

The Greener, the Better: Probing Green Innovation in Pilgrimage Tourism

Highlights:

- Examine how pilgrimage tourism leverages green innovation.
- Explore factors that hinder pilgrimage tourism in promoting green innovation.
- Provides a comprehensive understanding of the pilgrims' and religious organizations' abilities to initiate and implement green innovations.
- Highlights the potential of pilgrimage tourism to ensure SDGs (Sustainable Development Goals) in the less-developed world like Africa.

Abstract

This study examines the importance of pilgrimage tourism to green innovation and assesses the factors that influence pilgrimage tourism efforts and implementation to ensure green innovation. The results of semi-structured in-depth interviews with religious figures and pilgrims, supplemented by secondary sources, show that linking pilgrimage capabilities and religious organizations is critical to sustaining green innovation rather than focusing on the dispersed state of consciousness. The findings underscore the importance of a practice-based teaching approach and the necessity of spiritual adherence to green innovative behavior. It is argued that the intersection between pilgrims and religious organizations supports the achievement of the United Nations Sustainable Development Goals (UNSDG) 2030 in less developed nations such as Africa. The study is helpful for destination management organizations, policymakers, and tourism stakeholders to promote green innovation through pilgrimage tourism.

Keywords: Green Innovation; Pilgrimage; Green Innovative Behavior; Tourism; SDG; Africa

Introduction

The Earth's climate remains in crisis due to global warming and climate change. Weather fluctuations, heat waves, floods, tsunamis, and hurricanes destroy tourist activities in many popular destinations. To be sure, the tourism industry is particularly vulnerable to climate crises that lead to downturns, unstable tourism flows, and the failure of tourism businesses. As with other destinations, the consequences of climate crises are not uncommon for religious sites. For example, India's most important sacred sites suffer from violations of environmental norms and the resulting pollution. In addition, environmental scientists and government officials have reported that the historical site of Buddha's birthplace is in poor condition due to pollution (Navin, 2017). In light of threats, scientists, policymakers, economists, and activists, guided by the United Nation sustainability agenda (UN, 2018), are stressing how to mitigate climate crises by promoting green innovation. Studies have underscored the need to initiate and implement green innovations in and around sacred sites (Rähme, 2021). According to Schumpeter's theory of innovation, green innovation can be viewed as a mechanism to promote environmental management through energy conservation, efficiency, and resource management (Castellacci & Lie, 2017; Takalo et al., 2021). In addition, green innovation is used to respond to environmental risks such as carbon emissions, pollution, and resource depletion. The present study defines green innovation in pilgrimage tourism can be understood as initiating and implementing green innovation through energy saving, minimizing pollution, resource efficiency, and advocating social and environmental responsibility.

Drawing on LeSueur's (2018) pilgrimage framework and organizational capability theory, this study extends the debate on the importance of pilgrimage tourism for green innovation. The current study assesses the factors influencing green innovation from the perspectives of pilgrims (i.e., demand) and religious organizations (i.e., supply). The research questions of this study are as follows: "How can pilgrimage tourism be leveraged to promote green innovation?" and "What factors encourage or inhibit pilgrimage tourism from promoting

green innovative behavior?” The objectives of this study are twofold: 1) to assess the potential of pilgrimage tourism for green innovation and 2) to explore the factors that drive pilgrimage tourism toward green innovation. This study contributes to theory and practice in several ways. Theoretically, it contributes to the debate on the relevance and mechanisms of implementing green innovation in pilgrimage tourism. Given the limited academic discourse on green innovation in pilgrimage tourism, the study demonstrates the necessity of pilgrimage tourism, the lived scenario of pilgrims and religious organizations towards green innovation. The results of this study explore the capabilities of pilgrims and religious organizations to engage in green innovation and examine factors that hinder pilgrimage tourism in promoting green innovative behavior. The findings contribute to the United Nations Sustainable Development Goals (UNSDG), which address sustainable consumption, environmental protection, and economic development in less developed countries (UN, 2018). In addition, understanding visitors’ motives for environmentally friendly behavior is critical because people’s future lives depend on the sustainability of our planet. Therefore, the practical implications of this study are helpful for destination management organizations, policymakers, and concerned stakeholders by focusing their interest on the prospect that pilgrimage tourism can contribute to green innovation.

The remainder of the article is structured as follows: The next section provides a literature review and conceptual background on pilgrimage tourism and green innovation. It then explains the methods and methodology of the study and presents the data collection process, procedures, and analysis. The subsequent section presents the findings on the potential and barriers of pilgrimage tourism in promoting green innovation and discusses them with previous studies and theoretical arguments. Finally, the conclusion summarizes the study’s main findings, explains the implications for theory and practice, and suggests future research directions.

Literature Review

Religion and the Environment

Religion is considered one of the most important motivating factors for tourism development. Religious tourism, or “tourism to sites of current and/or previous religious significance” (Hughes et al., 2013, p. 210), is one of the fastest-growing tourism sectors in terms of tourist flows and revenue (Olsen & Esplin, 2020; Yu et al., 2021). In addition, several studies argue that religion plays a significant role in the environment because it conveys meanings, values, actions, motivations, and strategies that positively support sustainable development (Rahmawati et al., 2019; Trono, 2021). In the 1980s, for example, scholars began to examine the relationship between religion and environmental sustainability. In particular, sociologists of religion raised the debate about the rules and regulations of religious organizations and the commitment of adherents to ecological concerns. Subsequently, contemporary religious literature has emphasized the position of religious tourism as a spiritually motivated activity and a mechanism for promoting education, culture, and social and environmental concerns (Buzinde, 2020).

