

Religiosity and Sustainability: The Role of Religious Values in the Economic–Environmental Trade-Off in Indonesia



Ahmad Syahrul Fauzi^{a*}, Sri Runtiningsih^b, Prabowo Yudo Jayanto^c, Ubaedul Mustofa^d, Risanda Alirastra Budiantoro^e

^a ahmadsyahrulfauzi@mail.unnes.ac.id, Universitas Negeri Semarang, Semarang, Indonesia

^b sri_runtiningsih@mail.unnes.ac.id, Universitas Negeri Semarang, Semarang, Indonesia

^c Yudho@mail.unnes.ac.id, Universitas Negeri Semarang, Semarang, Indonesia

^d ubaed_almustafa@mail.unnes.ac.id, Universitas Negeri Semarang, Semarang, Indonesia

^e risanda.abe@mail.unnes.ac.id, Universitas Negeri Semarang, Semarang, Indonesia

*Corresponding Author: ahmadsyahrulfauzi@mail.unnes.ac.id

Receipt: 01 March 2026; Revision: 09 April 2026; Accepted: 21 April 2026

Abstract: This study aims to analyze the role of religiosity in shaping individual preferences regarding the trade-off between economic development and environmental preservation, using data from the World Values Survey (WVS) in Indonesia for the period 2017–2022. The estimation was conducted using a probit regression model, with the trade-off measured through individual responses to the statement, “protecting the environment should be a priority even if it slows down the economy.” Religiosity was operationalized through two main indicators: frequency of worship and self-identification as a religious individual. The analysis reveals that both religiosity indicators positively and significantly increase the likelihood that individuals will prioritize environmental preservation over economic growth. These findings indicate that religious values play a substantive role in shaping societal sustainability orientations. In the context of Indonesia, a country characterized by a high level of religiosity, the results underscore the importance of integrating religious values into communication strategies and policy formulation for sustainable development. Spiritual values serve not only as moral principles but also as determinants of public attitudes toward environmental issues. This study offers empirical contributions to interdisciplinary scholarship linking religion, economics, and sustainability within the framework of developing countries.

Keywords: Religiosity; Environmental; Preservation; Sustainability; Trade-Off; Probit, WVS

This is an open access article under the CC-BY-SA license.



INTRODUCTION

Economic development and environmental sustainability are two dimensions that frequently exist in a trade-off relationship (Nguyen & Malesky, 2021; Running, 2015), wherein decision-making must account for sacrifices in one domain to achieve gains in another (Running, 2015). Efforts to boost economic growth through industrialization, natural resource exploitation, and infrastructure development often negatively impact ecosystem balance and environmental sustainability (Ahmed et al., 2022; Musah & Yakubu, 2023).

Conversely, policies that overly prioritize environmental preservation may hinder economic growth, particularly in developing countries that heavily rely on resource extraction (David Thomasberger & María Kristinsdóttir Gabriela Sabau, 2015; Ongo Nkoa et al., 2024). Thus, achieving a balance between economic development and environmental conservation constitutes a major challenge in public policymaking across nations.

Within the domains of social, economic, and environmental research, religiosity has gained increasing scholarly attention. Religiosity, which reflects the degree of individual adherence to religious values and teachings, can shape public perspectives and behaviors concerning social, economic, and environmental issues (Budarma, 2024; Wang & Lin, 2014). Religious doctrines generally emphasize moral responsibility, balance, and ethical treatment of the natural world and fellow human beings. These principles may encourage individuals to make decisions that consider not only short-term economic benefits but also long-term environmental and societal consequences (Chen & Yu, 2024; Mamat et al., 2024; Wiratama & Safitri, 2023).

This study employs data from Wave 7 of the World Values Survey (WVS), focusing exclusively on respondents from Indonesia (Haerpfer, et al., 2022). The WVS provides measures of religiosity as well as individual preferences regarding economic and environmental issues, thereby enabling empirical analysis of how religiosity influences individual preferences in navigating the trade-off between economic growth and environmental protection within the Indonesian context.

