Ramkissoon et al. (2013), dimensions like place attachment and satisfaction can positively shape pro-environmental intentions. In a similar vein, by equipping customers with the necessary knowledge, GKS can elevate CGAPs’ effectiveness, as customers who understand green practices can engage more meaningfully in sustainability initiatives. For instance, GKS might include sharing knowledge about sustainable materials, energy-saving techniques, or waste-reduction methods. The enhanced ability of participants, thanks to GKS, improves the effectiveness of CGAPs. Participants who are more knowledgeable and skilled are likely to contribute more meaningfully to these programs (Zhang et al., 2021). This can manifest in more innovative ideas, higher engagement levels, and more successful implementation of green initiatives. Further supporting this concept, Ramkissoon and Mavondo (2015) highlight that satisfaction in environmental contexts often correlates with a desire for repeated engagement. This theoretical basis reinforces the importance of enabling consumers through GKS to effectively participate in CGAPs, potentially leading to a stronger likelihood of repatronage intentions. Additionally, GKS not only supports but also amplifies the impact of CGAPs. As participants become more capable in terms of their understanding and application of green practices, the overall effectiveness and impact of CGAPs are likely to increase as customers feel more capable and confident in their ability to make environmentally friendly choices (thanks to the skills and knowledge gained from GKS and CGAPs), their likelihood of repatronizing the firm increases (Hung & Petrick, 2012). This is because they associate the firm with empowering them to make positive environmental choices. Consequently, a firm’s GKS is expected to play an important role in positively improving CGAPs.

**H4.** CGAP mediates the effect of GKS on RPI.

#### 2.2.5. The moderated mediation role of green trustworthiness of social media influencer

Based on the MOA framework, encompassing Motivation, Opportunity, and Ability underscores the impactful moderating effects derived from combining ability with motivation and opportunity, thereby enhancing the explained variance in marketing outcomes. However, in the context of green marketing, the interactive effects of these practices, especially on RPI, remain underexplored, indicating a significant area for future research. Our study examines the impact of tourists’ green trust in social media influencers (GTSMI) as an opportunity factor (Batra & Keller, 2016; Han et al., 2023; MacInnis & Jaworski, 1989). In the context of green marketing, social media influencers offer significant opportunities to reduce apprehensions about environmental impacts and restore confidence in eco-friendly travel practices (Han et al., 2023). Specifically, trust in influencers who advocate for sustainability may significantly moderate the relationship between green marketing practices and RPI. When tourists perceive these influencers as credible and trustworthy, they are more likely to be influenced by their endorsements of green practices, leading to higher RPI.

According to the MOA framework, we posit that GTSMI, considered a facilitator, will impact customers’ selection of behavioral intention by decreasing or increasing the likelihood that the customer experiences CGAPs with an ability (e.g., GKS). In other words, the participation of GKS in activities (e.g., CGAPs) and highly trustworthy influencers will interactively stimulate customer loyalty intentions (Kosiba et al., 2018). Ladhari and Michaud (2015) showed that the trustworthiness of other people moderates the link between comment behavior and the intention of continued usage. Specifically, a satisfied customer cooperating closely with a trustworthy influencer in the firm’s green experience is more likely to turn to behavioral intention than an equally satisfied customer who has had very little interaction in sharing green knowledge with partners on social media (Zhang et al., 2021).

In contrast, customers with low trust in the green commitment of social media influencers are motivated to rely on GKS in a firm’s green programs as they seek to increase the intention of returning. Also, we argue that green intention created by involving CGAPs in establishing the influencer’s green trustworthiness will be more critical for customers addressing environmental issues. Thus, CGAPs with GTSMI could be the central resource for boosting RPI. Therefore, we hypothesize that (Fig. 1).

**H5.** The mediating effect of CGAP on the relationship between GKS and RPI is moderated by GTSMI.

### 3. Methodology

#### 3.1. Research design

We selected the Vietnamese tourism industry, a rapidly emerging market in the Asia-Pacific region, as our research context for five reasons: (1) the Asia-Pacific region, including Vietnam, is expected to play a significant role in global environmentally friendly trends, especially in the tourism sector, (2) the travel and hospitality sectors in Vietnam have experienced remarkable expansion and show potential for advancing long-term, green performance, (3) globalization and the enforcement of Environmental Law have introduced green behavior concerns to Vietnamese companies, particularly in tourism, (4) tourism businesses are increasingly prioritizing environmentally sustainable practices, as they can enhance customer loyalty and provide a competitive edge, (5) local governing bodies have led to increased compliance with environmental policies and regulations in Vietnam’s tourism industry (Pham et al., 2019).