Studies have argued that not only individual factors influence a person’s actions and decisions; social context or structure, including institutional factors, play a vital role in determining human behavior (Di Pietro & Masciarelli, 2022; Gutsche, 2019). Among these social-related factors, religion is a critical social reinforcement mechanism that shapes an individual’s values, norms, and behavior (Friske et al., 2022; Zagonari, 2021). Therefore, studies have suggested investigating the role of religion and the collaborative approach between tourists and faith-based institutions to substantiate the link between humans and the environment (Rahmawati et al., 2019; Singh et al., 2021). In addition, scholars have investigated the influence of religion on different segments of tourist behavior, such as hedonism (Lochrie et al., 2019), place attachment and emotional experience (Patwardhan et al., 2020), and authenticity (Hung Lee, Jan, & Lin, 2021). For example, Patwardhan et al. (2020)

examine tourist's attachment and loyalty to religious destinations. They found that tourists' religious affiliation determines their emotional experience and commitment toward a sacred destination. Drawing on the concept of hedonism, Lochrie et al. (2019) explore the relationship between the sense of play and hedonism among religious tourists. The findings indicated that pilgrimage environment supports communal experiences of pondering faith and resolving problems. Hung Lee et al. (2021) argued that the authentic religious tourism experience encourages proper tourism development in Taiwan.

Literature investigated the relationship between religion and environmental sustainability. Religion is a powerful force for promoting sustainability and a green environment through the wise use of resources driven by meaning, values, actions, and motivations (Jenkins et al., 2018; Minton et al., 2022; Shinde, 2021; Zagonari, 2021). Some argued that religious tourism had encouraged environmental friendliness and eco-development schemes. For example, Koehrsen (2015) argued that religion could support energy saving and transform the dissemination of ecological values and conscious attitudes, and intermediation in the public sphere. Felix et al. (2018) found that religion is positively associated with environmental concerns. Regarding the relationship between religion and green innovation, Liao et al. (2019) found that managers' religious beliefs encourage green innovative behaviors among subordinates in the context of private enterprise. These studies indicate that religion could guide and regulate a person's environmental awareness and compliance with environmental rules and regulations. Hence, this study examines the importance of religious tourism, such as pilgrimage tourism, for green innovation.

Pilgrimages and Green Innovation

Pilgrimage is associated with a journey to sacred sites for spiritual purposes. As a subset of religious tourism, pilgrimage is among the oldest forms of tourism motivation. Ron and Timothy (2018) note that the evolution of tourism practice cannot be understood without considering religious activities such as pilgrimage. The concept of pilgrimage tourism is

significant in multiple ways and has implications for education, social and environmental values, and cultural and developmental values (McIntosh et al., 2018; Singh et al., 2021). Pilgrimage is known for its unique practices and sense of responsibility compared to other tourism segments (LeSueur, 2018; Lin & Hsieh, 2022). According to LeSueur, pilgrims differ from other tourists based on their perceived love of hardship and immersion in meanings and destinations. In addition, he argues that pilgrims, unlike other tourists, have developed a mindset from a faith ethos or culture that allows them to be more aware of their responsibilities to the surrounding environment. More recently, the term “pilgrimage” has been applied to a broader range of human experiences, including religious and secular travel infused with purpose and meaning. Correspondingly, pilgrimages have increased exponentially. According to McIntosh et al. (2018), the number of pilgrims reaches more than 300 million to various religious sites in countries such as India, Japan, Saudi Arabia, Israel, Iraq, and Spain. Moreover, pilgrimage tourism accounted for one-third of all international tourism recorded before the COVID-19 pandemic.

The claim that pilgrimage tourism contributes to green innovation is essential to reduce the climate crisis, promoting environmental conservation, and encouraging practitioners to comply with environmental rules and codes of conduct. Pilgrimage embraces green innovation. Dedication and commitment to natural resource conservation and management lead to green innovative behavior by pilgrims. Similarly, green innovative behavior requires demonstrating conscious and proactive behavior in natural resource management and implementing practical learning about resource conservation (Arici & Uysal, 2022). Green innovation, which lies at the philosophical roots of sustainable development, refers to policies, behavior, or actions that can minimize adverse impacts on the natural environment (Arici & Uysal, 2022; Oduro et al., 2021). Scholars have noticed the conceptual difference between green innovation and the notions of sustainability innovation. Sustainability innovation covers three dimensions of

sustainability, such economic, environmental, and social dimensions (Jaaron & Backhouse, 2019; Sinthupundaja et al., 2019), whereas green innovation focuses on minimizing environmental damage, pollution, and risks during production and operation (Cocca & Ganz, 2015; Lin et al., 2014). Green innovation in the tourism context aims to pursue environmentally friendly tourism services or processes to reduce pollution and environmental destruction (Gürlek & Tuna, 2018; Wang et al., 2020). Most tourism destinations are situated near natural resources, and tourist flow to such destinations may exacerbate pollution and waste disposal and damage biodiversity resources in the regions. Hence, these environmental challenges push the tourism business to consider green innovative behavior and practices (Ahmed et al., 2021; Koç & Yazıcıoğlu, 2020).

