
UNPACKING THE RELATIONSHIP: MOTIVATION, GREEN BEHAVIOR, AND RELIGIOSITY AMONG MUSLIM ACADEMICS IN INDONESIA

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Abstract

This study aims to analyze the relationship between motivation (intrinsic and extrinsic), employee green behavior, religiosity, and employee green attitude among Muslim employees in the higher education sector in Indonesia. This study uses a quantitative approach with a survey design and purposive sampling technique. Respondents consisted of 81 Muslim millennial and Gen Z employees working in higher education institutions. The data collection instrument was a questionnaire with a Likert scale covering five main constructs: intrinsic motivation, extrinsic motivation, green behavior, religiosity, and green attitude. Data analysis was carried out using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) technique through SmartPLS software. The results showed that intrinsic and extrinsic motivation had a significant influence on religiosity, and religiosity acted as a significant mediator in shaping employee green attitudes. Conversely, green behavior did not have a direct effect on religiosity or green attitudes. The R^2 values of 0.922 for religiosity and 0.940 for green attitudes indicate a very strong predictive ability of the model. These findings confirm that religious values play a central role in linking motivation to sustainability attitudes in the workplace.

Keywords: green behavior, religiosity, green attitude, motivation, SEM-PLS

Introduction

The environment in Indonesia faces serious challenges that require focused handling, especially the decline in forest cover reaching 0.5% per year, the increase in domestic carbon emissions by 4.5 tons per capita in 2021, and air quality that has not met the WHO threshold, causing various public health problems (de Bont et al., 2023; Galindo-Gutiérrez, 2024). This condition is exacerbated by the increase in global average temperatures of 1.1 °C since the pre-industrial era, which has the potential to accelerate ecosystem damage and threaten the achievement of the Sustainable Development Goals (SDGs), especially SDG 13 on climate action and SDG 15 on life on land (Schönberger, 2024; Wahid et al., 2024). Therefore, increasing awareness, attitudes, and environmentally friendly behavior through contextual education strategies, such as the implementation of a green curriculum based on local wisdom and adaptive technology is urgent to ensure the sustainability of the ecosystem and the quality of life of the Indonesian people.

As a developing country with the largest Muslim population in the world, Indonesia faces environmental issues that are highly focused on three main aspects air pollution, deforestation, and clean water crisis which directly affect the quality of education services and the welfare of education personnel (Farooq et al., 2023; Indonesia, 2024). From the perspective of Self-Determination Theory,

the low intrinsic motivation of teachers and education personnel to participate in environmentally friendly programs is triggered by the lack of fulfillment of the needs for autonomy, competence, and engagement in the work environment (Ryan & Deci, 2000). Furthermore, according to the Theory of Planned Behavior, the intention to behave green is determined by attitudes, subjective norms, and perceived behavioral control where the study found that Islamic religious norms significantly strengthened the relationship between pro-environmental attitudes and green behavior of elementary school employees in West Java (Simarmata, 2024). Although previous studies have shown the potential of Islamic religiosity as a driver of sustainability, there is still a lack of empirical evidence in the context of secondary education institutions in Indonesia (Sagala et al., 2024; Wakhidah & Erman, 2022). Therefore, this study will test an integrative model combining employee motivation, environmentally friendly attitudes and behaviors, and Islamic religiosity to explain the contribution of the education sector to achieving SDG 4 (Quality Education) and SDG 13 (Climate Action), while also offering strategies to increase the capacity of education personnel as agents of ecological change (Handayani et al., 2024).

The importance of green performance training can improve employee knowledge and skills in the industrial and educational sectors (Darvishmotevali & Altinay, 2022a, 2022b). However, their studies have not explained the psychological mechanisms behind the formation of green behavior. According to the Theory of Planned Behavior (Ajzen, 1991, 2020), green behavioral intentions are influenced by three main constructs it is attitudes, subjective norms, and perceived behavioral control and have been applied to study Employee Green Behavior (EGB) in the financial sector (Ahshanul Mamun, 2023), health (Fakhrudin et al., 2025; Mateen, Mahek, et al., 2023; Mateen, Thomas, et al., 2023), hospitality (Tariq et al., 2020; Tuan, 2022), textiles (S. H. Ali & Puppim de Oliveira, 2018; S. R. Ali et al., 2024), and tourism (Sinaga et al., 2024). On the other hand, Self-Determination Theory emphasizes the role of autonomy, competence, and relatedness needs in motivating pro-environmental behavior, but its application to the context of employee EGB is still very limited. In addition, the literature has not explored much about how Islamic religiosity as a norm and source of motivation as moderates the relationship between motivation and green behavior, especially in secondary education institutions in Indonesia (Maksimenko et al., 2023). This study attempts to fill this gap by testing an integrative model that combines the TPB construct, SDT psychological needs fulfillment, and Islamic religiosity moderation to explain the variance of educational employee EGB, while also offering recommendations for strategies to strengthen the role of education personnel in achieving SDG 4 (Quality Education) and SDG 13 (Climate Action).

Employee awareness of environmental impacts can be understood through the Theory of Planned Behavior (Ajzen, 2020), where attitudes, subjective norms, and perceived control influence green behavioral intentions (Daily & Huang, 2001;). In addition, Self-Determination Theory suggests that fulfilling the needs for autonomy, competence, and relatedness increases intrinsic motivation to adopt green practices (Benn, 2014). In the context of higher education, studies have revealed that employees' environmental knowledge positively contributes to the ecological performance of institutions (Tariq et al., 2020) and that lecturers' pro-environmental attitudes influence students' green behavior (Farooq et al., 2023). This study will examine the role of psychological and religious factors in shaping employees' attitudes and behaviors towards environmental issues, in order to support sustainability strategies in educational institutions.

