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The Role of International Religious Relations, Intrinsic & Extrinsic Religiosity in developing the Pro-environmental Behavior of Individuals among diverse religious backgrounds with mediating effect of pro-environmental intention

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Abstract

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behavior.

Religiosity tends to influence the intention of human beings and ultimately impact the behavior of an individual. Vietnam is one of the attractive countries having a religiously diversified population. Historically, the idea has been made that religious attitude and religion impact an individual's behavior in shaping the act. The current research endeavored to examine international religious interactions, the intrinsic and extrinsic perspectives of religiosity, and how they influence individuals' pro-environmental intentions and behaviors across samples recruited from numerous religious groups in Vietnam. The data were analyzed using Smart PLS, and the results indicated that while inner religiosity strongly predicts pro-environmental behavior, external religiosity also considerably predicts pro-environmental intention and behavior. Both intrinsic religiosity and extrinsic religions advocate for environmental protection. Endogenous religions such as Cao Dai and Hoa Hao have absorbed the teachings of foreign religions such as Buddhism, Catholicism, and Taoism and expressed the idea of environmental protection in their teachings, which influenced believers' pro-environmental behavior.

Introduction

Harvard University established the "Harvard Project on Religion and Ecology" under the Harvard Center for the Study of World Religions in 1996 for the first time to establish an appropriate and effective forum for interreligious dialogue and conversation among the world's major religions, including Buddhism, Islam, Jainism, Shinto, Daoism, Confucianism, Hinduism, Protestantism, and Christianity, among others. The project's purpose was to identify the implications of each religion towards environmental issues, the interpretation of religious messages for environment protection, religious groups concerned with clean rivers or reforestation, and the managing communities. The Harvard Project on Religion and Ecology sponsored a series of conferences, including "Buddhism and Ecology" and "Christianity and Ecology" at the forum on religion and ecology. It has been observed that environmental problems have been faced, including resource shortage, degeneration, global warming overconsumption, and sea-level issue, that has raised the concern to re-examine the attitude of individuals toward the protection of earth and spiritual responsibility for the planet. Research studies have reported that religious individuals and organizations are more responsive to ecological environment issues. The Catholic Church pays special attention to ecology, the revelation of foundation, theology of the Trinity and theological perspective (Pham, Do, & Nikolaeva, 2021).

Vietnam has faced several issues related to the environment, such as a rise in sea level, increased carbon emission, water and air pollution, cut forest, scarcity and, rapid reduction in forest growth, the collapse of natural

resources and watersheds. The number of countries that received negative impacts of changing environmental situations, rapid climate change, and increased temperature has created a point of concern for research scholars to address the predictor of situations. It has been observed that changes and increase in sea level show the ecological crisis that negatively impacts human life and ruin economic-social development. The agriculture and population engaged in agriculture production are expected to receive the lower budget revenue and reduce the ability to respond and fulfill social welfare (Clark & Stroope, 2018).

The religious population in Vietnam accounts for 27% of the total population. The remaining population relates to the ideal personalities, followers, and indigenous beliefs. The population of Vietnam is worried only foris worried only about earning to live, and the country's management is concerned with how it is possible to prevent people from damaging the natural resources and nature. The huge religious population believed in the philosophy of Buddhism, as monks and nuns believed in few desires that reduce the pressure on the environment and natural resources. The other major religious followers consist of Catholicism and non-Catholics who live together and observe obvious differences between their opinions on the environment. The community was concerned about the plantation and keeping the place cleaner and airier. The Protestantism community in Vietnam is aware of environmental and ecological challenges, developed a connection between humans and nature, and is responsible for protecting nature. The awareness and concern of protestants are evident in their practical activities and movements for environmental protection (Pham et al., 2021).

The literature review concentrated on the impact of people and socio-cultural values on using natural resources and their behavior toward sustainability, as culture plays a crucial role. The research scholars have expressed culture as an important platform that plays a role in developing pro-environmental behavior (Stolz, Molina, Ramírez, & Mohr, 2013). It has been reported that knowledge about cultural values and their influence on pro-environmental values remains limited. There is a dire need to research to assess the environmental concern. The literature has incorporated the relationship and influence of various factors that drive individuals' behaviour towards the environment and has various limitations. The literature streams show that corporate social performance and ethical perspective are limited and contribute to sustainable practices (Jackson & Apostolakou, 2010). Further, the supply chain strategies were influential on pro-environmental firms' stock prices. The scholars highlighted that the research stream has a wider gap in explaining cross-cultural differences (Chwialkowska, Bhatti, & Glowik, 2020).