Although there is an urgent need to explore tourism's contribution to the environment, less research has been conducted on green innovation in tourism, particularly in pilgrimage tourism. Existing studies on religious and pilgrimage tourism have examined its environmental impact from the perspective of a single stakeholder, either the tourist (i.e., the demand side) or religious organizations (i.e., the supply side; Kim et al., 2020; Shin & Preston, 2021; Trono, 2021). Demand-side studies, for example, focus on pilgrims' perceptions and attitudes about social and environmental responsibility. Supply-side research examines the role and responsibility of religious organizations in improving environmental management and conservation. Generally, compared to the manufacturing industry, green innovation research has a short history in the tourism literature (Gürlek & Koseoglu, 2021). In addition, the extant literature on green innovation in tourism focuses on commercial-based tourism enterprises (Gürlek & Koseoglu, 2021; Arici & Uysal, 2022). There is also limited empirical information on the role of pilgrimage tourism in fostering green innovation in less-developed nations such as Africa (Moufahim & Lichrou, 2019; Senbeto et al., 2021).

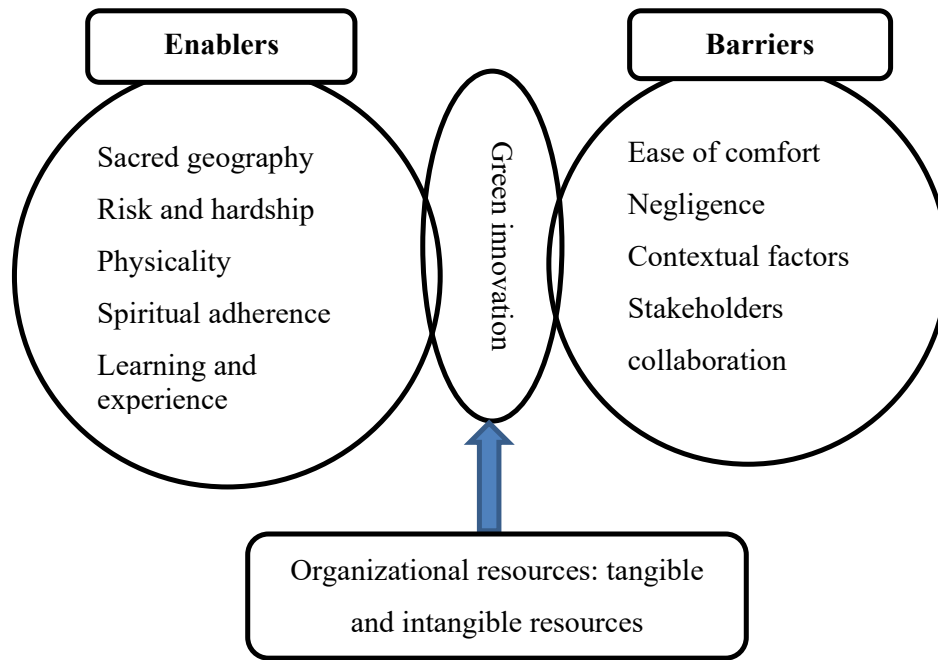


Figure 1 Pilgrimage features

To fill the above research gaps, this study examines the role of pilgrimage tourism in green innovation and factors that encourage or inhibit green innovative behavior of the pilgrims. Based on LeSueur’s pilgrimage framework and organizational capability theory, Figure 1 shows the key characteristics of a pilgrimage that might promote or inhibit pilgrims’ intention to engage in green innovative behavior. LeSueur explains the philosophical constructs of pilgrimage along with the spectrum of contemporary tourism features. He describes the characteristics of pilgrimage in a quadratic structure. The vertical and horizontal axis represents the strength of pilgrims, such as risk and hardship, meaning, learning, and immersion in local culture. The upper and lower quadrants present the types of pilgrimage tourism and characteristics of the pilgrims, such as seeking comfort, adventure, negligence, and anticipation of the unknown. Importantly, LeSueur categorizes pilgrimage as a perceived process of seeking out experiences of hardship coupled with immersion in local issues and cultures. This framework helps explore pilgrims’ capacities for spirituality, personal experience, risk-taking and challenges, sacred geography, learning, and adventure. Although the framework demonstrates the distinctive features of pilgrimage tourism, the model could not fully address

religious organization and destination standpoints. Given that pilgrimage evolved with traveling to religious sites, religious organizations played a crucial role in the behavior of the pilgrims. However, the framework is not supported by empirical insights, and it could not fully consider the combination of pilgrims and religious organizations.

Against this backdrop, Figure 1 presents that this study adopts organizational capability theory with LeSueur's pilgrimage framework to examine how pilgrims and religious organizations can be leveraged to encourage green innovation. Helfat and Peteraf (2003) define organizational capability as 'the ability of an organization to perform a coordinated set of tasks, utilizing organizational resources, for the purpose of achieving a particular end result' (p. 999). According to Barney (1991), resources are diverse and include intangible treasures such as beliefs, norms, and traditions in addition to traditional tangible resources. Organizational capability theory is seen as an extension of resource-based views that encompasses dynamic and operational resources and capabilities. Dynamic capability refers to the ability or potential of an organization to integrate, shape, and reconfigure internal and external resources or experiences to address or deal with changing or challenging situations (Ferreira et al., 2020). Operational capability is the collection of activities and routines that organizations pursue to achieve the desired objectives (Mikalef et al., 2020; Winter, 2003). Operational resources and capabilities enable organizations to perform tasks and activities consistently. Likewise, studies suggest investigating organizational resources to promote innovative behavior and sustainable business practice through attaining new information, knowledge, and skills (Gupta, 2021; Sehnem et al., 2022; Surmeier, 2020). Accordingly, this study examines the importance of pilgrimage tourism for green innovation, drawing on LeSueur's model and organizational capabilities and resources, including intangible assets such as norms and beliefs.