As the largest Muslim population in the world, Indonesian employees have strategic potential as agents of environmental change through green behavior (Mateen, Mahek, et al., 2023; Tuan, 2022). Although many empirical studies have discussed Employee Green Behavior (EGB) in the financial,

healthcare, and hospitality sectors, attention to internal psychological factors intrinsic-extrinsic motivation, green attitude, and Islamic religiosity is still limited (Maksimenko et al., 2023). Based on the Theory of Planned Behavior, pro-environmental attitudes, subjective norms influenced by Islamic values, and perceived behavioral control predict EGB intentions (Huang et al., 2024). In addition, Self-Determination Theory asserts that fulfilling the needs for autonomy, competence, and relatedness increases intrinsic motivation for green practices (Ryan & Deci, 2000). The Islamic perspective reinforces this ecological responsibility as a moral obligation, as evidenced by the concept of the caliph and (QS. Al-A'raf: 56) which emphasizes the necessity of preserving the earth (Aripin & Nugroho, 2023). However, current literature still focuses on individual consumption behavior outside the organization (Abutaleb et al., 2021; Begum, Jingwei, Haider, et al., 2021; Begum, Jingwei, Marwat, et al., 2021) without integrating all these constructs in the context of secondary education. Therefore, this study will design an integrative model that links Islamic motivation, attitude, and religiosity to explain the variance of employee EGB in educational institutions, while formulating strategies to increase green leadership capacity that are relevant to achieving SDG 4 and SDG 13 (Ahshanul Mamun, 2023; Lestari et al., 2024).

This study is based on the Theory of Planned Behavior (Ajzen, 2020), Self-Determination Theory (Ryan & Deci, 2024), and the mandate to protect the earth from an Islamic perspective (Aripin & Nugroho, 2023), and aims to uncover the psychological and religious mechanisms behind the green attitudes of Muslim academic staff in Indonesian universities (Rosita et al., 2025). First, the study will assess the direct influence of the level of religiosity including the frequency of worship and the depth of understanding of Islamic values on Employee Green Attitude (EGA). Second, the role of intrinsic motivation (need for autonomy, competence, relatedness) and extrinsic motivation (incentives, rewards) will be analyzed as predictors of religiosity which then shapes green attitudes. Third, this study will evaluate the contribution of Employee Green Behavior (EGB) concrete actions of employees in environmentally friendly practices in strengthening religiosity and solidifying green attitudes. With this integrative model, it is hoped that strategic recommendations will be obtained to instill religious-based sustainability values in environmental management policies and practices in higher education institutions.

This research is very crucial because it is in line with Indonesia's commitment in the RPJMN to support the achievement of SDGs and respond to climate change (Asia, 2022) and utilizes the unique context as a country with the largest Muslim population to integrate religious values into sustainability practices. Although a number of studies have examined the relationship between religiosity and environmental awareness (Abutaleb et al., 2021; Begum, Jingwei, Haider, et al., 2021), none have explored the mediating role of religiosity in relation to intrinsic and extrinsic motivation and employee green behavior in higher education a strategic sector as an agent of change (Disterheft et al., 2012).. By testing an integrative model linking motivation, religiosity, and Employee Green Behavior to Employee Green Attitude, this study is expected to provide evidence-based recommendations for designing policies and training programs that strengthen green leadership based on Islamic values in higher education institutions.

Literature Review

Employee green behavior (EGB)

Employee Green Behavior (EGB) is a form of Organizational Citizenship Behavior (OCB) that is voluntary and supports environmental sustainability, such as energy saving, waste sorting, and waste reduction initiatives, as explained by Organ in his book *Organizational Citizenship Behavior* and classified as contextual performance in Organizational Behavior. EGB plays a crucial role in the Green Human Resource Management (GHRM) framework to improve organizational environmental performance (Johnson & Walston, 2021; King & Lawley, 2022). Empirical research confirms that employees' pro-environmental values and attitudes are key predictors of EGB. For example, Chan, Hon, Chan, and Okumus (2017) found that employees with high pro-environmental personal values had a greater frequency of participation in green practices (King & Lawley, 2022). In addition, (Farooq et al., 2023) showed that an organizational climate that actively supports green initiatives through policies, training, and communication increases employees' intentions to engage in EGB. Beyond organizational policies, individual psychological factors also influence EGB. And then revealed that employees with high job satisfaction and sense of belonging are more motivated to voluntarily engage in environmentally friendly actions (King & Lawley, 2022). Similarly emphasized the role of green training programs that enhance employees' competence and engagement with organizational values, thereby triggering an increase in the frequency of EGB (Darvishmotevali & Altinay, 2022b). Thus, EGB can be understood as a multidimensional construct arising from the interaction of individual values, organizational support, and psychological context that provides a theoretical and empirical framework for designing effective GHRM interventions.