The research studies argued that pro-environmentalism is positively related to individualism, which plays an important role in the sustainability of corporate practices (Vachon, 2010). The contradictory findings have been shared that individualism has no significant

relationship with environmental sustainability (Cox, Friedman, & Tribunella, 2011; Park, Russell, & Lee, 2007). The negative association between top management and social responsibility values and corporate propensity for supporting sustainability has been identified in the study (Parboteeah, Addae, & Cullen, 2012). A positive relationship has been reported between femininity and pro-environmentalism (Ho, Wang, & Vitell, 2012). Sustainable behavior has no agreement on the role of gender egalitarianism and femininity, contrary to the positive link between femininity and pro-environmentalism (Chwialkowska et al., 2020). An individual's inclination towards environmental protection is considered an important perspective that directly impacts an individual's inclination towards environmental protection is considered an important perspective directly impacts green consumption. The green products are linked with consumers' attitude having a greening perspective, the green purchase intention and green energy consumption, including recycling and conservation that depicts the environmentally friendly purchases (Laureti & Benedetti, 2018; Lee, Kim, Kim, & Choi, 2014; Pagiaslis & Krontalis, 2014). The research articles have reported that individuals having much higher concerns about the environment are more willing to pay premium prices for environmental protection products, leading to restricting the product that harms the environment (Liu & Segev, 2017).

The literature highlighted the role of religion in the allocation of values, spirituality, and promotion of good life here in the world and hereafter. The teachings are valuable due to beliefs that divine documents and scriptures, unless ignored or rejected by other norms, ethical, ideal. The teachings are valuable due to beliefs that divine documents and scriptures, unless ignored or rejected by other norms, ethical, ideal pragmatic approaches. The literature has identified the religion that emphasizes the universality and cooperation that means the emergence of international relations as a system that attempts to allocate and define international values through state interest, moral legitimacy and political power. The prior literature has provided an understanding of the function of religion in politics; however, the perspective of international relations has been overlooked. The research studies have stated that power and politics are the keys to international relations and that the religion perspective is absent in the prior literature. The political enemy can be eliminated with power employed by politicians, and religion provides the ground for developing the ideas (Shuriye, 2011).

The research has emphasised the importance of culture as an element that influences the cultural environment and influences individuals to act and behave. The religiosity factor has been expressed as the motivational factor that predicts the strength of employees and the beliefs and values system possessed by individuals living in the society. The different motivations have been offered from the religious perspective to explain the phenomenon of intrinsic religiosity and extrinsic religiosity. The intrinsic religious beliefs are essential for the social dimension. Contrary,

extrinsic religious motivations rely on values and extrinsic social beliefs (Hassanian & Shayan, 2019). The scholars identified two dimensions. In contrast, one is related to religion of mean, and second is related to the religion of end as defined in the research study of, namely intrinsic and extrinsic religious perspective, whereas one is related to religion of mean.

The second is related to the religion of end as defined in the research study (Tiliopoulos, Bikker, Coxon, & Hawkin, 2007). The extrinsic perspective of motivation relates to the person who prefers the usage of religion (means). However, intrinsically motivated lives in religion have been suggested that religion by means and religion by the end are inconclusive and reported as fundamental elements of religious orientation. The researchers have referred to it as an effective tool and may exist in person concurrently (Arli, Pentecost, & Thaichon, 2021) A long time ago, in 1967, it was argued that Judeo-Christian religious belief system. In 1967, it has been argued that Judeo-Christian religious belief system was found to be negatively influential for the environment and focus on the concept of protecting nature (White, 1967). The argument remained strong in assessing the ecological crisis in the middle of the 20th century (Luetz & Nunn, 2020).