As a country with a high degree of religiosity and rich religious diversity, Indonesia provides a unique case in which religious values play a significant role in shaping social and cultural life. Nevertheless, despite the prevalence of religious teachings that emphasize harmony with nature, the practical implementation of these values in everyday behavior remains limited. The high rates of environmental degradation caused by deforestation, pollution, and large-scale resource extraction suggest a disconnect between moral-religious ideals and actual societal practices. This raises a critical question: to what extent does religiosity meaningfully influence individual attitudes and behaviors regarding environmental preservation? Investigating the relationship between religiosity and environmental concern in Indonesia is therefore essential to understanding the potential of religious values in advancing sustainable development agendas.

This study aims to examine the role of religiosity in the trade-off between economic development and environmental sustainability using WVS data from Indonesia covering the 2017–2022 period. By understanding this relationship, the research seeks to contribute to more balanced and sustainable development policy formulation by incorporating religiosity as a potentially influential social factor. Furthermore, the findings offer valuable insights for academic literature that bridges economics, the environment, and religiosity in the context of sustainable development. Examining the influence of religiosity on the trade-off between economic growth and environmental preservation is vital, as religious values can offer moral and ethical guidance that promotes more prudent and responsible decision-making (Nguyen & Malesky, 2021).

LITERATURE REVIEW

A few studies have been conducted to examine the relationship between religiosity and individual preferences regarding economic and environmental issues. Prior research indicates that religious values play a significant role in shaping individuals' economic behavior, including decisions related to the balance between economic development and environmental preservation (Agrawal et al., 2024; Budarma, 2024; Song & Conner, 2015; Wang & Lin, 2014). Several studies also suggest that individuals with higher levels of religiosity tend to exhibit greater concern for environmental sustainability, as most religious teachings emphasize the importance of maintaining ecological balance and fulfilling moral responsibilities toward creation (Budarma, 2024; Song & Conner, 2015).

While earlier studies have often explored religiosity within the context of specific religions, recent scholarly attention has expanded to include interfaith and non-denominational approaches, particularly in assessing how religious values influence individual preferences for sustainable development. Nevertheless, within the Indonesian context marked by high levels of religiosity and religious diversity there remains a relative scarcity of empirical research that specifically investigates the relationship between general religiosity and the trade-off between economic development and environmental preservation (Budarma, 2024; Ghaemi Asl et al., 2024; Wang & Lin, 2014).

Empirical studies utilizing datasets such as the World Values Survey (WVS) also remain limited in Indonesia when it comes to explaining the link between religiosity and preferences for sustainable development policies. Most prior studies in the Indonesian context have primarily focused on the socio-political dimensions of religiosity, while the economic and environmental aspects have yet to receive adequate scholarly attention. Accordingly, the use of WVS Wave 7 data in this study is significant for empirically exploring the intersection of religiosity, economic development attitudes, and environmental concern in the Indonesian setting.

This research offers several novel contributions relative to previous studies. First, it exclusively focuses on the Indonesian population, drawing on representative WVS data to enable a more context-specific analysis of religiosity dynamics in Indonesian society. Second, the study adopts a quantitative approach to examine the relationship between religiosity and individual preferences concerning the trade-off between economic growth and environmental sustainability an area that remains underexplored in empirical research based on Indonesian data.

METHOD

Data and Data Sources

This study utilizes data from Wave 7 of the World Values Survey (WVS), collected between 2017 and 2022, with the analysis focused exclusively on observations from Indonesia. The WVS is a global survey project that gathers data on the social, cultural, economic, and political values of individuals across various countries. The dataset includes a wide range of individual-level variables, including religiosity, attitudes toward economic issues, and preferences regarding environmental policies (Haerpfer, et al., 2022). Conducted systematically using cross-nationally comparable methodologies, the WVS provides a robust

foundation for examining global patterns in social and economic behavior. In this study, the sample consists of all individuals surveyed within the WVS who are located in Indonesia. This focus enables the identification of patterns and variations in the relationship between religiosity and individual preferences concerning economic development and environmental sustainability within the Indonesian context.