Methodology

Data Collection, Procedures, and Analysis

This study focuses on pilgrims and religious organizations in Ethiopia, as these are the main tourism potentials of the country. The name “Ethiopia” is frequently mentioned in the history of both Christianity and Islam (Erlich, 2010) and appears more than 42 times in the Bible. For example, in the history of Christianity, Ethiopia was known as the second Christian nation after Armenia when the Ethiopian king “Ezana” was baptized in 330 AD (Ray, 2012). Furthermore, as cited in the Holy Quran, Ethiopia played a crucial role in saving the followers of Prophet Muhammad during their exile from Mecca. Historical records show that the country has been performing pilgrimages since ancient times (Kaplan, 2018; Senbeto, 2022).

For the methodology, this study followed an interpretive-constructivist approach (Cohen & Manion, 1994; Mertens, 2005). This paradigm focuses on respondents’ perspectives of their situations and circumstances and is based on their insights from unique experiences and backgrounds. The realities of pilgrimage tourism in terms of green innovative behavior emerge from participation, social interaction, and mental constructions on different occasions. While the positivist approach is characterized by theory and hypothesis testing, constructivist researchers follow a qualitative research design (Mackenzie & Knipe, 2006). Therefore, this study employs qualitative research to examine how religious organizations and visitors promote green innovation. Data were collected from multiple sources to analyze the views of pilgrims and religious organizations. A purposive sampling technique was used based on predetermined criteria. We conducted in-depth and semi-structured interviews with 22 respondents, as shown in Table 1. Respondents included pilgrims, religious figures, administrators, and pilgrimage associations, and they were selected based on their knowledge, engagement, and experience with pilgrimage and green practices. For example, experts (in the fields of culture, tourism, and heritage) and government officials were interviewed to gather

information and opinions about factors that promote or inhibit the potential of pilgrimage tourism for green innovation.

Table 1 Background information of the respondents

Respondents code	Category	Gender	Age	Education status
I1	Pilgrims/visitors	F	31	Bachelor degree
I2	Pilgrims/visitors	M	29	Graduate diploma
I3	Pilgrims/visitors	F	36	Bachelor degree
I4	Pilgrims/visitors	F	33	Highschool diploma
I5	Pilgrims/visitors	M	55	Post-graduate
I6	Pilgrims/visitors	M	42	Bachelor degree
I7	Pilgrims/visitors	F	26	High school diploma
I8	Pilgrims/visitors	F	24	Post-graduate
I9	Pilgrims/visitors	M	35	Bachelor degree
I10	Religious figures	M	53	High school diploma
I11	Religious figures	M	45	Bachelor degree
I12	Religious figures	M	42	Post-graduate
I13	Religious figures	M	51	High school diploma
I14	Government official	F	28	Bachelor degree
I15	Government official	M	42	Post-graduate degree
I16	Government official	M	32	Post-graduate degree
I17	Expert	M	29	Bachelor degree
I18	Expert	M	34	Post-graduate degree
I19	Expert	F	30	Post-graduate degree
I20	Pilgrimage association	M	35	Bachelor degree
I21	Pilgrimage association	M	41	Bachelor degree
I22	Pilgrimage association	F	28	Bachelor degree

The respondents' educational profiles range from high school diplomas to post-graduate levels. The academic profiles of the government officials and experts were focused on tourism, natural resource management, culture, and heritage management. Consistent with the purpose of this study, we found that such educational profiles were appropriate for investigating the potential barriers to green innovations in pilgrimage tourism. Most respondents completed higher education in Ethiopia and abroad, and some completed spiritual education in Ethiopia. The research team approached government officials and experts through connections, suggestions, and professional networks. Compared to other respondents, finding an experienced pilgrim who had gained knowledge, experience, or observation in the

pilgrimage was not easy. Therefore, the research team followed the recommendations of other pilgrims and pilgrimage associations. Respondents were informed of the study's objectives in accordance with ethical considerations. Their consent was sought, together with a guarantee of anonymity and confidentiality. The interview protocol and format (see Appendix I) were derived partly from previous studies (e.g., Shinde, 2021; Terzidou et al., 2018; Young et al., 2018). Each interview session lasted, on average 30 minutes.

Questions for religious figures and pilgrimage associations focused on three main areas: how pilgrims have integrated church rules to strengthen green innovation, the potentials and challenges of green innovation, and how pilgrims and religious organizations practice green innovation. In addition, questions to pilgrims focused on how pilgrimage shapes their perceptions of the environment, spiritual precepts, contribution to green innovation, and the nature of the perceived benefits of pilgrimage to enhance their understanding of the environment and green innovation. Interviews were conducted face-to-face and via email using Amharic and English (the working language in Ethiopia). The research team conducted all interviews between September 2021 and January 2022, following the interview protocols and guidelines. Interviews conducted in Amharic were translated into English for data analysis using back-translation (Schaffer & Riordan, 2003). In addition, two bilingual professional language experts checked the translated version's consistency, semantic and linguistic equivalence. Furthermore, secondary sources were used to strengthen the research findings to support the primary data. Secondary sources were gathered from websites and social media platforms representing governmental and non-governmental organizations such as the Ethiopian Orthodox Tewahedo Church, Land of Origin, and the Ministry of Tourism and Culture. Media sources comprised news, reports, and press releases on pilgrimage tourism and green innovation from major international and national media outlets like National

Geographic.com, nature.com, Deutsche-Welle (DW.com), and theguardian.com for additional perspectives and examples.