On the other hand, the researchers have stressed the behavior of the individual consumer and their concern towards the environment, the purchase behavior of individual and the development of eco-friendly green products that must be adopted at the user level that shows the acceptability and, most important the greening aspect of the manufacturing (Bian, Zhang, & Zhou, 2020; Cerri, Testa, & Rizzi, 2018; Heo & Muralidharan, 2019). The positive impact on consumers' environmental concerns is influenced by consumption values, including social value, conditional value, epistemic values, emotional values, and functional values that may help develop the purchasing intention of individuals toward greening (Mohd Suki, 2016). It has been empirically evident that eco-friendly labels play a crucial role in determining the attitude of individuals toward the production and adoption of green production and the impact on the environment as production materials negatively impact the environment. However, the greening aspect is effective and environmentally friendly (Cerri et al., 2018). The research studies have reported insignificant relation between religious factors towards the formation of sustainable behavior (Felix & Braunsberger, 2016). The studies have reported that intrinsic religiousness does not influence the intention of people to recycle the products in general (Arli & Pekerti, 2017). The prior literature found that biblical literalism correlated with the level of environmental concern. The other study found that environmental attitude was insignificantly influenced by intrinsic motivation (Felix & Braunsberger, 2016). The studies have reported that higher concern for the environment has been observed, but there is a need to increase individuals' interest in developing and forming the behavior reflective of such concern (Hunter & Toney, 2005). Morrison,

[Duncan, and Parton \(2015\)](#) reported that Christian believers were not interested and unfocused on climate issues, weather issues, global warming issues, and environment-related burning issues.

The literature highlighted the relationship and association between extrinsic and intrapersonal factors that shape the behavior of tourists. The study reported that extrinsic factors, including incentives, are weak, intrapersonal and emotional perspectives and religious beliefs found to be much more effective in tourist participation towards environment-friendly behaviour ([Han & Hyun, 2018](#); [Sun & Lin, 2018](#)). The pro-environmental behavior is argued to be influenced due to religiosity and intrapersonal factors; previous research empirically assessed the religion on the development of environment-friendly behavior and perspective ([Chowdhury, 2018](#)). The research articles have been published to assess and investigate the association and link between religiosity and environment environment-friendly behavior of individuals in the tourism context. The relationship between pro-environmental behavior and religiosity has been conducted in Middle Eastern and Western countries, and limited research has been conducted in the Asian region such as China and Vietnam ([Bhuian, Sharma, Butt, & Ahmed, 2018](#)). The geographical discussion zone is Middle Eastern nations, and the main religions found to be Judaism, Catholicism, Protestantism and Islam ([Li & Xu, 2020](#)).

The researchers have argued that assessing the relationship between the religious and cultural differences between different countries differs from Western and Middle Eastern nations in less developed countries compared to a higher performer and pro-environmental behavior ([S. Wang, Wang, Li, & Zhou, 2020](#)). The researchers have identified the gap in current research and suggested increasing the knowledge about religious perspectives for determining the behavior of individuals for being environmentally friendly. The scholars have focused on explaining the impact of religion on shaping the behavior of tourists for being environmentally friendly in the Chinese sample and context ([S. Wang et al., 2020](#)). The research scholars have suggested incorporating the environmental concerns for determining and examining the pro-environmental behaviors the behavior of an individual driving the concern of environment on priority basis as suggested in the pro-environmental behavior theory ([Verma, Chandra, & Kumar, 2019](#)).

This research effort is conducted to assess the environmental-friendly attitude in Vietnam among residents based on the religious perspective. The study incorporated the international religious relations, intrinsic and extrinsic religiosity factors to express the pro-environment intention that further leads towards the pro-environmental behavior that argued to develop the harmony and development of cooperation among stakeholders.

Literature Review

This present research effort investigates the pro-environmental behavior of people living in Vietnam who belong to different religious backgrounds. The study focused on the role of religion in environment protection and the behaviour of mutually cooperative and environmentally friendly individuals. The prior literature has identified that environmental education as a necessary element of such interventions that create awareness and sensitivity towards the environment and enhance the knowledge about taking innovative initiatives towards the environment and demonstrate the general public's positive attitude to environment protection (Jacobson, McDuff, & Monroe, 2015). This paper contributes to knowledge building by explaining the relationship and role of religion in assessing the environment protection and investigating the relationship and role in explaining pro-environmental behavior. It is believed that higher education level enables the individuals to think more positively about the environmental protection and take the initiatives for environmental protection, the highly educated individuals found to be more responsive toward environmental protection and develop the behavior as pro-environmental friendly, as higher education provides the base of higher knowledge, environmental issues and its solutions that resulted in sustainable and pro-environmental behavior (Janmaimool & Khajohnmanee, 2019).