The use of WVS data allows for a more comprehensive empirical analysis due to the survey's large and representative sample, comprising 84,668 respondents globally in Wave 7. The key indicator representing individual preferences in the context of the trade-off between economic development and environmental preservation is based on whether individuals agree that environmental protection should remain a priority even at the expense of economic growth and job loss. Religiosity is operationalized through two main indicators: self-identification as a religious person and the frequency of religious worship. In order to reduce potential estimation bias, the study includes several control variables. These control variables encompass income, education level, gender, age, area of residence (urban or rural), marital status, employment status, and perceived social class. A detailed list of the variables used in this study is presented below:

Table 1. Variable Descriptions

Variable Name	Variable Description
Preference for Economy and Environment	
Environmental protection should be a priority even if the economy slows down	Categorical variable indicating the preference that protecting the environment should be a priority, even if it results in slower economic growth and job losses. 1 = "Yes" and 0 = "No"
Religiosity Characteristics	
Religious person	Categorical variable for self-identification as a religious individual, 1 = "Yes" and 0 = "No"
Prayer frequency	Frequency of daily prayers, ranging from 1 = "Never" to 4 = "Several times a day"
Control Variables	
Income level	Income level scale, 1 = "Low" to 4 = "Very high"
Education level	Last level of education, 1 = "Primary school" to 4 = "Tertiary level (Strata 3)"
Male	Categorical variable for male respondent, 1 = "Yes" and 0 = "No"
Age	Respondent's age in years
Urban	Respondent resides in an urban area (1 = "Yes", 0 = "No")
Married	Categorical variable indicating marital status, 1 = "Married" and 0 = "Not married"
Unemployed	Categorical variable indicating unemployment status, 1 = "Yes" and 0 = "No"
Social class	Social class scale, 1 = "Lower class" to 5 = "Upper class"

Estimation Method

This study employs a quantitative approach using statistical analysis methods based on survey data published by the World Values Survey (WVS) Wave 7, conducted during the 2017–2023 period. The sample used in this study consists of individuals residing in Indonesia who were surveyed in the WVS dataset. In total, WVS Wave 7 includes 84,668 respondents globally. The objective of this study is to examine the role of religiosity in the trade-off between economic development and environmental sustainability. The trade-off is proxied by individual preferences regarding the statement: “protecting the environment should be a priority even if it slows down the economy.”

The independent variable in the probit estimation is religiosity, measured using two indicators: self-identification as a religious person and frequency of religious worship. Additionally, several individual-level control variables are included in the model to ensure the robustness of the probit estimates. The complete list of variables used in this study is presented in Table 1.

The estimation in this study is conducted using a probit regression model based on the following regression equation:

$$\text{Logit } P = \ln \frac{p}{1-p} = \alpha + \beta \text{religiosity}_i + \gamma \text{individual}_i + \varepsilon_i \quad (1)$$

$$P = \frac{\exp(\alpha + \text{religiosity}_i + \gamma \text{individual}_i + \varepsilon_i)}{1 + \exp(\alpha + \text{religiosity}_i + \gamma \text{individual}_i + \varepsilon_i)} \quad (2)$$

The equation is used to identify the probability that an individual prioritizes environmental protection, even when doing so may lead to slower economic growth and reduced employment opportunities. Here P represents the probability that an individual responds “yes” to the question: “Should protecting the environment be given priority, even if it causes economic slowdown and job losses?”, while $1 - P_1$ indicates the probability of responding “no” to the same question. The term *religiosity* denotes a vector consisting of the two variables used as indicators of religiosity in this study, which serve as the main variables of interest and form the focus of the analysis. *individual* refers to a vector capturing the characteristics of the survey respondents. The symbol α represents the constant term, while α represents the constant term, β , and γ denote the parameters to be estimated. Lastly ε refers to the unobserved error term.

ANALYSIS AND DISCUSSION

Analysis

Descriptive statistical analysis provides a general overview of individual preferences related to environmental preservation and the religiosity characteristics of the respondents in this study. Table 1 presents the mean, standard deviation, as well as the minimum and maximum values for all variables included in the analysis.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Preference for Economy and Environment					
Environmental protection should be a priority even if the economy slows down	2567	0.790	0.407	0	1
Religiosity Characteristics					
Religious person	2567	7.586	1.068	1	8
Prayer frequency	2567	0.921	0.271	0	1
Control Variables					
Income level	2567	4.266	2.404	1	10
Education level	2567	2.466	1.407	1	8
Male	2567	0.466	0.499	0	1
Age	2567	38.826	13.088	18	87
Urban	2567	0.272	0.445	0	1
Married	2567	0.769	0.421	0	1
Unemployed	2567	0.951	0.215	0	1
Social class	2567	2.427	1.045	1	5

