

Materialism and Environmental Knowledge as a Mediator for Relationships between Religiosity and Ethical Consumption

Materialisme dan Pengetahuan Lingkungan sebagai Mediator Hubungan Religiusitas dan Konsumsi Etis

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ABSTRACT

On a global and regional scale, Indonesia has one of the least environmentally sustainable economies in the Asia-Pacific region. Consumption is one of the key factors contributing to environmental degradation. By using materialism and environmental knowledge as mediators, This research attempted to understand how religiosity affects ethical consumption. This research used quantitative methods with structural equation modeling (SEM) analysis techniques based on partial least squares (PLS). The data came from a questionnaire distributed online. 153 valid questionnaires were selected for analysis. All respondents came from Indonesia, were adults (from 18 years old), and were Muslims. Findings show that religiosity influences ethical consumption, materialism, and environmental knowledge. This research also reveals that materialism and environmental knowledge influence ethical consumption, as well as the mediating effect of materialism and environmental knowledge on the influence between religiosity and ethical consumption. So, all hypotheses from this research can be accepted. These findings contribute theoretically to explaining the relationship between religiosity, materialism, environmental knowledge, and ethical consumption. Thus, his findings contribute to the field of Islamic economics. Practically, the findings of this research can help marketers formulate communication strategies that take into account the level of religiosity of consumers in Indonesia. Marketers must avoid unethical practices to encourage ethical consumption.

Keywords: Religiosity, ethical consumption, materialism, environmental knowledge

ABSTRAK

Pada skala global dan regional, Indonesia merupakan salah satu negara dengan perekonomian paling tidak ramah lingkungan di kawasan Asia-Pasifik. Konsumsi merupakan salah satu faktor utama yang berkontribusi terhadap degradasi lingkungan. Dengan menggunakan materialisme dan environmental knowledge sebagai mediator, penelitian ini berupaya memahami bagaimana religiosity mempengaruhi ethical consumption. Penelitian ini menggunakan metode kuantitatif dengan teknik analisis Structural Equation Model (SEM) berbasis Partial Least Square (PLS). Data berasal dari kuesioner yang disebar online. 153 kuesioner yang valid dipilih untuk analisis. Seluruh responden berasal dari Indonesia, dewasa (mulai 18 tahun) dan beragama Islam. Temuan menunjukkan bahwa religiosity berpengaruh terhadap ethical consumption, materialism, dan environmental knowledge. Selain itu juga diketahui bahwa materialism dan environmental knowledge berpengaruh ethical consumption, serta adanya efek mediasi dari materialism dan environmental knowledge pada pengaruh antara religiosity dan ethical consumption. Sehingga, semua hipotesis penelitian ini dapat diterima. Secara praktis, temuan penelitian ini dapat membantu pemasar untuk merumuskan strategi komunikasi yang mempertimbangkan tingkat religiosity konsumen di Indonesia. Pemasar harus menghindari praktik tidak etis untuk mempromosikan ethical consumption.

Kata Kunci: Religiosity, ethical consumption, materialism, environmental knowledge

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I. INTRODUCTION

Globally, especially in developing countries, there is a problem of deteriorating environmental conditions (Adil, 2022). Individuals from developing countries show greater concern for the environment and society in general (Sadiq et al., 2021). However, their concern for the environment is not applied to concrete actions to save the environment (Dhir et al., 2021). Indonesia is a country with poor environmental sustainability on a global scale and an Asia Pacific country. Based on the Environmental Performance Index (2022), Indonesia is ranked 164 out of 180 countries included in the study with a score of 28.2 out of 100. Furthermore, on the scale of Asia Pacific countries, Indonesia ranked 22 out of 25 countries. Indonesia scored the lowest with ecosystem livability 34.1, environmental health 25.3, and climate change mitigation policies 23.2 out of 100.

One of the main reasons for environmental degradation is attributed to consumers' unethical consumption (Wooliscroft et al., 2014) or more specifically, overconsumption (Sadiq dkk., 2021a). According to previous research, it has been explored that about 40% of ecological damage occurs due to individuals' unjust consumption patterns (Doh et al., 2019). In Indonesia, there are 46.35 million tons of food waste (Kementerian Lingkungan Hidup dan Kehutanan, 2021). As much as 44% of waste generation in Indonesia is food waste (Kementerian Lingkungan Hidup dan Kehutanan, 2018). Indonesia is the second largest producer of food loss and waste (FLW) in the world, producing as much as 300 kg of waste per capita per year.