The prior literature has talked about the role of religion in international relations, which means religion has a significant role in the global stage that influences attitude. Religion and spirituality have taken different directions across the diverse regions and countries. The future of religion has been stated as significant and striking on the global social impact compared to regional standpoint. The religion has to be understood in a global worldwide context as to be understood in isolation or individually. The global scale must be incorporated in understanding religion. Europe has faced the religious related problems and issues, or South America originated from Africa or any other place, that is the link of religion and internal relations. This study focuses on the international relations from a religious perspective that influence the worldwide concerning phenomenon of pro-environmental attitude and behavior.

International Religious Relations to Pro-Environmental Intention and Pro-Environmental Behavior

The term religiosity refers to the belief in God and commitment of an individual to follow the guidelines and principles revealed by God for humanity. The nature of religiosity is complex, and scholars have expressed the phenomenon in two dimensions and suggested utilizing both dimensions to assess the influence on the behavior of individuals. Intrinsic and extrinsic religiosity has been coined to define the concept of religiosity (Chang, Vitell, & Lu, 2019) Religion is a different domain, and

international relations is the domain of social sciences. The prior literature embarks on the relationship between religious impact on the social science, such as behaviours in modern political scenario. This contradicts the previous belief that religion has no role in the political sphere. The various scholars have rejected the influence of religion as western political thinkers focused on their nations, which stated that the influence of religion is not obvious. This is stated as it was wrongly assumed that influence of religion disappeared during modernization. The research scholars in the study have argued that ignoring religion, undermining, or misplacing it will deviate from the solution of political problems. The researcher also argued that it is essential to conduct research on international relations as religion significantly influences behaviors(Shuriye, 2011).

The scholars have defined religiosity (International Religious Relations) as religious orientation where an individual get involves in religions activities for the sake of internal goals as it is religious tradition itself. On the other hand, intrinsic and extrinsic religiosity is explained as religious orientation when an individual engages in religious activities to achieve their purposes (Chang et al., 2019; Raggiotto, Mason, & Moretti, 2018). The literature has stated that the intrinsic dimension of religious perspective relates to the religion as an ultimate end itself. Contrary to the individuals possessing an extrinsic dimension of religious perspective relates to religion as base for achieving certain goals. The literature and research scholars have expressed religiosity asa thoughtful consequence of the attitude and behavior of individuals, specifically towards ethical concerns and pro-environmental behavior (Bhuian et al., 2018). Several research articles have considered the concept of religiosity and investigated the relationship between religiosity and behavioral outcomes and reported that religiosity tends to influence the behavior. Based on prior literature, the current study argues that religiosity influences individuals' behaviour towards environmental protection and plays a significant role in developing pro-environmental behavior. The researchers have observed that religiosity has positive and significant impact on consumer behavior an environmental perspective (Chang et al., 2019).

Further, the study reported that religiosity has a positive link towards the ethical perspective of consumer for willing to become the part of adopting recycling behavior. The prior literature has revealed that religious--based values and beliefs are effective in motivating the individuals to become environmentally friendly and prefer to purchase green products that demonstrate the green purchase behavior of individuals (Siyavooshi, Foroozanfar, & Sharifi, 2019). The previous literature has focused on the concept of religiosity, but overlooked the effect of intrinsic religious perspective on developing the attitude and behavior towards environment friendly initiatives, further the extrinsic religious perspective to explain the pro-environmental behavior has not occurred in the literature and there is not any evident and not sufficiently studied

as the role of intrinsic and extrinsic religiosity is uncertain and absent in literature empirically (Patwardhan, Keith, & Vitell, 2012; Raggiotto et al., 2018). This research addresses the scarcity of literature on the role of religiosity and enriches the empirical evidence by exploring the effect of religion's perspective on the behavior of individuals towards the environment. The pro-environmental behavior is widely accepted and occurred in the literature that it has the tendency to gain social recognition and helps in the achievement of specific goals (Gao, Wang, Li, & Li, 2017). The research scholars have highlighted that the motivational factor behind pro-environmental behavior has the importance and religiosity can also act as motivational factors that influence individuals' behaviour towards environmental protection. The effect of religiosity is evident, and there is a dire need to conduct the research on the concept of religiosity to investigate pro-environmental behavior. The previous research studies have depicted that a tourist's pro-environmental behavior in the hotel industry is expected to reduce energy utilization and resources consumption while keeping in view the protection of the the natural environment. The tourist's behavior has a significant influence on environment-friendly initiatives, and it has been stressed that the religious perspective of a tourist is most likely to be influential towards the development of pro-environmental behavior. The religiosity was found to be helping in gaining social approval and recognition and being willing to behave environmental friendly (S. Wang et al., 2020).