Data analysis was performed using exploratory qualitative data (EQA) analysis techniques. EQA helps to extract relevant information from multiple sources to draw generalizations and develop meanings and understandings (Cox, 2017). In-depth semi-structured interviews and secondary sources were analyzed considering the observations, experiences, and opinions. The research team manually transcribed the recorded interviews. The transcribed data were then coded and analyzed in line with concepts and indicators of clearly defined issues. Member check was conducted to ensure verification of meaning, interpretation, and external validity (Guba & Lincoln, 1998). Secondary sources were analyzed following qualitative content analysis (QCA). QCA was performed to extract relevant ideas from the secondary sources. QCA has been explained and used in knowledge development and investigation of various study phenomena (Schreier, 2014). The above-mentioned analytical methods were adopted to extract indicators and contextual clues for meaning-making from interviews and secondary sources.

Results and Discussion

Pilgrims' Capabilities

This study elaborates critical questions about environmental friendliness and conservation mindsets as drivers of green innovative behavior. Respondents indicated that developing emotional affinity and reciprocity among stakeholders could strengthen faith principles and directions, enabling pilgrims to respond to environmental conservation and management. Respondents argued that the teaching-practice nexus could positively reinforce proper engagement and cooperation to safeguard ecological sustainability (I2, I14, I11, and I20). In addition to the institutional and spiritual structure of the church ensuring the protection of natural resources, respondents agreed that focusing on faith and devotion to spiritual values enhances their awareness, positive attitude,

and willingness to maintain the sustainability of the sacred destinations. Most respondents noted that pursuing spiritual blessings enables pilgrims to pay critical attention to the green environment. Furthermore, they mentioned that the value of the sacred sites and spiritual attachment led them to accept hardships such as walking, hiking, and climbing (according to I4, I7, and I9). In this regard, respondent I8 said:

"We are always attending to spiritual matters and withhold our comfort. We must be careful to be quiet and keep noise away. The church rule has instructed us to be careful of noise and not to disturb others."

Respondent I6 also noted, "If we are not walking, we prefer to use the public bus instead of a private automobile. Sharing utilities, food, and drinks are the main features of pilgrimage activities. Such practices promote waste management and appropriate consumption. Following the EOTC rule (Kaplan, 2018), respondents also noted that pilgrims primarily fast and limit food preferences dictated by the monastery. According to LeSueur (2018), the devotion and commitment of pilgrims could distinguish them from other tourists and enable them to be proactive and innovative in adopting and implementing green practices. In addition, pilgrims preferred staying on the premises of churches and monasteries instead of staying in commercial accommodation, encouraging resource efficiency and responsible consumption. Respondents noted that they consume locally produced food and beverages and pay attention to pollution (I1, I3, I9, and I7). The above practices support sustainable energy use, as water and energy are the primary consumption of tourists and accelerate tourism's contribution to environmental degradation. The findings support previous arguments highlighting the importance of a closer link between consumer behavior and sustainability from different perspectives, such as demographic and psychographic characteristics (e.g., Jang, 2022; Kim et al., 2022; Luo et al., 2019).

This study revealed that spiritual adherence helps care for waste, forest protection, and pollution reduction. Furthermore, we found that pilgrims' abilities are manifested through their spiritual commitment, willingness, and positive attitude toward religious rules and regulations. Although various aspects of theology and religious traditions and practices overlay environmental concerns, previous studies have found differences among religious adherents in their willingness to engage in green innovative behaviors (Arbuckle & Konisky, 2015; Rähme, 2021). Some studies (e.g., Hope & Jones, 2014) have even suggested that secular people are more concerned about human responsibility and willing to change and take action against environmental risks than religious people who rely on divine power and intervention. However, given the ethical, moral, and spiritual commitment and prescription, the current findings align with most studies that assert that pilgrims' activities have the potential to positively reinforce green innovative behavior (Gutsche, 2019; Rahmawati et al., 2019; Trono, 2021). Therefore, this study argued that pilgrimage practices could promote green innovative behavior driven by spiritual adherence and an innate drive to follow religious rules and guidelines.

Religious Organizations' Capabilities

This section presents testimony from religious organizations and evidence about their engagement and practices. Respondents and media sources indicated that religious organizations such as the Ethiopian Orthodox Church (EOTC) support green innovative behaviors. Most respondents agreed that EOTC's spiritual teachings and practices play a central role in the wise use of environmental resources and their management through strengthening policies and regulations. Respondents stated that people could easily see that churches and monasteries were becoming the only protection for biodiversity resources (according to I3, I5, I11, and I18). In line with this, respondent I19 said:

EOTC has a long history, tradition, and proven record of accomplishment in natural resource conservation and management. The church is preaching the value of natural

resources and practically displaying the benefit of conserving indigenous forests and biodiversity.