Employee green attitude (EGA)

Employee Green Attitude (EGA) is defined as an employee's internal disposition that reflects affective, cognitive, and conative evaluations of environmental issues and readiness to support sustainability initiatives in the organization (Ajzen, 2020). Ajzen stated that attitude acts as a mediator between basic beliefs and behavioral intentions and expanded it through the construction of subjective norms and behavioral control. In the organizational environment emphasized that employee attitudes are the main predictors of Organizational Citizenship Behavior towards the environment (Conte, 2024). Empirically, Chan et al. (2017) found that EGA explained 38% of the variance of Employee Green Behavior in the hospitality sector reported a prediction of 45% of the variance of pro-environmental behavior in manufacturing workers in China (Dhir et al., 2025) and Farooq et al. (2023) showed that lecturers with high levels of EGA significantly more often integrated sustainability topics into lectures (Farooq et al., 2023). Furthermore, Abutaleb et al., (2021) found that Islamic religiosity strengthened the relationship between EGA and EGB through moderation of religious norms, so EGA should be understood as a multidimensional construct and combination of theoretical beliefs, affective evaluations, and religious commitment as a basic for designing Green Human Resource Management interventions in Indonesian Islamic universities.

Religiosity

Religiosity is defined as the degree to which a person adheres to spiritual teachings, values, and practices in everyday life, which according to encompasses five dimensions of belief, practice, experience, knowledge, and consequences as the main multidimensional [framework \(Glock & Bellah, 2024\)](#). Allport (1950) distinguished intrinsic religious orientation and motivation of internal meaning and value from extrinsic orientation instrumental motivation which is indicates the extent to which religious values are internalized in work behavior ([Van Herwaarden, 2021](#)). From a coping psychology perspective asserted that religious beliefs and practices serve as inner resources for interpreting and responding to stress, thereby strengthening moral resilience in the face of environmental dilemmas ([Davis et al., 2023](#)). In addition, Koenig, King, and Carson (2012) in the Handbook of Religion and Health documented the consequences of religiosity for well-being including healthy behaviors and social responsibility as a theoretical basis for religious values to encourage pro-social behaviors such as ecological concern ([Cutts, 2024](#)). Empirical support for this framework is found in the study for intrinsic religious values significantly increase employee sustainability behavior through increased pro-environmental attitudes and a cross-cultural study which showed that religious beliefs facilitate employees' hope ("HOPE") to protect the environment, thereby narrowing the gap between green intentions and actions ([Mo et al., 2023](#)). Thus, religiosity based on theoretical primary sources from leading books has the potential to be the foundation for effective Green Human Resource Management strategies in Islamic higher education institutions.

Self-determination theory and motivation

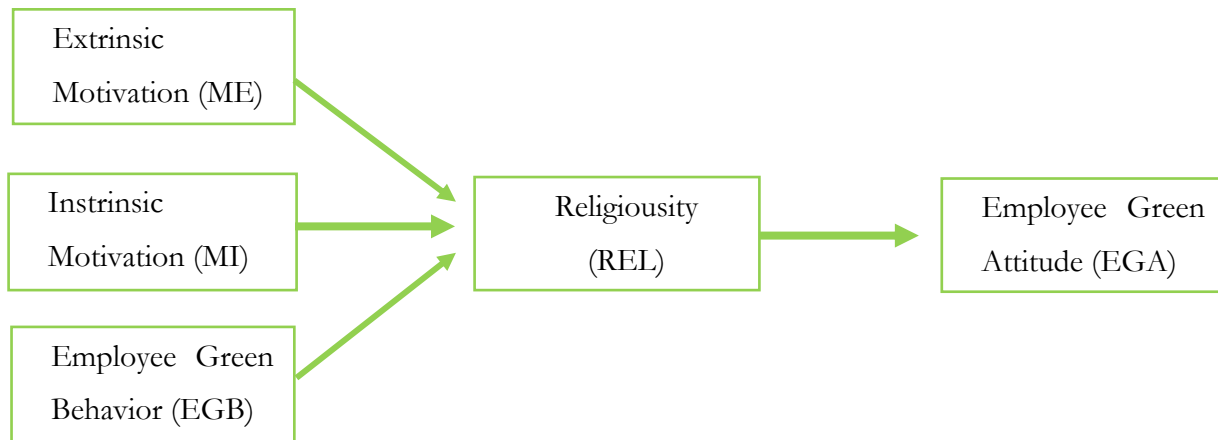
Self-Determination Theory (SDT) was first formulated by Deci and Ryan in their book *Intrinsic Motivation and Self-Determination in Human Behavior*, which emphasized three basic psychological needs autonomy, competence, and relatedness as sources of intrinsic motivation and well-being ([Ryan & Deci, 2024](#)). [Ryan and Deci \(2017\)](#) in *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness* extended this framework by showing that the satisfaction of these needs across contexts from education to work to health is a prerequisite for optimal human functioning ([Ryan, 2023](#)). Furthermore, their *Handbook of Self-Determination Research* introduced the internalization continuum, which explains how extrinsic motivation can be transformed into motivation aligned with personal values when autonomy is supported ([Mynard & Shelton-Strong, 2022](#)). Empirical evidence supports this mechanism: [Jeno et al., \(2023\)](#) found that faculty autonomy support increased student academic engagement and achievement through increased feelings of competence; while [Gagné et al., \(2023\)](#) reported that fair and transparent incentive designs meet employees' autonomy and competence needs, thereby encouraging performance while reducing work burnout. Thus, SDT provides a solid theoretical framework for designing motivational interventions in Green Human Resource Management.