Descriptive statistical analysis provides an initial overview of the characteristics of the data used in this study, particularly with regard to respondents' preferences for environmental preservation and levels of religiosity. As shown in Table 1, the majority of respondents express a strong preference for environmental preservation. This is evident from the variable "protecting the environment should be a priority even if the economy slows down," which has a mean value of 0.790 and a standard deviation of 0.407. This indicates that approximately 79% of respondents prefer to prioritize environmental conservation even if it may potentially hinder economic growth. This finding reflects a relatively high level of environmental awareness among the Indonesian population, forming an important foundation for understanding their attitudes toward the trade-off between economic development and ecological sustainability.

Religiosity within the population is also reflected as being considerably strong. The average frequency of prayer is 7.586 on a scale of 1 to 8, with a standard deviation of 1.068, indicating a high and relatively consistent level of religious practice among respondents. In addition, 92.1% of respondents identify themselves as religious individuals, as reflected in the "religious person" variable with a mean of 0.921. These results demonstrate that religiosity is one of the most salient social characteristics in the Indonesian context and, therefore, holds potential in shaping perspectives and behaviors concerning development and environmental issues.

Meanwhile, control variables such as income level (mean = 4.266), education level (2.466), age (38.8 years), as well as employment and marital status, reveal demographic diversity within the sample. Approximately 27% of respondents live in urban areas, 46.6% are male, and nearly all (95.1%) are not unemployed. Although these variables are not the primary focus of this study, they are included in the analytical model to control for the influence of external factors on the relationship between religiosity and environmental preference.

Probit Estimation Results

Probit analysis was conducted to examine the influence of religiosity on individuals' preferences for prioritizing environmental preservation, even at the risk of slowing economic growth. The marginal effects (dy/dx) derived from the estimation results are presented in Table 3 below:

Table 3. Probit Estimation Results

Variabel	dy/dx	Std. Error
Religiosity Characteristics		
Religious person	0.091**	(0.043)
Prayer frequency	0.288**	(0.173)
Control Variables		
Income level	0.003**	(0.022)
Education level	0.028***	(0.038)
Male	0.002	(0.101)
Age	0.002	(0.004)
Urban	-0.200**	(0.111)
Married	-0.073	(0.123)
Unemployed	0.123	(0.226)
Constant	0.228	(0.439)
Observations	2567	-
R ²	22.300	-

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The results indicate that religiosity has a statistically significant influence on individuals' preferences for prioritizing environmental preservation, even when doing so may lead to slower economic growth. The variable representing frequency of prayer has a marginal effect value of 0.091 and is statistically significant at the 5% level ($p < 0.05$), suggesting that a one-unit increase in the frequency of prayer is associated with a 9.1 percentage point increase in the likelihood that an individual will prioritize environmental preservation, regardless of economic consequences. Similarly, the variable religious person has a marginal effect of 0.288 and is also significant at the 5% level, indicating that individuals who identify themselves as religious are 28.8 percentage points more likely to support environmental preservation than those who do not. These findings reinforce the notion that religious values play a critical role in shaping environmental preferences in the Indonesian context.

Several control variables also exhibit statistically significant effects. Education level is positively associated with environmental preference ($dy/dx = 0.028$, $p < 0.01$), indicating that individuals with higher education levels are more likely to support environmental policies despite potential economic slowdowns. Income level also shows a positive effect, although significant only at the 10% level ($dy/dx = 0.003$), suggesting a modest yet statistically meaningful contribution. On the other hand, the urban variable demonstrates a statistically significant negative effect ($dy/dx = -0.200$, $p < 0.1$), which is notable as it implies that individuals residing in urban areas are less likely to prioritize environmental protection compared to those in rural areas. This may reflect the complex realities of urban life, where economic pragmatism often takes precedence. Other variables such as gender, age, marital status, and unemployment status do not exhibit statistically significant effects in this model.

The pseudo R^2 value of 22.3% indicates that the model explains approximately one-fifth of the variation in individual preferences for environmental conservation.