Similarly, Borunda (2019) observes, “The Ethiopian Orthodox Tewahido Church - the dominant religious group in Ethiopia, with nearly 50 million members - were almost always nestled in patches of vibrant, shady forest” (*p.* 1). The church uses various theological doctrines and ritualized approaches, including the Holy Bible and the acts and hagiographies of the saints to ascribe value to nature. As some scholars' report, the dimension of church institutions plays a role in connecting people and the environment by promoting environmentally friendly practices and ecological development programs (Albort-Morant et al., 2018; Martinez, 2019; Singh et al., 2021). The education and spiritual commitment of EOTC help to strengthen the conservation and commitment among devotees, pilgrims, and residents. For example, pilgrims cannot bring food or drink to some monasteries. Instead, they must consume food and beverages produced by the monastery.

Fasting, sacred value for the trees, and loyalty to the faith could accelerate a positive attitude to the environment, where pilgrims are dedicated to walking, willing to face hardships, and pursue appropriate consumption. The respondents mentioned that forest protection is the church's first and foremost priority. There is a belief that every tree in and around churches and monasteries represents holy saints and angels. Such sacred values raise environmental protection awareness and promote learning experiences about the importance of a green environment. For example, respondent 1 noted:

I have learned the value of a green environment, natural resources, scenery, and the aesthetic value of forests during a pilgrimage to monasteries. This practical learning mechanism paves the way to conserve the natural environment and embrace green innovation.

This study showed that the church had developed striking potential for biodiversity conservation and green innovation efforts. In addition, a report from National Geographic that corroborates the primary data on pilgrimage tourism and green innovation states, “Many of the church forests, though, remain protected by their religious stewards and the communities around them. They are tiny fragments of a lost past, and the centre of hope for conservation and future restoration” (Borunda, 2019, citing the local respondent). Sarah (2019) also supports the primary evidence of the importance of pilgrimage tourism in promoting walking and thus reducing pollution and waste. Another media source by Chandler (2019) explains the significance of pilgrimage sites for green innovation. According to the author, “they [are] vital islands of biodiversity in a region burdened by deforestation and overgrazing. They help protect water supplies and soil quality, and provide habitat for pollinators, which are important not only for the forests but also for adjacent crops.” In support of the above findings, scholars have found that religious rules and guidelines control followers' activities in and around sacred sites (Aerts et al., 2016; Klepeis et al., 2016; Sarah, 2019). From the perspective of organizational capability theory, the findings indicate that religious organizations can foster green innovative behaviors because of their potential to integrate, shape, and reconfigure internal and external resources or experiences to demonstrate green innovative behaviors and practices (Aboelmaged & Hashem, 2019; Ferreira et al., 2020). Similarly, this study also found that religious organizations' rules and procedures, core beliefs, and values promote the adoption of green innovation among pilgrims.