Methodology

Research design and approach of the study

This study employed a quantitative approach that seeks to examine the causal relationships among several psychological and behavioral factors influencing Employee Green Attitude in the education sector in Indonesia. In this research method, the researcher conducted a review of previous studies through secondary data such as journal articles, proceedings, or through seminars to find research gaps and novelties which were then continued by compiling a framework for thinking. Specifically, self-determination theory (Ryan & Deci, 2000) was used to conceptualize intrinsic and extrinsic motivation and the theory of planned behavior (Ajzen, 2020) guided understanding of environmental attitudes. These foundational theories provided a robust theoretical underpinning and ensured that the constructs were conceptually valid and relevant for the research context. This study aims to test the hypothesized relationships among Intrinsic Motivation (MI), Extrinsic Motivation (ME), Employee Green Behavior (EGB), Religiosity (REL) and Employee Green Attitude (EGA). The conceptual framework developed from this theoretical foundation was the empirically tested. Primary data were collected using a structured questionnaire designed to measure these five constructs. Data were analyzed using the Partial Least Squares-Structural Equation Modelling (PLS-SEM) analysis method to determine the relationship between endogenous variables and exogenous variables that had been determined.

Figure 1. *Research path diagram*



Research site and participants

The sampling technique used in this study is non-probability sampling, as elements within the population do not have any probability of being selected as subjects. The non-probability technique employed is purposive sampling and judgement sampling (Hossan et al., 2023). This approach was used because the sample focuses solely on specific criteria, which included: (1) Muslim; (2) Employed in the education sector; (3) Limited to millennials and Gen Z; (4) Residing in Indonesia. The instrument used in this study was tested through a pre-test and reviewed further before being

distributed to respondents. This questionnaire consisted of 5 variables: Intrinsic Motivation (MI) consisting of 3 items; Extrinsic Motivation (ME) including 3 items; Employee Green Behavior (EGB) consisting of 2 items; Religiosity (REL) including 3 items; and Employee Green Attitude (EGA) consisting of 3 items. Each item in these variables was measured using a likert scale, ranging from strongly disagree to strongly agree. The Likert scale is designed to assess how strongly respondents agree with a statement, enabling differentiation of consumers' attitudes toward predefined variables. A total of 81 valid responses were obtained and included in the analysis. All participants provided informed consent prior to their participation in the study. They were assured of the confidentiality and anonymity of their responses, and they explicitly agreed to the use of their data for academic research purposes only.

Data collection and analysis

Data collection in this study was conducted through an online survey using a closed questionnaire based on a 5-point Likert scale distributed to 81 Muslim employees in higher education institutions in Indonesia using a purposive sampling technique. The collected data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method with the help of SmartPLS 4.0 software. The SEM-PLS method was deemed appropriate for this study due to its ability to analyze complex causal models involving latent variables, its robustness against non-normal data distributions, and its suitability for moderate sample sizes. The analysis consisted of two stages; evaluation of the measurement model (including convergent validity, discriminant validity and reliability) and assessment of the structural model, which tested the hypothesized relationships between constructs. To determine the significance of path coefficients and mediation effects, a bootstrapping procedure with 5000 subsamples at a 95% confidence level was applied, in accordance with guidelines from (J. F. Hair et al., 2019). Within the structural model, MI, ME and EGB functioned as independent variables and EGA was the dependent variable. This methodological framework allowed for a comprehensive analysis of both direct and indirect effects, thereby aligning the empirical design closely with the theoretical and practical aims of the study.

Results

Analysis of learning implementation

This study applied the PLS-SEM model using Smart PLS 4 software. This method is used to examine and assess the relationships among the observed elements. The initial step of the PLS-SEM method involves evaluating the quality of the measurement model, in terms of both reliability and validity. The author observed *factor loadings* to determine the internal consistency, and the results are presented in table 1. Based on table 1, all factor loadings fall within the recommended threshold of 0.708 . (J. F. Hair et al., 2021)

Table 1. *Outer loadings*

Var	Items of the Constructs	Outer Loadings
EGA1	I support green behavior in the workplace	0.901
EGA2	I think that efforts to encourage employees to practice green behavior in the workplace are a wonderful idea	0.928
EGA3	I think it is crucial to practice green behavior at workplace	0.920
EGB1	I bring reusable eating and drinking utensils to minimize waste and promote sustainability	0.844
EGB2	I turn off the lights When I leave the office for a while, and there is no one else	0.863
ME1	I believe that implementing green behavior is meaningful and important	0.925
ME2	My desire to create a sustainable earth for future generations will be fulfilled if I practice environmentally friendly conduct	0.871
ME3	My identity as a good Indonesian can be demonstrated by environment friendly behavior	0.814
MI1	I enjoy adopting green behaviors such as reducing the use of single-use plastics, bringing reusable eating and drinking utensils, disposing of waste properly, and conserving energy by turning off unused electrical appliances.	0.908
MI2	I feel that it is interesting to take action to protect the environment and coming generations	0.898
MI3	It gives me inner satisfaction to practice environmentally friendly conduct	0.901
REL1	It is important for me to take time to pray to Allah	0.932
REL2	I believe that the Prophet Muhammad (SAW) is my role model in leading my daily life	0.920
REL3	I have faith in the existence of Hell and the Day of Judgment	0.824

Then, the measurement of the internal consistency reliability is conducted to determine the extent to which indicators measuring the same construct are correlated with each other (J. F. Hair et al., 2021). According to the literature, when the composite reliability (ρ_c) exceeds 0.7, it is generally considered adequate and indicates good reliability (J. Hair et al., 2017), J. F. Hair et al., 2021). The author has presented the composite reliability values in table 2 which shows that all ρ_c values exceed above 0.7.