Discussion

The probit estimation results indicate that religiosity plays a significant role in shaping individual preferences toward environmental preservation. Both indicators of religiosity, frequency of prayer and self-identification as a religious person, demonstrate positive and statistically significant effects on the likelihood that an individual will prioritize environmental protection, even when it may lead to economic slowdown. These findings are consistent with prior studies, which have shown that religious adherence can enhance awareness of the importance of environmental sustainability (Budarma, 2024; Singh et al., 2025; Song & Conner, 2015; Wang & Lin, 2014). Moreover, the results reinforce the theoretical assumption that religious values can influence attitudes toward public issues, including decision-making processes involving trade-offs between economic growth and ecological sustainability. Amid increasingly complex global and national environmental challenges, a value-based religious approach may serve as a vital social foundation in supporting sustainable development policy (Wang & Lin, 2014; Pew Research Centre, 2015).

In the Indonesian context, these findings are especially relevant given the high level of religiosity observed across nearly all regions. National and international surveys, such as those conducted by the Pew Research Center and the World Values Survey, consistently reveal that religion holds a central place in the lives of most Indonesians (Ongo Nkoa et al., 2024). It is therefore unsurprising that religious values are also reflected in preferences regarding environmental issues. The concept of moral responsibility toward nature as God's creation, found across various religious teachings, may act as an internal motivator for individuals to support environmental conservation. In religious societies, environmental issues are not perceived merely as technical or economic concerns, but also as matters of spiritual and ethical responsibility (Chen & Yu, 2024; Wiratama & Safitri, 2023).

Comparatively, these findings align with several international studies. Research conducted in the United States and various European countries shows that religious individuals tend to express greater concern for environmental issues, particularly when their religious teachings emphasize the principle of stewardship or the wise management of nature (Budarma, 2024; Wang & Lin, 2014; Wiratama & Safitri, 2023). Nevertheless, contextual differences must also be considered. In several developed countries, religiosity does not always correlate positively with environmental concern, often due to the influence of political ideology or conservative religious interpretations. Conversely, in developing countries like Indonesia, religiosity is more often associated with collectivist values and social responsibility, which may strengthen environmental preferences, especially when sustainability is linked to the well-being of future generations (Ghaemi Asl et al., 2024).

This study carries important implications for public policy formulation. Within the framework of national development, purely secular and technocratic approaches often encounter implementation challenges, particularly when they fail to consider local values and societal beliefs. Therefore, the findings of this study provide a foundation for integrating religiosity into environmental communication and education strategies. Governments and non-state institutions may benefit from engaging religious leaders and faith-based organizations in conveying sustainability messages, given the moral authority they hold within communities.

Such an approach could also enhance the legitimacy and effectiveness of environmental conservation programs at the grassroots level. Ultimately, the results of this study affirm the importance of a multidisciplinary approach to designing policy interventions for sustainable development. Economic, environmental, and religious values cannot be treated in isolation, as they interact within the broader dynamics of society. In Indonesia, where religiosity is an integral part of collective identity, ignoring this dimension in policy analysis may reduce both accuracy and effectiveness.

CONCLUSION

This study demonstrates that religiosity plays a significant role in shaping individual preferences concerning environmental preservation amidst the dilemma of economic development. The probit estimation results reveal that both the frequency of prayer and self-identification as a religious individual positively and significantly influence the likelihood of prioritizing environmental sustainability, even when such a stance may lead to slower economic growth. These findings suggest that religious values function not only as moral or spiritual expressions but also as influential factors driving public attitudes and decisions aligned with sustainability goals.

In the context of Indonesia a country characterized by high levels of religiosity and diverse belief systems these results reinforce the importance of incorporating value-based dimensions into the formulation of development policies. By integrating religiosity into environmental communication strategies and policy design, governments and relevant stakeholders may enhance the effectiveness of environmental preservation efforts. This study offers a valuable contribution to the academic literature and provides an empirical foundation for value-based approaches in addressing the trade-off between economic growth and ecological sustainability.