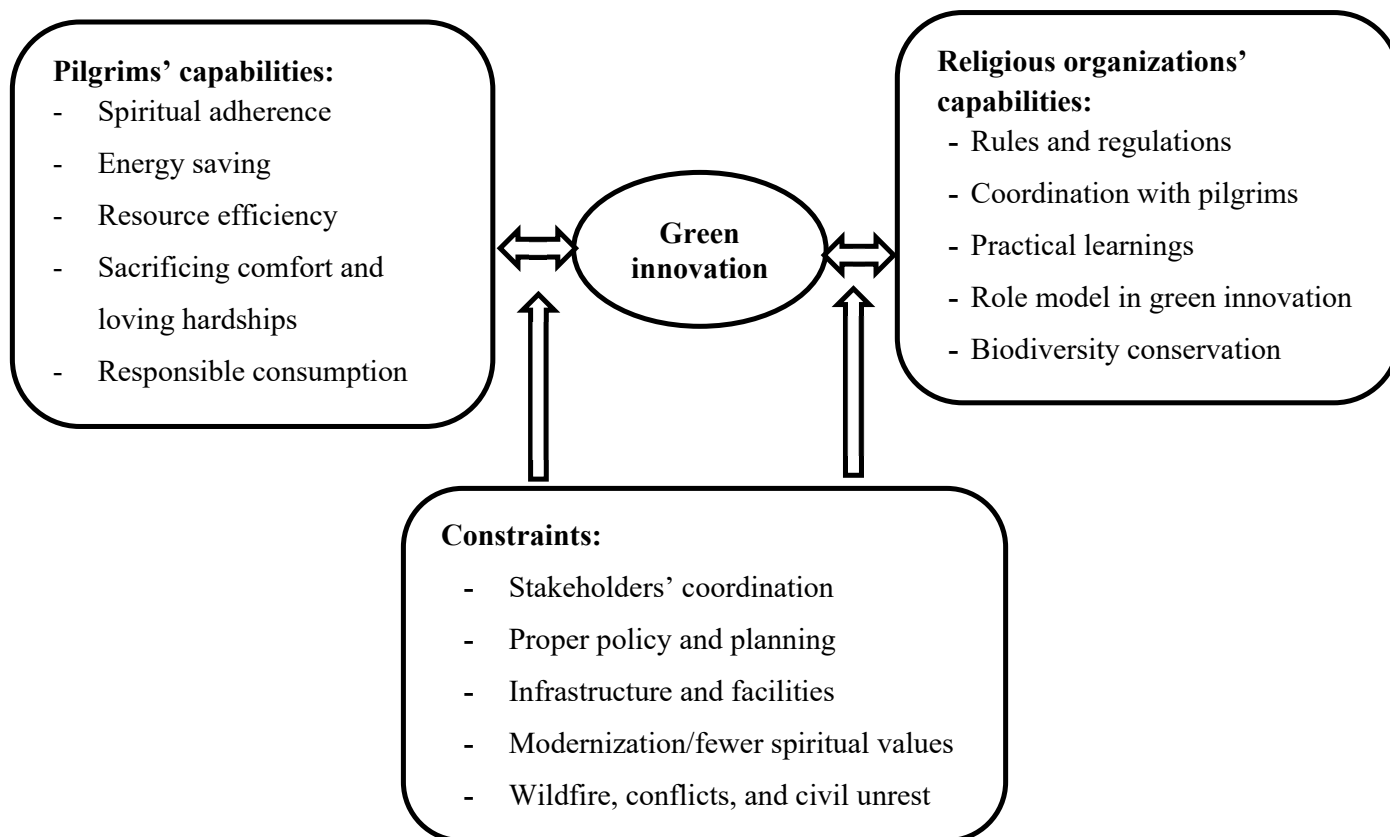


Figure 2. Green innovation in pilgrimage tourism

Constraints

While pilgrimage tourism fosters green innovation, several challenges hinder the involvement of stakeholders in promoting green innovation. Respondents indicate that challenges, including negligence, deviation from spiritual values, and seasonality, have affected pilgrimage tourism and its benefit for green innovation. Respondents noted that the need for comfort and ignorance of rules and regulations influence green innovative behavior. Interviewees pointed out that some pilgrims brought various materials, such as food and drinks, from cities, creating excessive waste around churches and monasteries (I12, I13, and I21). For example, pilgrims have recently preferred to use private vehicles and consume excessively. In addition, respondents stated that they had experienced mass pilgrimages primarily for recreation and vacation, with less emphasis on the spiritual aspect, which is detrimental to the intent of green innovative behavior. In this regard, respondent 22 said:

More recently, pilgrims have been practicing mass travel to monasteries to attend annual spiritual ceremonies; however, the quest for spirituality has been alarmingly declining. Instead, visitors focus on business, recreation, and traveling to escape from mundane city life.

Most respondents noted that modernity and commercialization are the biggest challenges hindering pilgrimage tourism support for green innovation. While pilgrims' spiritual adherence supports green innovation, in some cases, pilgrimage negatively influences the environment due to limited interaction between stakeholders (i.e., religious organizations and followers), mass tourism, and inadequate facilities and infrastructure. Secondary sources indicated that emerging school of thought and modernity had influenced pilgrims' piety and spiritual devotion (Pelletier, 2007), influencing existing green innovative behavior and natural resource conservation intent. In support of this finding, previous studies have noted the negative impacts of the mass and commercial aspects of pilgrimage tourism on the sustainability of tourist destinations (Huang & Pearce, 2019; Liro, 2021; Sołjan & Liro, 2022). Interviewees observed that despite the immense contribution of EOTCs to tourism development, adequate spiritual tourism planning, facilities and infrastructure, and low stakeholder collaboration are the main challenges associated with organizational factors. According to the respondents, macro-level factors such as collaboration among stakeholders and limited capacity to initiate and develop green innovations have hindered green innovation efforts (I15, I16, and I19). However, the government is concerned about the potential of tourism and its contribution to the macroeconomy. For example, the government and the church's role are limited to defending against threats such as rampant deforestation, arson, and land grabbing in and around churches and monasteries. In 2021, irreplaceable indigenous plants protected in churches and monasteries were threatened by deforestation and fire. Media sources also highlight that religious extremism and ethnic conflicts affect regular religious services,

including pilgrimage practices. Such conflicts indirectly affect the contribution of pilgrimage tourism to developing green innovations (Borkena, 2022; Kiruga, 2019). Wildfires, land grabbing, and deforestation are other major disruptive factors for the ongoing efforts of pilgrims and religious organizations to implement green innovations. According to a media release from Inverse (2019),

Within these forests, a problem is rooted: The church forests need more land to grow, but the church's people need that land too. As the area around the forest becomes converted to economically beneficial agricultural and pastureland, the pressures on the forests have increased.

The current findings suggest that while organizations can leverage tangible and intangible resources (Argyres, 2021; Najib et al., 2022) to enhance performance, factors such as changing customer demand, planning and policy, and resource constraints can affect the performance and productivity of an organization. The results indicate that tourism development and management, facilities and infrastructure, and collaboration among stakeholders are the main factors hindering pilgrimage tourism's potential for green innovation.

Conclusion and Implications

Theoretical Implications

The study's theoretical implications are fourfold. First, the current study expands the knowledge and scope of pilgrimage tourism toward green innovative behavior and goes beyond the conventional understanding of tourism for economic reasons. In a broader sense, the study sheds light on the promising role of pilgrimage tourism in green innovation at the societal and community levels. The research found that pilgrims exhibit green innovative behavior by following spiritual principles, adhering to rules and regulations, and promoting responsible consumption. Following LeSueur's pilgrimage framework, the results suggest that sacred geography, spirituality, and facing hardships are vital drivers of green innovation in pilgrimage

tourism. Previous research on green innovation has focused mainly on the context of commercial enterprises (Oduro et al., 2021; Takalo et al., 2021). Tourism studies have also discussed this topic, focusing on green leadership and green creativity (Bhutto et al., 2021), strategic orientation, and green intellectual capital (Wang, 2022). Therefore, the findings of this study broaden the potential of other tourism segments, such as pilgrimage tourism, to be used to promote green innovation.