Table 2. *Construct reliability and validity*

	Cronbach's alpha	Composite reliability (ρ_a)	Composite reliability (ρ_c)	AVE
EGA	0,906	0,934	0,940	0,840
EGB	0,628	0,629	0,843	0,729
M	0,848	0,957	0,904	0,759
ME	0,887	0,900	0,929	0,814
REL	0,875	0,920	0,922	0,798

Meanwhile, the convergent validity and the discriminant validity were evaluated within the reflective measurement model. Convergent validity assesses the extent to which a construct explains the variance of its indicators (J. F. Hair et al., 2021). To measure convergence validity, Hair recommends

using the Average Variance Extracted (AVE), where the minimum acceptable AVE value is 0.5 or higher. The author has presented the AVE values in table 2, indicating that all AVE values are acceptable, as they exceed 0.5. Moreover, the discriminant validity is evaluated using the Heterotrait-Monotrait Ratio (HTMT) technique (J. F. Hair et al., 2021). According to Hair, the HTMT value should be below 0.85. Since all scores meet the HTMT criteria, as shown in table 3, this confirms that discriminant validity has been achieved.

Table 3. *discriminant validity: heterotrait-monotrait ratio (htmt)*

	EGA	EGB	ME	MI	REL
EGA					
EGB	0,405				
ME	0,769	0,232			
ME	0,704	0,320	0,815		
REL	0,497	0,317	0,553	0,581	

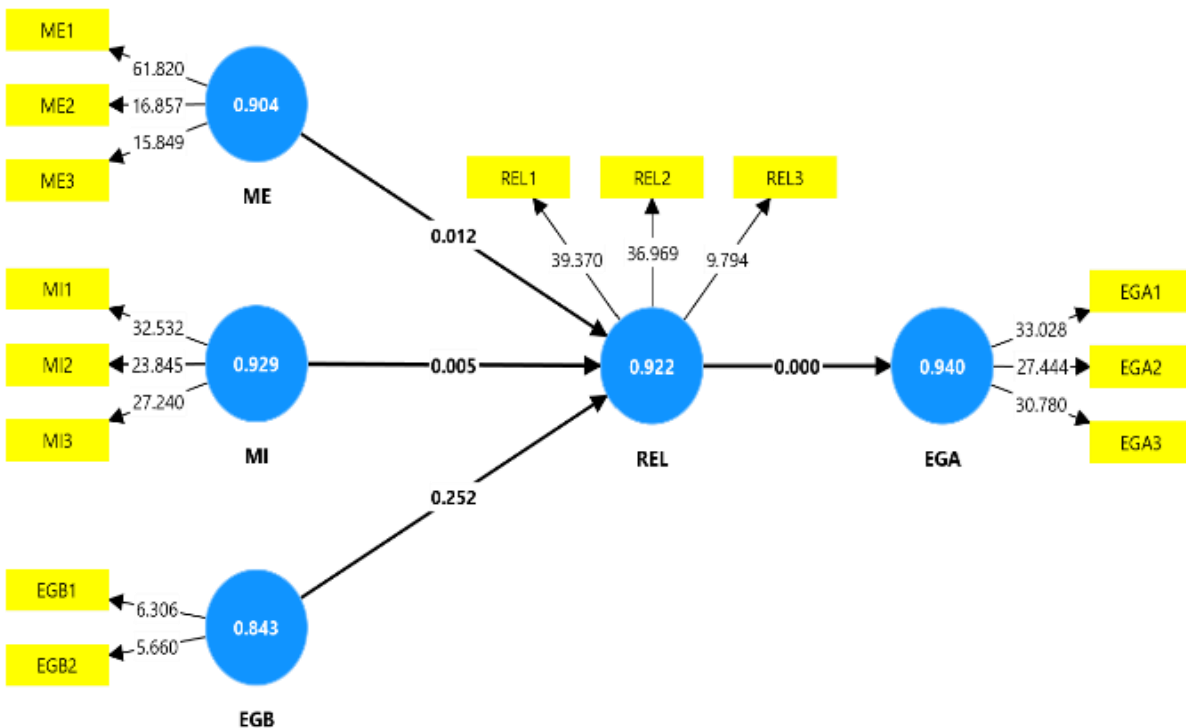
Subsequently, an evaluation is conducted to detect potential multicollinearity issues. This is performed when assessing the structural model (Ahshan Mamun, 2023). Multicollinearity issues arise when the VIF value is 5 or higher (J. F. Hair et al., 2019). Based on table 4, the VIF values are below 5, indicating that there is no multicollinearity among the variables in the model.

Table 4. *Collinearity statistics (VIF)-Inner model*

	EGA	EGB	REL
EGA			
EGB			1,065
ME			2,097
MI			2,158
REL	1,000		

Relationship between extrinsic motivation (me), intrinsic motivation (mi), employee green behavior (egb), religiosity (rel), and employee green attitude (ega)

The data processing in this study then was conducted using Smart-PLS software to perform mediation analysis. In addition, the bootstrapping method with 5000 resampling iterations was used to assess the structural SEM model using path coefficient (β) and t-statistics, as shown in Figure 2. The research hypothesis is bidirectional, where a t-value above 1.96 at a 5% significance level is considered acceptable (J. F. Hair et al., 2019). For the path coefficient (β), the larger the value, the greater the impact on endogenous variables.