This research effort aims to find the pro-environmental behavior influenced by intrinsic religiosity through pro-environmental intention, as Vietnam has diverse religious followers. Hence, the study answers the question of whether religiosity helps develop the environmental concerns at large and be responsive to the community at large. Based on the above literature and argument of the study following hypotheses are derived.

H1: International Religious Relations influence the Pro-environmental behavior among participants belonging to Vietnam from diverse religious backgrounds

H2: International Religious Relations influence the Pro-environmental Intention among participants belonging to Vietnam from diverse religious backgrounds

Intrinsic & Extrinsic Religiosity to Pro-environmental Intention and Pro-environmental Behavior

This part of the research paper demonstrates the relationship and influence of extrinsic religiosity and environmentally friendly intention and behavior among Vietnam's multi-religion-based community. The literature is scarce on assessing the role of extrinsic religiosity in explaining the behavioral consequences of the individuals. The literature highlighted that there is insufficient literature in explaining extrinsic religiosity and its role in the behavior of individuals. The prior literature incorporated the role of religiosity in assessing tourist behaviour while

identifying the mechanism and revealing that religiosity influences the behavior of tourists in the hotel industry (S. Wang et al., 2020). several religions exist in the world, and each religion has different doctrines that are significantly different (Minton, Kahle, & Kim, 2015). However, the literature has observed and reported that according to the environmental ecology theory, all religions have the advocacy perspective towards protecting life and each connected perspective, including nature (Snyder, 2006; Yang & Huang, 2018). All the religious commandments consider the sacredness of nature and prefer the human being that must be respected. Humans have an obligation to protect nature and gain a materialistic approach to wealth generation by exploiting natural resources and prefer to have a simple, frugal lifestyle (Roiland, 2016).

The research studies assessed the connectedness towards nature and simplicity had been considered to explore the mechanism that links the religiosity towards the tourist's behavior for environmental protection. That means that an individual's connectedness towards religion tends to develop the intention and behavior that is found to be favorable for the environment. It has been admitted that it is tough to assess the behavior of tourists in the hotel industry, and it is difficult to measure the behavior of an individual tourist towards the environment, as pro-environmental intention and behavior are tough to be addressed and assess (Gao et al., 2017). It has been established that an appropriate measure of intention provides a perfect prediction for behavior (J. Wang, Wang, Wang, Li, & Zhao, 2018). So, therefore, it is appropriate to measure the behavior on the base of intention in the research. The current research incorporated the pro-environmental intention and behavior influenced by extrinsic religiosity. The prior literature has embarked on the phenomenon of pro-environmental behavior and intention influenced by religious perspectives in the hotel industry in China and reported favorable results. It has been stated that religiosity is an under-researcher phenomenon and extrinsic religiosity rarely occurs in the literature. There is a scarcity of empirical evidence that extrinsic religiosity has a significant link to the pro-environmental intention and behavior among the individuals (S. Wang et al., 2020).

The present research effort aims to enrich the literature and develop the empirical evidence in assessing the relationship between religiosity and pro-environmental intention and behavior, specifically extrinsic religiosity that affects the behavioral outcomes. Based on the prior literature and evidence, the current study argues that extrinsic religiosity tends to influence the pro-environmental intention among the respondents from different and diverse religious backgrounds in the diverse religious-cultural country of Vietnam. The study also explains and intends to empirically investigate the relationship between extrinsic religiosity and pro-environmental behavior of individuals towards environmental protection. The above literature and arguments of the current study help devise the following hypothesized statements for relationship investigation.

H3: Intrinsic & Extrinsic Religiosity influence the Pro-environmental behavior among participants belonging to Vietnam from diverse religious backgrounds

H4: Intrinsic & Extrinsic Religiosity influence the Pro-environmental Intention among participants belonging to Vietnam from diverse religious backgrounds

Mediating Role of pro-Environmental Intention

This study examines the function of pro-environmental intention in mediating the relationship between intrinsic and extrinsic religiosity and pro-environmental action. Numerous studies have been conducted in pertinent areas, demonstrating the government's concern and offering attractive incentives and possibly penalties for not recycling plastic waste, incentives to households for encouraging waste recycling, and financial incentives to promote waste recycling. (Abila & Kantola, 2019; Aprile & Fiorillo, 2019). The prior literature has shown that incentive programs increase an individual's behaviour toward garbage management in separating paper from plastic. On the other hand, research reported no relation between monetary incentives and the conservation behavior of individuals (Struk, 2017). Weak relationships have been shown between monetary incentives and recycling behavior. The study has justified the region for a weaker relationship between incentives and recycling behavior (Hage, Söderholm, & Berglund, 2009).