Second, this study offers empirical insights that help broaden the scope of LeSueur's pilgrimage framework and organizational capability theory. The findings add empirical insights and extend the framework by exploring the features and benefits of pilgrimage to green innovation. Also, the present study expands the consideration of internal and external challenges that influence the relationship between pilgrimage tourism and green innovation. The findings explore the influence of resource limitations, changing pilgrimage patterns, and stakeholder collaboration in promoting green innovation in the context of pilgrimage tourism. These results extend LeSueur's framework to include constraints that impede green innovative behavior. In addition, the findings advance the applicability of organizational capability theory to non-commercial organizations such as religious institutions. Accordingly, the results demonstrate that resource limitations, deviance, and challenges in stakeholder collaboration can limit the capacity of pilgrims and religious organizations to ensure green innovation. Third, the findings comprehensively understand the combined features of pilgrims' and religious organizations' abilities to initiate and implement green innovations. This is in response to the limited availability of research addressing the combination of demand (i.e., customers) and suppliers (i.e., tourism organizations) to promote green innovation and environmental sustainability. Figure 2 provides a comprehensive overview of the capabilities of pilgrims and religious organizations and the constraints they face. The results suggest the need for collaboration between customers and tourism organizations to minimize environmental risks

and enhance collective efforts and development, positive values, and attitudes toward social and ecological aspects of the environment.

Fourth, this study offers insights into pilgrimage tourism and green innovation in less-developed nations such as Africa. Existing literature on green innovation and sustainability in tourism is dominated by Western epistemologies that primarily focus on developed countries (Arici & Uysal, 2022; Senbeto, 2022). To address this research gap, our study extends the understanding of green innovative behavior to less developed and non-Western countries. Thus, the findings provide a more comprehensive perspective on the relationship between green innovation and pilgrimage tourism in the Global South. Specifically, African countries are vulnerable to climate crises due to widespread deforestation, poor governance, land grabbing, and unplanned natural resource management (Nhamo et al., 2018). Although Africa's natural resources contribute to the global ecosystem by reducing carbon emissions, the continent has experienced a worldwide climate crisis and recurrent droughts (Washington, 2019). Thus, the findings offer insights into the concept of pilgrimage tourism and the resulting practices that contribute to a green environment in less-developed nations.

Practical Implications

This study will be helpful to destination managers, policymakers, and tourism practitioners by considering the potential of pilgrimage tourism for green innovation. In light of the global climate crisis caused by deforestation, irresponsible consumption, waste disposal, and pollution, this study highlights the importance of exploring tourism segments to promote green innovation. The findings offer destination managers the opportunity to consider the role of pilgrimage tourism in encouraging a bottom-up approach to green innovation. This study suggests promoting practice-based learning and green innovation practices to mitigate the climate crisis and advocate for environmental sustainability. Suggested activities include awareness-raising and educational campaigns supported by hands-on demonstrations through

experience-sharing, follow-up, and discussion programs with concerned stakeholders (Fang et al., 2022; Kim et al., 2022). Practice-based learning can help transfer knowledge and experiences, attracting and educating visitors. Such learning practices will also help achieve sustainability goals by creating greater awareness of how to innovate sustainable practices in tourism.

This research could be relevant to developing a social and environmental entrepreneurial mindset. Lessons learned from this study may inform an entrepreneurial focus on green knowledge, skills, and attitudes. These include supporting social and ecological practices and encouraging eco-friendly business strategies by adopting mechanisms for energy consumption and resource and waste disposal management (Christofi et al., 2022; Otoo et al., 2022). The positive attributes of pilgrimage tourism in green innovation can support efforts to transform environmental management, responsible consumption, and sustainable business practices. From the perspective of this study, policymakers could foresee the value of beliefs and practices associated with pilgrimage tourism that could be useful for protecting the green environment and preventing climate-related challenges such as drought, deforestation, resource shortage, and rainfall variability. Rather than spending a considerable budget on renewable energy, managers and policymakers could consider indigenous and place-based practices such as a pilgrimage to promote a balance between resource conservation and economic development.

Given the cost-saving mechanisms of harnessing the potential of pilgrimage tourism for green innovation, the study supports policymakers in adopting a green culture and environmental regulations in governmental and non-governmental organizations. The results also support development goals such as the SDGs to strengthen the sustainability agenda in different sectors (UN, 2018). Tourism and the environment have become salient topics in tourism studies. More broadly, the SDGs emphasize that tourism can be a “sector of hope” if

it implements the promise to humanity and considers ecosystem performance. More specifically, the SDGs address climate change, potential threats to ecosystems, and biodiversity loss. This study offers insights into the SDGs by promoting green innovation in less-developed nations such as Africa.

Limitations and Future Research

Although this study contributes to the existing literature on religious tourism and green innovation, the research also encountered some limitations. For example, although the study conducted semi-structured interviews and secondary sources, there are issues with generalizability due to the small sample size. Future empirical studies could investigate the factors that encourage or undermine green innovations in pilgrimage tourism by using a larger sample and incorporating insights from tourism organizations, host communities, tour operators, and destination management organizations. Given that the alarming pace of the climate crisis raises sustainability issues, future research should emphasize the need to investigate green innovations in different tourism segments. In addition, future studies are needed on how tourism destinations and organizations can implement green innovations with coherent policies and practices to improve tourism's contribution to the environment. We suggest that future studies conduct comparative research on pilgrimage tourism in developed and developing countries. Replicating current research in religious, non-religious, and geographic settings will also have significant implications.

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