Figure 2. *The structural model for factors influencing employee green attitudes*

The structural model analysis revealed several important findings that were aligned with the proposed hypotheses. First, extrinsic motivation (ME) was found to have a positive and significant effect on religiosity (REL), as indicated by a path coefficient of $\beta = 0.277$ and a p-value of 0.012. This supports the first hypothesis (H1), suggesting that external drivers, such as institutional policies or rewards, can enhance religious consciousness in employees within the context of environmental engagement. Furthermore, mediation analysis demonstrated that religiosity significantly mediates the relationship between extrinsic motivation and green attitude (Employee Green Attitude/EGA), with an indirect effect of $\beta = 0.130$ and $p = 0.044$. This finding confirms the second hypothesis (H2), indicating that religiosity functions as a psychological conduit through which external motivation can translate into pro-environmental attitudes. Similarly, intrinsic motivation (MI) also showed a positive and significant influence on religiosity ($\beta = 0.310$, $p = 0.005$), thereby confirming the third hypothesis (H3). This result highlights the importance of internal values such as personal responsibility, moral commitment, and spiritual calling in shaping religious beliefs related to environmental responsibility. In line with this, religiosity was also found to mediate the relationship between intrinsic motivation and green attitude significantly ($\beta = 0.145$, $p = 0.014$), thus supporting the fourth hypothesis (H4). These findings collectively reinforce the role of religiosity as a crucial mediating variable linking personal motivation—both extrinsic and intrinsic—to the formation of environmentally responsible attitudes.

However, contrary to expectations, employee green behavior (EGB) did not exhibit a significant effect on religiosity ($\beta = 0.113$, $p = 0.252$), leading to the rejection of the fifth hypothesis (H5). This suggests that while employees may engage in green behaviors, such actions do not necessarily stem from or enhance religious values, but may instead be responses to external influences such as

workplace norms or compliance with environmental regulations. Furthermore, the sixth hypothesis (H6), which posited that religiosity mediates the relationship between green behavior and green attitude, was also not supported, as the indirect effect was statistically insignificant ($t = 1.043 < 1.96$). These findings imply that green behavior alone, without the underpinning of religious belief, may not be sufficient to shape internal pro-environmental attitudes. Overall, the results emphasize the central role of religiosity as a mediating variable that links personal motivation particularly intrinsic and extrinsic to employees' attitudes toward the environment. This study provides theoretical contributions by validating religiosity as a critical psychological mechanism in environmentally conscious behavior models, while also offering practical insights for institutions aiming to integrate spiritual values into environmental management strategies, especially within Islamic higher education settings.

Meanwhile, Tabel 6 presents the direct hypothesis testing results. The findings indicate that both external (ME) and internal (MI) employee motivation have a significant effect on religiosity (REL), with the statistical results as follows: ($\beta = 0.277$, $t = 2.519 > 1.96$, $p < 0.012$, CL-BC = [0.044, 0.474]) for ME, and ($\beta = 0.310$, $t = 2.779 > 1.96$, $p < 0.005$, CL-BC = [0.109, 0.548]) for MI. This study also found a significant direct effect of REL as a mediating variable on EGA ($\beta = 0.468$, $t = 5.512 > 1.96$, $p < 0.000$), with a bias-corrected 97.5% confidence interval (CL-BC) ranging from 0.314 to 0.474. In contrast, the study found that the direct relationship between EGB and REL was not statistically significant, as indicated by the beta coefficient of 0.113, a t-value of 1.146 (below the critical t-value of 1.96), a p-value of 0.252, and a confidence interval of (-0.053, 0.339).

Table 5. *Path Coefficients (Direct effect) and hypothesis testing*

	Beta Coeff	Sample Mean (M)	STDEV	T-Value	P-Value	2.5%
EGB → REL	0,113	0,130	0,098	1,146	0,252	0,0053
ME → REL	0,277	0,276	0,110	2,519	0,012	0,044
MI → REL	0,310	0,319	0,112	2,779	0,005	0,109
REL → EGA	0,468	0,483	0,085	5,512	0,000	0,314

Furthermore, table 6 shows the indirect effect of each independent variable (ME, MI, & EGB) on the dependent variable (EGA) through the mediating variable (REL). Overall, ME and MI have a significant effect both directly and indirectly on EGA. These findings suggest that religiosity, as a mediating variable, strengthens the relationship between Muslim employees' motivation in the education sector and their attitudes towards the environment. This is evidenced by the statistical results of ($\beta = 0.130$, $t = 2.017 > 1.96$, $p < 0.044$, CL-BC = [0.018, 0.266]) for ME and ($\beta = 0.145$, $t = 2.453 > 1.96$, $p < 0.014$, CL-BC = [0.049, 0.282]) for MI. Conversely, this is not the case for the EGB variable, where EGB does not significantly affect EGA when mediated by REL, with the t-value falling below the critical t-value of 1.043. In addition, EGB also has a direct effect on both EGA and REL.