Data collection involved participants who, after passing a screening question in the primary survey, consented to share their email. This consent confirmed their voluntary participation in the research on green tourism. The survey collected demographic details such as gender, age, education, and income, ensuring participants’ privacy through clear explanations of the survey’s goals and data handling procedures. An online survey was adopted to broaden the participant pool, effectively leveraging digital networks for enhanced participation. This approach is notably advantageous in scenarios where identifying target populations is challenging (Saunders et al., 2009). This study employed a dual-channel strategy to enhance cost-effectiveness and data integrity in survey distribution. Initially, social media platforms were utilized for their broad outreach and capacity to engage diverse participants rapidly (Wiśniewski et al., 2020). Additionally, a professional online sampling service was engaged to facilitate national probability sampling, which, although more costly, mitigates selection bias and ensures a systematic data collection process (Wiśniewski et al., 2020). This approach sought to balance expedited data collection, geographic heterogeneity, and data robustness.

Regarding data collection methodology, a time-lagged approach was deemed appropriate for our research model. Consequently, a two-wave data collection process, separated by a one-month interval, was implemented to mitigate common method variance bias (Podsakoff et al., 2003). This investigation focused on five critical constructs collected across the two phases: In the first phase, we gathered data on GOP, GKS, and GTSMI. In the second phase, we collected data on CGAPs and RPI. Participants in the first round provided their email addresses and answered survey questions. In the second round, these individuals were re-contacted via email to respond to additional questions and re-confirm their email addresses. One week following the initial contact, a reminder email was sent to non-respondents. The questionnaires from both phases were meticulously matched using the email IDs. Employing a time-lagged approach may raise concerns regarding respondent anonymity, as contact information (e.g., email addresses) is required for tracking participants across waves. To address this, we implemented several safeguards. First, participants were informed about the necessity of

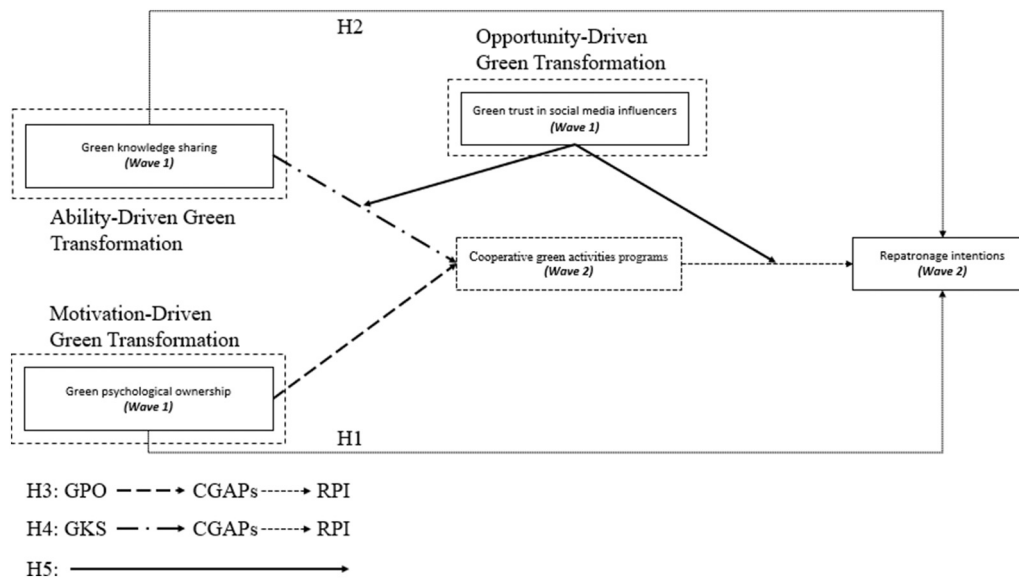


Fig. 1. Conceptual framework.

contact information for study purposes and assured of the confidentiality of their data. After linking responses across waves, all identifiers were removed from the dataset, ensuring that only anonymized data were analyzed. Additionally, access to identifiable information was restricted to the research team, with data stored on secure, access-controlled servers. These procedures were reviewed and approved by our institution’s ethics committee, confirming compliance with ethical standards for participant privacy and confidentiality. Thus, these measures adequately balance methodological rigor with participants’ privacy. After a thorough review, questionnaires with missing or invalid data were excluded from the analysis. With an effect size of 0.2,  $\alpha$  set at 0.05, and a power level of  $\beta = 0.80$ , a sample size of  $N = 395$  was determined to be adequate for detecting main and interaction effects, as calculated using GPower 3.1 (Faul et al., 2007). We successfully collected and utilized 602 pairs of valid responses for the final analysis, exceeding the required sample size and further strengthening the robustness of our findings.