Prior studies have investigated the mediation role of economic motivation among intrinsic perspective of religion and the intention of an individual to adopt the practices for recycling significantly, which means intrinsic religiosity influences the intention of an individual to adopt specific behavior related to environment. Similarly, extrinsic religiosity influences the intention of an individual through economic motivation. The committed recycler insignificantly mediates the relation between IR and the intention of the individual to recycle, further the ER and intention to recycle the required material. Further, the construct of 'love and care' towards natural resources and nature itself insignificantly mediates the relation between intrinsic religiosity and significantly mediates the relation between extrinsic religiosity and intention towards adoption of recycling (Arli et al., 2021).

Based on the above literature, the following mediating hypotheses are derived:

H5: Pro-environmental intention mediates the relationship between International Religious Relations, intrinsic religiosity and pro-environmental behavior among participants belonging to Vietnam from diverse religious backgrounds

H6: Pro-environmental intention mediates the relationship between intrinsic & extrinsic religiosity and pro-environmental behavior among participants belonging to Vietnam from diverse religious backgrounds

H7: Pro-environmental Intention influence the Pro-environmental behavior among participants belonging to Vietnam from diverse religious backgrounds

Research Methodology

This section of the study discusses the research methods, as it was a quantitative endeavour and data were collected cross-sectionally from members of the general population from various religious backgrounds in Vietnam. The measurement scales were used to test the link between the framework's constructs; the measurement scales were adapted from previous research, and the data collection instrument was a questionnaire. Convenient sampling was used to acquire the data, as it was collected from persons of varied religious backgrounds. The researcher circulated 350 questionnaires and obtained 308 responses for data analysis. To assess the construct's reliability, validity, and structural equation model, the researcher employed the Smart PLS.

Research Framework

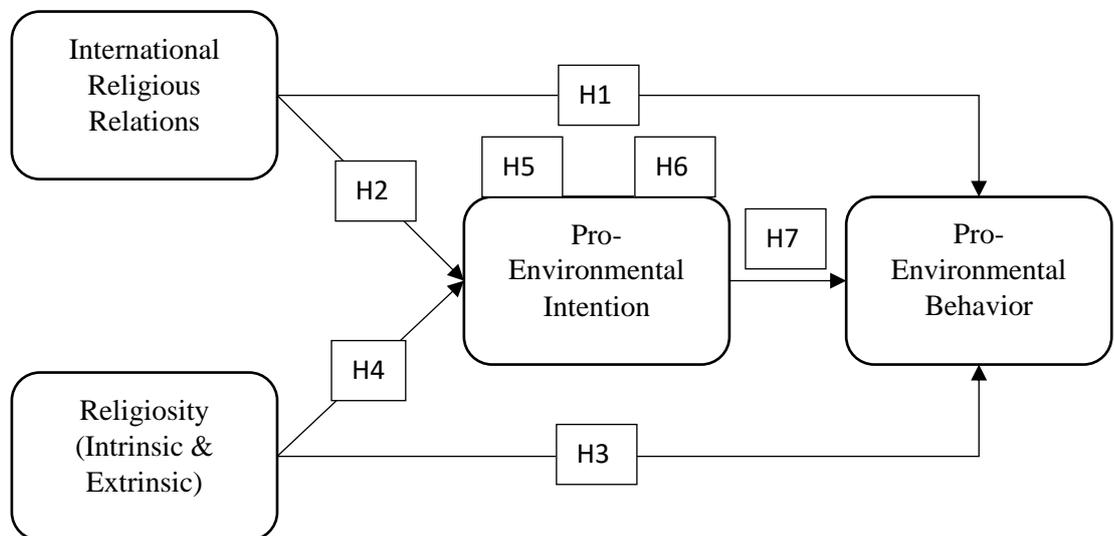


Figure 1: Research Framework

Both intrinsic religiosity and extrinsic religions endogenous advocate environmental protection and embody the idea of environmental protection in their doctrines and influence believers' pro-environmental behavior. That means that whether it is an intrinsic religiosity and extrinsic religions, it all plays an important role in being environmentally friendly.