Table 5. indirect effect of each independent variable

	Beta Coeff	Sample Mean (M)	STDEV	T-Value	P-Value	2.5%
Spesific Indirect Effect						
EGB → REL → EGA	0,053	0,064	0,051	1,042	0,297	-0,023
ME → REL → EGA	0,130	0,136	0,064	2,017	0,044	0,018
MI → REL → EGA	0,145	0,153	0,059	2,453	0,014	0,049
Total Effect						
ECE → EGA	0,053	0,064	0,052	1,403	0,297	-0,023
EGB → REL	0,113	0,130	0,098	1,146	0,252	-0,053
ME → EGA	0,130	0,136	0,064	2,017	0,044	0,018
ME → REL	0,277	0,276	0,110	2,519	0,012	0,044
MI → EGA	0,145	0,153	0,159	2,453	0,014	0,049
MI → REL	0,310	0,319	0,112	2,779	0,005	0,109
REL → EGA	0,468	0,483	0,085	5,512	0,000	0,314

Discussion

Relationship between motivation (intrinsic and extrinsic), religiosity, green employee behavior (EGB), and green employee attitudes (EGA)

Simultaneously, significant results were obtained on the relationship between motivation (intrinsic and extrinsic), religiosity, green employee behavior (EGB), and green employee attitudes (EGA) in the higher education sector in Indonesia. Partially based on the results of processing using SEM-PLS (Structural Equation Modeling- Partial Least Squares), it was found that there was no relationship between EGB and Religiosity. Although the direction of the relationship is positive, the P value is greater than the data significance of 0.05 and the T value is also low (1.146). This shows that ecological actions and concern for the environment in Muslim employees have spiritual and religious values that are standard and good. This condition is in accordance with the concept of [Festinger's Cognitive Dissonance Theory \(1957\)](#) which describes the possibility of differences between attitudes, actions and internal beliefs. A person can take actions and behaviors that do not always reflect their values or beliefs, especially when there is encouragement from the social or organizational environment ([Miller et al., 2015](#)).

EGB is an attitude and application of compliance values towards organizational policies and community groups, not because of internalized internal values. ([Tian et al., 2020](#)) in their research explained that a strong green work climate can give birth to and create green behavior without any treatment of profound value changes. In carrying out their daily values, employees act in an environmentally friendly manner because they "have to" (external motivation) do something because of rules or values, not because they "want to" without coercion or intervention from others (internal motivation). Therefore, EGB that is not based on religious beliefs can be shallow or temporary, and less effective in the long term. Then, high religiosity cannot automatically be actualized in real behavior, especially if there is no environment or support system that encourages the conversion of values into action ([Nazir et al., 2022](#)). Then, internalized motivation and values need to be supported by a supportive social context so that they can be realized in real action ([Ryan and Deci, 2000](#)). Thus,

even though spiritually employees have high religious awareness, without the integration of these values into the organizational system, these values may not appear in the form of daily ecological actions.

The relationship between REL and EGA was assessed in the first hypothesis (H1) and was found to be significant. Religion is an important factor that can motivate individuals to think, act and live ethically (Nazir et al., 2022). Islamic teachings emphasize that every human being is a *khalifah* who is responsible for maintaining the sustainability of the universe. According to (Begum, Jingwei, Haider, et al., 2021), Islam regulates various aspects of human life, including employees' interest in preserving the environment. Many religions, including Islam, Hinduism, Buddhism, Christianity and Judaism emphasize the importance of protecting and respecting the earth and all its inhabitants (Abutaleb et al., 2021). Therefore, the findings of this study reveal that the level of religiosity among Muslim employees in the education sector positively influences their environmentally friendly attitudes. The higher the level of religiosity, the greater the likelihood of having environmentally friendly attitude. External incentives such as social rewards, organizational norms, or leadership expectations can encourage the internalization of religious values and the formation of positive attitudes towards the environment. These results support the findings of De Groot & Steg (2010) who explained that instrumental values and social norms play an important role in the formation of pro-environmental orientation. In addition, Nazir et al. (2022) emphasized that in the Muslim context, the collective nature of Islamic work ethics can strengthen the relationship between external motivation and spiritual values. This finding is also in line with Ahshanul Mamun (2023) research which shows that external motivation managed with an autonomous approach can be converted into sustainable environmentally friendly behavior. In the higher education sector, employees are often influenced by strong institutional reward systems and social expectations, which indirectly encourage them to adopt sustainability values as part of their professional identity (Farooq et al., 2023). Furthermore, the framework of Self-Determination Theory also stated that extrinsic motivation can develop into internal motivation when organizational values are in line with personal values, including religious values, so as to strengthen a more stable and meaningful ecological attitude.

This study also showed a significant relationship between ME and REL (H1) and EGA (H2). This indicates that the attitude of Muslim employees in the education sector is influenced by external factors beyond themselves. These results are consistent with previous research by (De Groot & Steg, 2010) and (Ahshanul Mamun, 2023) which state that the external motivation, such as when an individual starts to understand the importance of environmentally friendly actions, has a positive effect on environmental attitudes. Thus, the relationship between external motivation and environmental attitudes is related to the influence of external factors that encourage individuals to adopt behaviors related to environmental sustainability. Moreover, religiosity was considered capable of mediating the relationship between ME and EGA. External motivation and religiosity interact to influence the pro-environmental attitudes of Muslim employees in the education sector. Research shows that external motivations, such as incentives from management and environmental policy support, can reinforce positive attitudes towards sustainability when combined with high levels of religiosity (Preston & Baimel, 2021). Employees with strong religiosity tend to feel more environmentally responsible, as many religious teachings, including Islam, emphasize the importance of protecting and caring for nature as part of worship (Terzani & Turzo, 2021; Yang & Gao, 2022). In addition, external motivation provided by educational institutions, such as reward programs for environmentally friendly practices, can increase employee engagement in sustainability initiatives, thus creating a work environment that is more concerned about environmental issues (Basri & Damis, 2023; Begum, Jingwei, Marwat, et al.,

2021). Thus, the combination of external motivation and religiosity may be a key factor in shaping environmentally friendly attitudes among Muslim employees in the education sector.