In this study, the participants show that the gender split is fairly even, with males at 51.993 % (313 people) and females at 48.007 % (289 people). Age groups are varied: 24.917 % are aged 18–26 (150 people), 38.040 % between 26 and 35 (229 people), 18.272 % fall in the 36–45 bracket (110 people), 15.615 % are aged 46–55 (94 people), and those over 55 years old are the smallest group at 3.156 % (19 people). Educational levels are diverse, ranging from 6.312 % (38 people) with middle school education or less to 34.385 % (207 people) with high school or vocational qualifications, 32.558 % (196 people) with college degrees, 12.957 % (78 people) with graduate degrees, and 13.787 % (83 people) having post-graduate or higher education. Monthly incomes also show a wide range: 9.635 % earn under \$300 (58 people), a significant 50.997 % earn between \$300 and \$999 (307 people), 37.542 % make between \$1000 and \$4999 (226 people), and a small 1.827 % earn over \$5000 (11 people).

### 3.2. Measures

The initial questionnaire, utilizing a 5-point Likert-type scale (ranging from Disagree to Agree), was developed in English and then translated into Vietnamese by two bilingual, native researchers. This Vietnamese version was subsequently retranslated back into English to ensure linguistic accuracy. The validity and reliability of the questionnaire were further strengthened through pilot testing, leading to several items being reworded in the Vietnamese survey. For the construct of

GPO, we adapted three items from Peck and Shu (2009), for example, “I feel like this is my green destination” (Cronbach’s alpha [CA] = 0.884; Average Variance Extracted [AVE] = 0.812). To measure GKS, seven items from Lee (2001) were employed, such as “Tourism companies should share know-how from green experiences on social media with customers” (CA = 0.906; AVE = 0.841). GTSMI was assessed using five adapted items from Ohanian (1990), including “Social media influencers concerned with environmental protection at travel destinations are believable” (CA = 0.940; AVE = 0.806). CGAP was evaluated using one item from Wang et al. (2017) and two from Miller et al. (2015). An example question item is “I save water at travel destinations” (CA = 0.890; AVE = 0.820). Lastly, RPI was measured using four items adapted from Huang and Hsu (2009), such as “I intend to return to sustainable travel destinations in the next years” (CA = 0.876; AVE = 0.730).

### 3.3. Data analysis and data bias controlling

In this study, we employed Partial Least Squares Structural Equation Modeling (PLS-SEM) due to its effectiveness in evaluating construct reliability and validity, particularly suitable for datasets with varied sample sizes and complex structural models (Hair et al., 2021). Additionally, we utilized the PROCESS model in R, which is consistent with prior research on moderated mediation models (Hayes, 2022). The combination of PLS-SEM and PROCESS was integral for testing hypotheses, especially in mediation, moderation, and moderated mediation contexts. Two statistical techniques were applied to mitigate potential common method bias. First, Harman’s single-factor analysis indicated a minimal bias, as a single construct accounted for only 23 % of the variance, below the 50 % threshold, and five factors had eigenvalues over 1.0 (Podsakoff et al., 2003). Second, the full collinearity assessment method by Kock (2015) showed that the Variance Inflation Factors (VIF) were under the limit of 4 (O’Brien, 2007), suggesting a negligible common method bias in our research.

## 4. Findings

### 4.1. Measurement assessment

Table 2 demonstrates the acceptable reliability of our measures, with all values of CA and Composite Reliability (CR) surpassing the benchmark of 0.7, indicating robust internal consistency (Hair et al., 2021). Furthermore, the results exhibit reasonable convergent validity,

evidenced by all AVE values exceeding the minimum standard of 0.5 and factor loading values all above the threshold level of 0.7 (Hair et al., 2021). In assessing discriminant validity, Table 2 indicates that all Heterotrait-Monotrait ratio (HTMT) values range between 0.031 and 0.492, comfortably below the threshold of 0.9 (Ringle et al., 2020). This suggests a satisfactory level of discriminant validity for the constructs in this study. Therefore, based on these indicators, we can conclude that our measures exhibit an adequate level of discriminant validity (Table 1).