Measurement Scale

The international religious relation with four items and Intrinsic & extrinsic religiosity consisted of three items and was adopted from the work of (Bhuian et al., 2018) and (Raggiotto et al., 2018). Three items scale of pro-environmental intention was adopted from the research work of (S. Wang et al., 2020). The thirteen items scale of pro-environmental behavior was adopted from the study (Begum et al., 2021).

Data Analysis

This section of the study presents the data analysis. The data analysis was conducted on Smart-PLS. There are two sections in data analysis. First section relates to the construct validity and reliability assessed based on the PLS algorithm. The construct validity and reliability are assessed based on are assessed based on Cronbach alpha, composite reliability, and average variance extracted and known as measurement model assessment. The second section of the analysis consists of the structural equation model (SEM) to investigate the hypothesized relationships and assess the base of t-statistics and p value.

Measurement Model Assessment

This phase of the research paper entails the measurement model assessment utilized through the PLS algorithm method of Smart PLS and presents the construct validity and reliability. The construct validity and reliability are assessed on the base of Cronbach alpha that must remain higher than 0.70 for acceptability. The composite reliability also should remain higher than 0.70 for acceptable reliability, and the average variance extract (AVE) must remain higher than 0.50 for acceptable reliability and validity. Table 1 presents the values for Cronbach alpha, composite reliability and AVE based on the data analysis.

Table 1.

Constructs	Cronbach alpha	Composite Reliability	Average Variance Extracted (AVE)
IER	0.873	0.922	0.797
IRR	0.939	0.956	0.846
peb	0.937	0.945	0.571
pei	0.910	0.943	0.846

Note: International religious relations (IRR), Extrinsic Religiosity (ER), Intrinsic Religiosity (IR), Pro-environmental behavior (peb), Pro-environmental intention (pei)

Table 1 demonstrates the values for construct validity and reliability. The Cronbach alpha for each variable was higher than the 0.70 necessary to be achieved as per the suggested criteria (Leguina, 2015). The Cronbach

alpha for IER was 0.873, for IRR 0.939, for the pro-environment intention was 0.910, and for pro-environment behavior, the alpha was 0.937, which shows the satisfied criteria for construct validity. Similarly, the composite reliability determines the reliability that ER found to be 0.922 for the CR value. Similarly, the pro-environmental intention was 0.943, which is higher than the cut-off point and acceptable. Similarly, the AVE was found to be for each construct higher than the cut point. Hence construct is reliable and satisfied to conduct the analysis further investigation analysis.

Discriminant Validity

This phase examines the discriminant validity of the constructs. The discriminant validity determines the difference of construct's items with each other. The square root of AVE must remain higher than correlation values for acceptable discriminant validity achievement (Fornell & Larcker, 1981).

Constructs	IER	IRR	Peb	pei
IER	0.893			
IRR	0.580	0.920		
Peb	0.621	0.610	0.756	
pei	0.441	0.333	0.505	0.920

Table 2.

Note: International religious relations (IRR), Extrinsic Religiosity (ER), Intrinsic Religiosity (IR), Pro-environmental behavior (peb), Pro-environmental intention (pei)

The above table indicates that the square root of IER was found to be 0.893, which is greater than the previous values in the same column, which are correlation values, the square root of AVE of IRR was found to be 0.920, and the square root of peb was found to be greater than the correlational values and observed 0.756. Similarly, the square root of pro-environment intention was appropriate for satisfying the construct validity and may proceed to the hypotheses testing phase.

Structural Equation Model (SEM)

This section of the study entails hypothesis testing, as there are seven hypotheses in the model, five direct hypotheses and two indirect mediating hypotheses are derived. This section investigates the relationship between the construct based on the collected data. The hypotheses are examined using the bootstrapping method of Smart-PLS and checked through t-value

and p-value. The t-statistics present the significance of the relationship as the value should be larger than 1.96 for the significance of the relationship as social science as 05% error margin, so, therefore, the p-value should be less than 0.05 for acceptability of

hypotheses as per suggested criteria of [Hair et al., \(2010\)](#). Firstly, this section presents the results of direct hypotheses, and secondly, the mediating effect is presented. The [Table 3](#) presents that direct hypothesis H1 investigates the relationship between IRR and pro-environmental behavior. The results show that ($\beta = 0.347$, t-value = 4.277, p-value = 0.000), the t-value and p-value remained within the limit, hence the hypothesis H1 is statistically accepted.