REFERENCES

- Agrawal, S., Sharma, N., Dhayal, K. S., & Esposito, L. (2024). From economic wealth to well-being: exploring the importance of happiness economy for sustainable development through systematic literature review. *Quality and Quantity*, 5503–5530. <https://doi.org/10.1007/s11135-024-01892-z>
- Ahmed, F., Ali, I., Kousar, S., & Ahmed, S. (2022). The environmental impact of industrialization and foreign direct investment: empirical evidence from Asia-Pacific region. *Environmental Science and Pollution Research*, 29(20), 29778–29792. <https://doi.org/10.1007/s11356-021-17560-w>
- Budarma, I. K. (2024). A model of religiosity integration in sustainable tourism development (The case of Tenganan Pagringsingan Village, Bali, Indonesia). *Journal of Applied Sciences in Travel and Hospitality*, 7(2), 84–93. <https://doi.org/10.31940/jasth.v7i2.84-93>
- Chen, N., & Yu, M. T. (2024). Human rights and value of cash: Evidence from Islamic and non-Islamic countries. *Pacific Basin Finance Journal*, 86. <https://doi.org/10.1016/j.pacfin.2024.102466>
- David Thomasberger, A., & María Kristinsdóttir Gabriela Sabau, S. (2015). *The Exploitation versus Conservation Dilemma Preparative Research towards a Comprehensive and Extensive Environmental & Social Impact Assessment-Koh Rong Archipelago, Cambodia*.
- Ghaemi Asl, M., Ben Jabeur, S., & Ben Zaied, Y. (2024). Analyzing the interplay between eco-friendly and Islamic digital currencies and green investments. *Technological Forecasting and Social Change*, 208. <https://doi.org/10.1016/j.techfore.2024.123715>

- Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E. & Puranen B. (2022): World Values Survey Wave 7 (2017-2022) Cross-National Data-Set. Version: 4.0.0. World Values Survey Association. DOI: doi.org/10.14281/18241.18
- Mamat, H. N., Kamarudin, F., Ali, M., & Hussain, H. I. (2024). Impact of Islamicity on the productivity of conventional and Islamic banks in selected southeast Asian countries. *Pacific Basin Finance Journal*, 87. <https://doi.org/10.1016/j.pacfin.2024.102492>
- Musah, A., & Yakubu, I. N. (2023). Exploring industrialization and environmental sustainability dynamics in Ghana: a fully modified least squares approach. *Technological Sustainability*, 2(2), 142–155. <https://doi.org/10.1108/TECHS-06-2022-0028>
- Nguyen, Q., & Malesky, E. (2021). Fish or steel? New evidence on the environment-economy trade-off in developing Vietnam. *World Development*, 147. <https://doi.org/10.1016/j.worlddev.2021.105603>
- Ongo Nkoa, B. E., Song, J. S., & Minkoue Bikoula, B. (2024). Natural resource rents in developing countries: Is the positive influence on the fragilities real? *Resources Policy*, 89. <https://doi.org/10.1016/j.resourpol.2023.104541>
- Pew Research Center. (2015). The Future of World Religions: Population Growth Projections, 2010-2050. <http://www.pewforum.org/2015/04/02/religious-projections2010-2050>
- Running, K. (2015). Towards climate justice: How do the most vulnerable weigh environment-economy trade-offs? *Social Science Research*, 50, 217–228. <https://doi.org/10.1016/j.ssresearch.2014.11.018>
- Singh, K., Cheemalapati, S., RamiReddy, S. R., Kurian, G., Muzumdar, P., & Muley, A. (2025). *Determinants of Human Development Index (HDI): A Regression Analysis of Economic and Social Indicators*. 25(1), 26–34. <https://doi.org/10.9734/ajeba/2025/v25i11630>
- Song, G., & Conner, T. E. (2015). *Understanding Environmentalism: The Impacts of Cultural Worldview, Party Identification, and Religious Affiliation on Environmental Concern*. <http://ssrn.com/abstract=2621626> Electronic copy available at: <https://ssrn.com/abstract=2621626>
- Wang, Q., & Lin, X. (2014). Does religious beliefs affect economic growth? Evidence from provincial-level panel data in China. *China Economic Review*, 31, 277–287. <https://doi.org/10.1016/j.chieco.2014.10.006>
- Wiratama, B. F., & Safitri, Z. (2023). Is Islamic Economy as that Green? *AL-MUZARA'AH*, 11(1), 103–118. <https://doi.org/10.29244/jam.11.1.103-118>