4.2. Validating higher order GKS construct (reflective- formative)

In this study, GKS was conceptualized as a higher-order construct (HOC), informed by three lower-order constructs (LOCs). Several steps were undertaken to validate this higher-order formative construct. The first step involved assessing collinearity within the formative model. For this, VIF values were examined, as higher VIF values indicate greater collinearity. According to Hair et al. (2021), VIF values of 5 or above suggest significant collinearity issues. In our study, however, collinearity did not present a problem, as the VIF values for the formative HOC of GKS were below the threshold of 5. Subsequently, the statistical significance and relevance of the outer weights of the formative construct were evaluated. These outer weights were found to be significant, as noted by Hair et al. (2021), further corroborating the validity of the GKS construct. Lastly, the outer loadings for each indicator of the HOC were assessed and found to be >0.50 and significant, aligning with the criteria set by Sarstedt et al. (2019). Given that all criteria were met, as detailed in Table 2, the validity of the higher-order construct of GKS was firmly established.

4.3. The mediating effect of cooperative green activities programs analysis

In the analysis of the direct and mediating effects of CGAPs, the data from Table 3 reveals intriguing insights. In Model 4 of the analysis, GPO directly impacts RPI with a coefficient of 0.171 (p < 0.01). Similarly, the analysis reveals a strong direct influence of GKS on RPI, indicated by a coefficient of 0.173 and a significance level of p < 0.01. These coefficients indicate that both GPO and GKS independently and significantly contribute to shaping RPI. Following this, the mediating path from GPO through CGAP to RPI shows a significant mediating effect,

Table 1  
Construct scales based on reflective indicators.

Constructs	Items	Convergent validity		Internal consistency reliability		Discriminant validity (HTMT)					
		Loadings	AVE	CA	CR	(1)	(2)	(3)	(4)	(5)	(6)
Green psychological ownership(GPO)	GPO1	0.895	0.812	0.884	0.928						
	GPO2	0.899									
	GPO3	0.909									
Firm's explicit green knowledge sharing(EGKS)	EGKS1	0.901	0.821	0.927	0.948	0.097					
	EGKS2	0.913									
	EGKS3	0.908									
	EGKS4	0.902									
Firm's implicit green knowledge sharing(IGKS)	IGKS1	0.908	0.841	0.906	0.941	0.181 0.427					
	IGKS2	0.931									
	IGKS3	0.913									
Green trustworthiness of social media influencers(GTSMI)	GTSMI1	0.907	0.806	0.940	0.954	0.031 0.304 0.290					
	GTSMI2	0.896									
	GTSMI3	0.904									
	GTSMI4	0.899									
	GTSMI5	0.882									
Cooperative green activities program(CGAP)	CGAP1	0.910	0.820	0.890	0.932	0.365 0.167 0.199 0.071					
	CGAP2	0.903									
	CGAP3	0.902									
Revisiting behavioral intention (RPI)	RPI1	0.861	0.730	0.876	0.915	0.353 0.201 0.284 0.351 0.492					
	RPI2	0.839									
	RPI3	0.871									
	RPI4	0.845									

Table 2  
Higher order construct (HOC) validity of GKS.

HOC	LOC	VIF	Outer weights	T statistics	p value	Out loading
GKS	EGKS	1.182	0.404	2.307	0.011*	0.706
	IGKS	1.185	0.770	5.795	0.000***	0.928

with a coefficient of 0.104 (p < 0.001). This suggests that the impact of GPO on RPI is partially mediated through CGAPs. Similarly, the path from GKS through CGAP to RPI, having a coefficient of 0.052 (p < 0.01), also indicates a significant mediating role of CGAPs. These findings highlight that while GKS and GPO have direct effects on RPI, their impacts are also channeled and potentially enhanced through CGAPs. Thus, hypotheses of direct effects (H1, H2) and mediating effects (H3, H4) were supported.

4.4. Moderated mediation effect of tourists' green trust in social media influencers analysis

The moderated mediation effects presented in Table 4 showcase several significant findings. The mediated paths (GPO → CGAP → RPI and GKS → CGAP → RPI) were significant, with coefficients indicating a moderate positive effect (around 0.10 and 0.05, respectively, p < 0.01 or better). The GTSMI × CGAP → RPI path, which examines the interaction between GTSMI and CGAPs on RPI, showed a significant positive effect in Models 6 and 7. The coefficients were identical in both models, at 0.170, with a p-value of <0.001. This indicates a substantial and statistically significant moderating effect of GTSMI on the relationship between CGAP and RPI. Interestingly, GTSMI as a moderator influenced the mediating pathway (GKS-CGAP-RPI), as indicated by the positive and significant index of moderated mediation (0.034, 95 % CI [0.012; 0.061]), suggesting GTSMI moderate the mediated relationship between GKS, and RPI through CGAP. Moreover, Fig. 2 provides a nuanced view of the moderated mediation effect, revealing how the relationships between GKS and RPI via CGAP change across different levels of GTSMI. The segmented lines allow for a more detailed analysis of the impact of GTSMI on these relationships. Thus, the hypothesis of moderated mediation effects (H5) was supported.