The next hypothesis examined how MI affects REL (H3) and EGA (H4). The results showed that attitudes towards the environment were influenced by the internal motivation of Muslim employees working in the education sector. These results align with the study (Ahshan Mamun, 2023), which states that internal motivation significantly affects individuals' environmental attitudes. People with intrinsic motivation tend to take actions that benefit the environment (Sabbir & Taufique, 2022). How employees view their environment is greatly influenced by their motivation. Motivated employees tend to be more aware of environmental issues and are more active in doing environmentally friendly things in their workplace. Intrinsic motivations, such as a sense of social responsibility and personal satisfaction, can encourage employees to support sustainability initiatives (Rongbin et al., 2022). In addition, research conducted by Boiral shows that organizations that provide support and rewards to employees who contribute to environmental sustainability can make them more motivated and more committed to green practices (Huang et al., 2024). This emphasizes that a supportive and motivating work environment can increase employees' belief in sustainability and result in a more environmentally friendly organizational culture (Akbar et al., 2024).

The results of this study suggested that Muslim employees in the education sector were more motivated to adopt a positive attitude towards environmental sustainability and naturally enjoy engaging in activities related to environmental preservation and protection. Additionally, the results of this study also indicated that religiosity mediated the relationship between employees' intrinsic motivation and EGA, where individuals with intrinsic motivation toward the environment tend to engage in worship, follow religious teachings and adhere moral values. According to (Lestari et al., 2024) Environmentally conscious individuals are more likely to invest in eco-friendly products. Furthermore, the study also evaluated the relationship between EGB to REL (H5) and EGA (H6). The results showed that EGB did not have a significant effect on either REL or EGA. Previous studies ((Bissing-Olson et al., 2013, Ahshan Mamun, 2023, Tian et al., 2020) have found that EGA significantly influences EGB. However, this study did not show the opposite relationship. Based on Festinger's (1957) cognitive dissonance theory, an individual's behavior may not align with their attitude (Miller et al., 2015). Muslim employees in the education sector may engage in pro-environmental behavior due to pressure, but they may not hold environmental values. This suggests that their actions do not fully reflect a personal commitment to sustainability principles or environmental ethics. This suggests that their actions do not fully reflect a personal commitment to sustainability principles or environmental ethics, but rather a response to workplace or societal expectations.

Factors that may contribute then to this include a lack of support from leadership and the work environment, the absence of internalization of environmental values, and employees' limited understanding of the importance of environmental sustainability. According to (Iqbal et al., 2023) When leaders provide clear signals of their commitment to protecting the environment, it triggers a sense of environmental responsibility among employees, which can ultimately encourage their engagement with various environmental issues. Leaders who give clear signals about their commitment to protecting the environment play an important role in building a culture of sustainability within the organization. When leaders actively show support for environmental initiatives, it not only creates awareness among employees, but also triggers a greater sense of environmental responsibility among them. Employees who feel that their leaders are committed to

sustainability tend to be more engaged in various environmental issues, such as waste reduction, efficient use of resources, and participation in sustainability programs.

As such, this engagement not only supports the Sustainable Development Goals (SDGs), specifically SDG 12 on Responsible Consumption and Production, but also contributes to the achievement of other SDGs, such as SDG 13 on Addressing Climate Change. Through proactive leadership and a clear commitment to environmental protection, organizations can create sustainable positive impacts, both for employees and society at large (Hammond, 2021; Kazancoglu et al., 2021; Kersting, 2021). Thus, it is important to conduct future research that focuses on organizational commitment and values in developing policies that encourage their employees' interest in all environmental activities, especially in developing countries with a Muslim majority.

Conclusion

This study successfully uncovered the psychological and religious mechanisms underlying the formation of Employee Green Attitude (EGA) among Muslim employees in Indonesian universities. The results of the SEM-PLS analysis showed that both intrinsic and extrinsic motivations had a positive and significant effect on religiosity, which then mediated the formation of employees' green attitudes. The magnitude of $R^2 = 0.922$ for the religiosity model and $R^2 = 0.940$ for the EGA model confirmed the predictive ability of this integrative model. In contrast, Employee Green Behavior (EGB) did not provide a significant direct or indirect effect on religiosity or green attitudes, indicating that environmentally friendly actions that are policy or compliance in nature are not necessarily reflected in employees' religious beliefs and commitments. These findings also emphasize the central role of religiosity through the internalization of Islamic values and the fulfillment of the needs for autonomy, competence, and connectedness as catalysts that connect employee motivation with deep pro-environmental attitudes. In practice, higher education institutions need to design Green Human Resource Management interventions that integrate religious value training, strengthening employee autonomy, and reward policies that are in line with Islamic teachings. Thus, universities can strengthen their religious-based green leadership capacity, while supporting the achievement of SDG 4 (Quality Education) and SDG 13 (Climate Action) by increasing the ecological awareness and commitment of academic staff. This study successfully uncovered the psychological and religious mechanisms underlying the formation of Employee Green Attitude (EGA) among Muslim employees in Indonesian universities.

Disclosure statement

No potential conflict of interest was reported by the authors

Acknowledgments

The author would like to thank the UT Leadership for giving the opportunity to conduct research, all respondents, especially Muslim employees in higher education institutions in Indonesia who have participated in filling out the questionnaire. Thanks are also conveyed to the journal management team and reviewers who have provided constructive input in improving this article. Not to forget, appreciation is given to colleagues and affiliated institutions who have provided support during the research process

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