Table 3.

Relationship	β	t-stat	P value
IRR \rightarrow peb	0.347	4.277	0.000
IRR \rightarrow pei	0.116	0.879	0.380
IER \rightarrow peb	0.308	2.816	0.005
IER \rightarrow pei	0.374	2.476	0.014
Pei \rightarrow peb	0.253	2.710	0.007

Note: International religious relations (IRR), Extrinsic Religiosity (ER), Intrinsic Religiosity (IR), Pro-environmental behavior (peb), Pro-environmental intention (pei)

Hypothesis H2 investigates the relationship between IER and pro-environmental intention. The results show that ($\beta = 0.116$, t-value = 0.879, p-value = 0.380), the t-value and p-value remained higher than the limit and cut off point as per the suggested criteria. Hence hypothesis H2 is statistically rejected.

Hypothesis H3 investigates the relationship between IER and pro-environmental behavior. The results show that ($\beta = 0.308$, t-value = 2.816, p-value = 0.005), the t-value and p-value remained within limits cut off point as per the suggested criteria. Hence hypothesis H3 is statistically accepted.

Hypothesis H4 investigates the relationship between IER and pro-environmental intention. The results show that ($\beta = 0.374$, t-value = 2.476, p-value = 0.014), the t-value and p-value remained within limits and cut off point as per the suggested criteria. Hence hypothesis H4 is statistically accepted.

Hypothesis H7 investigates the relationship between pro-environmental intention and pro-environmental behavior. The results show that ($\beta = 0.253$, t-value = 2.710, p-value = 0.007), the t-value and p-value remained within limits and cut off point as per the suggested criteria. Hence hypothesis H3 is statistically accepted.

This study derived two indirect or mediating hypothesized relationships. The pro-environmental intention mediates the relationship between intrinsic religiosity, extrinsic religiosity, and pro-environmental behavior. The next [table 4](#) demonstrates the mediating results. The hypothesis H5 investigates the mediating role of pro-environmental intention between IRR and pro-environmental behavior. The results depicted that ($\beta = 0.029$, $t\text{-value} = 0.785$, $p\text{-value} = 0.433$), the t -value and p -value found to be insignificant as t -value is lower than cutoff point and p -value higher than its limit. Hence, H5 is rejected statistically.

Table 4.

Hypotheses	β	t-value	P-value
IRR \rightarrow pei \rightarrow peb	0.029	0.785	0.433
IER \rightarrow pei \rightarrow peb	0.099	1.991	0.004

Note: Extrinsic Religiosity (ER), Intrinsic Religiosity (IR), Pro-environmental behavior (peb), Pro-environmental intention (pei)

The hypothesized relationship under H6 assessed the mediation role of pro-environmental intention between IER and pro-environmental behavior. The results depicted that ($\beta = 0.099$, $t\text{-value} = 1.991$, $p\text{-value} = 0.004$), the t -value and p -value found to be significant as the t -value is higher than cut off point, and p -value was found to be lower than its limit of acceptability. So, therefore, hypothesis H5 is accepted.

Conclusion

This study is unusual since it concentrated on the crucial aspect of religiosity in determining the effect on the broader community in terms of moulding behavior that promotes harmony and common goals. The study concentrated on religion-based international relations and the role of intrinsic and extrinsic religiosity in explaining the phenomena of pro-environmental behavior among religious adherents in Vietnam's varied religious communities. The study integrated the mediating influence of pro-environmental intention, which further contributes to the act of environmental conservation occurring. The research endeavored on the premise that religious communities have a strong concern for the environment, as religion suggests being supportive of nature and minimizing damage to natural resources. As such, the study focused on assessing the pro-environmental concerns and behaviors of the public from diverse religious backgrounds living in Vietnam. The study collected data by questionnaire using a straightforward sampling approach. The findings indicated that while international religious relations affect pro-environmental behavior but are insignificant in predicting pro-environmental intention, intrinsic religiosity and extrinsic religions significantly affect pro-environmental intentions and behaviors. Both

intrinsic religiosity and external religions contribute significantly to environmental stewardship.

The report recommended a greater emphasis on religious-based activities that involve the broader population and promote peace and harmony in society. Future research studies can be undertaken to examine specific group behavior, as a diverse sample of each faith can be used to compare the results.

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