**Table 3**  
Direct effect and mediating effect.

Paths	Model 1	Model 2	Model 3	Model 4	Conclusion
	Coff.(SE)	Coff.(SE)	Coff.(SE)	Coff.(SE)	
Gender → RPI	-0.037(0.068)	-0.006(0.073)	-0.025(0.073)	-0.009(0.072)	
Age → RPI	0.014(0.033)	0.015(0.037)	-0.007(0.036)	0.003(0.036)	
Education → RPI	-0.028(0.035)	0.003(0.037)	0.006(0.037)	0.007(0.036)	
Income → RPI	0.011(0.038)	0.005(0.039)	0.004(0.040)	0.002(0.039)	
GPO → CGAP		0.324(0.042)***		0.299(0.042)***	
H1: GPO → RPI	0.179(0.051)***	0.190(0.053)***		0.171(0.054)**	Supported
GKS → CGAP			0.199(0.049)***	0.151(0.048)**	
H2: GKS → RPI	0.085(0.046)*		0.191(0.046)***	0.173(0.046)***	Supported
CGAP → RPI	0.343(0.050)***	0.374(0.050)***	0.399(0.045)***	0.346(0.050)***	
H3: GPO → CGAP → RPI		0.121(0.023)***		0.104(0.021)***	Supported
H4: GKS → CGAP → RPI			0.080(0.022)***	0.052(0.019)**	Supported
R <sup>2</sup> of CGAP		0.050	0.040	0.127	
R <sup>2</sup> of RPI	0.316	0.222	0.225	0.250	

\* p < 0.05.  
\*\* p < 0.01.  
\*\*\* p < 0.001.

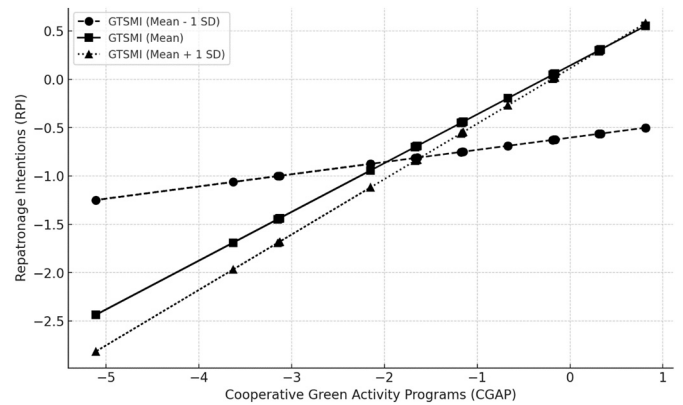
**Table 4**  
Moderated mediation effect.

Paths	Model 5	Model 6	Model 7	Conclusion
	Coff.(SE)	Coff.(SE)	Coff.(SE)	
Gender → RPI	-0.009 (0.072)	-0.024(0.067)	-0.024 (0.067)	
Age → RPI	0.003 (0.036)	0.001(0.032)	0.001 (0.032)	
Education → RPI	0.007 (0.036)	-0.033(0.035)	-0.033 (0.035)	
Income → RPI	0.002 (0.039)	0.009(0.036)	0.009 (0.036)	
GPO → CGAP	0.301 (0.042)***	0.299 (0.042)***	0.300 (0.042)***	
GPO → RPI	0.171 (0.054)**	0.174 (0.052)***	0.174 (0.052)***	
GKS → CGAP	0.154 (0.051)**	0.151(0.048)**	0.160 (0.052)**	
GKS → RPI	0.173 (0.046)***	0.077(0.046)*	0.077 (0.046)*	
CGAP → RPI	0.346 (0.050)***	0.367 (0.050)***	0.367 (0.051)***	
GPO → CGAP → RPI	0.104 (0.021)***	0.110 (0.022)***	0.110 (0.022)***	
GKS → CGAP → RPI	0.053 (0.019)**	0.055(0.020)**	0.059 (0.021)**	
GTSMI × GKS → CGAP	0.062 (0.044)		0.066 (0.038)*	
GTSMI × CGAP → RPI		0.170 (0.048)***	0.170 (0.048)***	
R <sup>2</sup> of CGAP	0.132	0.127	0.132	
R <sup>2</sup> of RPI	0.250	0.343	0.343	
Index of moderated mediation	Index(BootSE)[Boot95%CI]			
H5: GTSMI moderates (GKS → CGAP → RPI)		0.034(0.013) [0.012;0.061]		Supported

\*\*\* p < 0.001.  
\*\* p < 0.01.  
\* p < 0.05.

**5. Discussion**

This research investigates how GOP and GKS influence RPI in the tourism sector. Our study first establishes a direct positive relationship between GOP, GKS, and RPI (hypothesis H1, H2), addressing a gap in the literature that has primarily focused on general intentions rather than on specific factors like RPI in tourism. The findings align with previous



**Fig. 2.** Moderated mediation effect of GTSMI for the relationship between GKS and RPI via CGAP.

studies on the positive link between ownership and RPI (Berry & Douglas Hoffman, 2023), as well as the positive link between travel ability and destination loyalty (Liu et al., 2023). However, this study offers a fresh perspective by integrating emotional and knowledge-based elements of the green marketing within the digital environment. Subsequently, the study highlights CGAPs mediating the role between GOP/GKS and RPI (hypothesis H3, H4). It reveals how CGAPs, through collaborative, sustainable tourism efforts, enhance GOP and GKS’s impact on RPI. This aligns with Wang et al.’s (2020) and Gilal et al.’s (2022) studies on mediation effects, expanding our understanding of the MOA framework’s motivational and ability factors in fostering repatriation intentions, as discussed by Huang et al. (2021) and Majeed and Kim (2022). Additionally, this parallels Schmitt et al.’s (2018) findings on green behavior’s mediation role between ecological threat perception and life satisfaction, introducing a new perspective on the practical implications of cooperative green efforts in marketing. Lastly, the study unveils tourists’ GTSMI as a moderating factor in the GOP, GKS, and CGAP relationship (hypothesis H5). It demonstrates how GTSMI influences the effectiveness of GOP and GKS on RPI via CGAPs, echoing Han et al.’s (2023) findings on the growing influence of digital influencers in shaping green marketing perceptions. The study suggests further investigation into digital platforms and influencer engagement in augmenting green marketing strategies and their impact on RPI.

**5.1. Theoretical implications**

This research holds significant theoretical implications. Firstly, the



findings highlight the need for more scholarly investigation into the impacts of additional emotional and cognitive green marketing practices on intentions/behaviors such as RPI. Limited research examines the interplay of emotional and cognitive green marketing practices in influencing tourist repatronage intentions, specifically sustainable tourism (Huang et al., 2021; Majeed & Kim, 2022). As exemplified in this study, factors like GPO and GKS can have notable effects on encouraging repatronage intentions. This study expands understanding by revealing how practices fostering ownership and knowledge sharing interrelate to encourage enduring relations, yielding a fresh perspective to loyalty research. Specifically, the findings provide significant contributions to the theoretical understanding of sustainable tourism marketing. GPO was shown to have a direct positive effect on RPI, emphasizing the motivational role of emotional attachment in driving sustainable behaviors. This aligns with psychological ownership theory and validates its application in eco-tourism contexts, highlighting how fostering a sense of ownership over destinations can enhance loyalty. Furthermore, the significant relationship between GKS and RPI underscores the critical role of ability-enhancing mechanisms in influencing sustainable behavior, extending the theoretical understanding of how actionable knowledge empowers tourists to make eco-conscious decisions.

Secondly, based on the MOA framework, the results indicate the value of exploring alternative mediating mechanisms linking green marketing practices to tourist behaviors. While prior efforts have been relatively silent about CGAP between customers and companies that transmit the effects of practices like GPO and GKS onto outcomes like RPI (Gilal et al., 2022; Schmitt et al., 2018; Vesely et al., 2020; Wang et al., 2020; Xu et al., 2023), the current study reveals the mediating role of CGAP. Particularly worthy of attention is CGAP, which allows tourists to act on their green motivations and knowledge tangibly. Specifically, this study provides empirical support for CGAPs as an effective bridge between motivational (GPO) and knowledge-based (GKS) aspects and RPI. By highlighting CGAPs as a structured mechanism that connects GPO and GKS to sustainable behavioral outcomes, our research offers a new perspective within the MOA framework, suggesting that collaborative activities can effectively transform individual motivations and abilities into concrete pro-environmental intentions. By highlighting CGAPs as a structured mechanism that connects GPO and GKS to sustainable behavioral outcomes, our research offers a new perspective within the MOA framework, suggesting that collaborative activities can effectively transform individual motivations and abilities into concrete pro-environmental intentions.

Finally, the MOA framework offers limited integration of social media credibility in consumer responses to green messaging (Vesely et al., 2020; Zhang et al., 2021). Moreover, while frameworks on CGAP underscore motivations and abilities, the interactive effects of these drivers on tourist intentions remain underexplored (Ladhari & Michaud, 2015). Our findings offer new insights into the moderating role of GTSMI in the relationship between GPO, GKS, and RPI, thereby expanding our understanding of how digital influencers shape sustainable consumer behavior. In real-world terms, GTSMI acts as a catalyst that strengthens the emotional and knowledge-based ties between consumers and eco-friendly destinations, illustrating how digital influencers can transform passive awareness into active loyalty within the tourism sector (Masuda et al., 2022). This research reveals that GTSMI enhances the likelihood of repeat visits by encouraging tourists to internalize sustainable values promoted by influencers—a significant contribution to the MOA framework, which has rarely examined influencer trust as an “opportunity” moderator. By doing so, our study highlights the potential of GTSMI as a key factor that translates sustainable marketing efforts into consumer commitment, bridging the gap between green psychological ownership and actionable repatronage intentions (MacInnis & Jaworski, 1989). This broadens the theoretical application of the MOA framework to modern, digitally driven contexts, offering a more comprehensive understanding of how motivation,

ability, and opportunity interact to shape sustainable tourism behaviors.

## 5.2. Practical implications

This research on green marketing practices on social media has several practical implications for tourism companies seeking to encourage tourist repatronage intentions. Firstly, tourism organizations should nurture tourist ownership through emotional branding, disseminate actionable eco-knowledge via digital channels, and facilitate cooperative sustainability experiences. This three-pronged approach based on the MOA framework can organically enhance repatronage intentions among environmentally-conscious travelers (Leung & Bai, 2013). Specifically, the findings on GPO suggest that creating personalized, eco-friendly experiences that foster emotional connections can encourage revisitation and long-term engagement with destinations. Strategies like showcasing unique eco-experiences, utilizing influencer testimonials, and emphasizing the personal impacts of eco-initiatives can help build green psychological ownership. Moreover, strategies such as promoting symbolic ownership through participation in conservation activities can deepen tourists' attachment to destinations. Strengthening this emotional bond between tourists and destinations can directly boost revisitation likelihood. Additionally, the positive impact of GKS on RPI highlights the importance of incorporating educational components into green marketing strategies. Tourism businesses should actively share green knowledge across digital platforms to equip tourists with sustainability skills and demonstrate commitment to eco-practices. For instance, eco-lodges could produce vlogs on water conservation techniques or sustainable seafood consumption. These knowledge materials make tourists more capable partners in cooperative green programs. Furthermore, such knowledge-sharing signals an authentic dedication to environmental issues.

Secondly, our findings have important implications for tourism practitioners and policymakers. The mediating role of CGAPs suggests that collaborative initiatives, such as community clean-ups or reforestation projects, are effective in converting tourists' motivations and knowledge into practical action. Our findings imply that CGAPs provide a tangible platform for both knowledge transfer and community-building, addressing the gap between tourists' abstract environmental values and actionable behavior. By involving tourists in hands-on, eco-friendly activities, tourism providers can facilitate meaningful learning experiences that encourage tourists to adopt and practice sustainable behaviors. This not only enhances the appeal of eco-tourism destinations but also builds trust and reduces skepticism towards green claims, as tourists actively participate in environmental preservation (Font et al., 2021). Additionally, this study suggests that fostering CGAPs is a practical strategy for increasing tourists' RPI. By actively involving tourists in structured green initiatives, tourism providers can cultivate a deeper sense of connection and responsibility towards the destination, which enhances their loyalty and likelihood to revisit. This highlights CGAPs as a valuable tool for tourism managers seeking to build long-term relationships with environmentally-conscious tourists, reinforcing customer loyalty through engagement in sustainability efforts. Thus, our research provides actionable insights for designing tourism programs that balance motivation and knowledge sharing to enhance loyalty and promote sustainable practices. For example, tourism operators should design collaborative green initiatives that allow tourists to contribute tangibly based on their motivations and abilities. Programs like reef restoration activities, rainforest replanting projects, and community litter clean-ups can provide meaningful involvement. As tourists participate hands-on, their sense of belonging and desire to repatronage strengthens.

Thirdly, the influence of GTSMI underscores the growing importance of digital influencers in green marketing. Partnering with credible and sustainability-focused influencers can enhance the effectiveness of green knowledge-sharing initiatives and build trust among tourists. This finding encourages tourism businesses to align influencer marketing

campaigns with their sustainability objectives, ensuring authentic and impactful messaging that resonates with environmentally conscious travelers (Zhang et al., 2021). Specifically, the finding translates into actionable strategies for tourism businesses by demonstrating how partnerships with trustworthy influencers can reinforce consumers' attachment to green values and practices. In a real-world context, tourism firms can leverage GTSMI to deepen the impact of GOP and GKS on tourists' intentions to revisit eco-friendly destinations. This approach addresses growing consumer skepticism towards green claims by fostering a sense of authenticity and trust through credible influencers who share relatable environmental values. Our study reveals that influencer partnerships are not merely promotional tools but can become conduits for lasting behavioral change, as they help consumers integrate green practices into their identity, resulting in stronger repatronage intentions (Nekmahmud et al., 2022). Therefore, tourism businesses can utilize GTSMI to build authentic and sustained connections with environmentally conscious travelers, thereby aligning marketing strategies with both consumer expectations and global sustainability efforts (Font et al., 2021).

### 5.3. Limitations and future studies

This study has some limitations that provide avenues for future inquiry. Firstly, the data was collected solely from Vietnam, an emerging Asian market. Further investigation should validate the conceptual framework and findings in other geographical contexts and cultures. Testing the model in more individualistic Western societies compared to this collectivist setting can yield exciting insights. Additionally, the research design utilized self-reported survey measures, where participants self-selected by sharing their email after a screening question, which has inherent subjectivity and biases (Podsakoff et al., 2003). This approach does not give all individuals in the target population an equal chance of selection, potentially introducing selection bias. As a result, the findings may not fully represent the broader population, limiting their generalizability. Future research should consider probability sampling to enhance the representativeness and applicability of the results. Moreover, future efforts could triangulate perceptual data with objective indicators of repatronage, like bookings data (Berry & Douglas Hoffman, 2023). They could also use experimental approaches to

examine the causality between green practices and intentions. Mixed-methods techniques may reveal nuances within tourist decision-making. Nonetheless, the study offers valuable insights into factors influencing repatronage intentions in sustainable tourism.

Furthermore, the current model focuses narrowly on select digital marketing practices and types of green collaborations (Vesely et al., 2020). Scholarship should explore the impacts of alternative practices like gamification for sustainability education and diverse collaborative formats like contests for eco-innovation between tourists and companies (De Giovanni & Zaccour, 2022). Research can also compare effects across industries like aviation, cruises, and hotels. Finally, future studies could assess additional attitudinal mediators like environmental self-identity and behavioral moderators like monetary donations to conservation causes (Hung & Petrick, 2012). Identifying such variables can help refine theoretical green marketing models in tourism.

### CRedit authorship contribution statement

**Tho Huu-Hoang Nguyen:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Giang Thuy Nguyen:** Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Zuzana Tučková:** Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Sinh Duc Hoang:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Appendix A

**Table 5**  
Constructs and items.

Constructs/items	Reference
<b>Green psychological ownership</b> I feel like this is my green destination. I feel a very high degree of personal ownership of the green destination. I feel like I own this green destination.	(Peck & Shu, 2009)
<b>Firms' green knowledge sharing: Explicit green knowledge sharing</b> Tourism companies share environment proposals and reports on social media with customers. Tourism companies share green manuals, models, and methodologies on social media with customers. Tourism companies share each other's success and failure green stories on social media with customers. Tourism companies share green knowledge obtained from newspapers, magazines, journals, and television on social media with customers.	Lee (2001)
<b>Firms' green knowledge sharing: Implicit green knowledge sharing</b> Tourism companies share know-how from green experience on social media with customers. Tourism companies share know-where and know-whom with customers on social media. Tourism companies share green expertise obtained from green education and green training on social media with customers.	
<b>Green trust in social media influencers</b> Social media influencers, who concerns environmental protection at travel destinations, is trustworthy. Social media influencers, who concerns environmental protection at travel destinations, is reliable. Social media influencers, who concerns environmental protection at travel destinations, is honest. Social media influencers, who concerns environmental protection at travel destinations, is dependable. Social media influencers, who concerns environmental protection at travel destinations, is believable.	Ohanian (1990)

(continued on next page)

Table 5 (continued)

Constructs/items	Reference
<b>Cooperative green activities programs</b>	Miller et al. (2015)
I save water at travel destinations.	Wang et al. (2017)
I encourage (or support) other to be environmentally friendly at travel destinations.	
I save electricity during my stay at this hotel at travel destinations.	
<b>Repatronage intention</b>	Huang and Hsu (2009)
You intend to return green travel destinations in the next years	
You plan to return green travel destinations in the next years	
You desire to visit green travel destinations in the next years	
You probably will return green travel destinations in the next years	

## Data availability

Data will be made available on request.

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