Felix & Braunsberger (2016) argued that in the long run, overconsumption by an individual is not only detrimental to his or her well-being and quality of life, but also to the natural environment. To find ways to reduce the negative impact of overconsumption, developing countries are taking initiatives to increase environmental awareness among their people (Yadav & Pathak, 2016). Consumers have many ways to express their feelings, beliefs and values. Through ethical consumption, consumers try to show responsible behavior that is more respectful of the environment, people, and nature (Iran dust & Bamdad, 2014). Ethical consumption is the practice of buying products and services that minimize social and environmental damage, and avoid products and services that have a negative impact on the environment and society (Carrier, 2010). The determinants of ethical consumption require more attention from academics. It is necessary to know the individual decision-making process to enable the development of a healthy and sustainable environment (Ghali-Zinoubi, 2022). Research conducted by Yadav et al., (2019) related to the natural environment that focuses on ethical consumption or pro-environmental attitudes, has failed to consider ethical consumption attitudes from a particular religious paradigm (Khan & Kirmani, 2018). Muslims' ethical consumption is influenced by the belief that if consumers consume ethically, i.e. do not waste natural resources, consumers will be better rewarded in the afterlife. For example, Prophet Muhammad (SAW) has advised Muslims not to waste water during ablutions, even when one is standing near a river (Al Glenid et al., 1994).

There are limited studies that try to examine the effect of religiosity on ethical consumption in the context of emerging markets (Khan & Kirmani, 2018). Religiosity is a belief in God and a commitment to act in accordance with the principles believed to be in accordance with the rules set by God (Bakar et al., 2013). Believing in God's presence and supervision will result in behavior. This belief becomes the reason for judging one's actions against religious ideals. Therefore, individuals who are intrinsically religious tend to be more prone to taking ethical paths (Singhapakdi et al., 2013). Research conducted by Adil (2022) examined the effect of religiosity on ethical consumption. This study also aims to examine the mediating role of materialism and guilt. According to him, religiosity has a significant and positive effect on consumer ethical consumption behavior. It was also found that materialism and guilt mediate the relationship between religiosity and ethical consumption.

Materialism will help better explain the influence between religiosity and ethical consumption (Ulusoy, 2015). Religiosity has a negative influence on materialism which in turn reduces the likelihood of ethical consumption (Polonsky et al., 2014). In addition to religiosity, environmental knowledge can increase ethical consumption (Clayton et al., 2016; Nassani et al., 2023). Environmental knowledge is an important variable that influences how people gather and use information to make moral decisions regarding ethical consumption (Kushwah et al., 2019). Environmental knowledge is a key determinant of ethical consumption behavior. High levels of environmental knowledge increase pro-environmental and ethical consumption behaviours, including recycling, energy efficiency, resource conservation, etc. (Jung et al., 2016)

In this study, the authors assumed that environmental knowledge mediates the effect of religiosity on ethical consumption because religiosity affects environmental knowledge (Kamis & Abd. Wahab, 2022), and environmental knowledge affects ethical consumption (Shapiro, 2019). Thus, this study modified previous research by examining the mediating role of environmental knowledge variables. Kushwah et al. (2019) and (Khan & Kirmani, 2018) suggested that more research on religiosity and ethical consumption be conducted in developing countries. To fill the gap, this study used materialism and environmental knowledge as mediators to understand how religiosity affects ethical consumption.

The findings contribute theoretically to explain the relationship between religiosity, materialism, environmental knowledge and ethical consumption. Thus, these findings contribute to the field of Islamic Economics. Practically, the findings of this study can help marketers to formulate communication strategies that consider the religiosity level of consumers in Indonesia. Marketers should avoid unethical practices to promote ethical consumption.

II. LITERATURE REVIEW

Customer Behavior Theory

Customer behavior is the process by which consumers choose to buy or use products, services, ideas, or experiences to meet their needs and wants (Solomon, 2010). Customer behavior can help marketing managers to know how consumers think, feel, and choose different products and brands, as well as how the environment affects their behavior (Forghani et al., 2022). Customer behavior is considered based on various factors including cultural, social, personal and psychological factors. These factors cannot be controlled and marketers do not have access to these factors; however, to understand complex customer behavior, it is important to consider them (Stávková & Turčínková, 2005). Customer behavior theory is used in this study because researchers focus on personal factors that consumers have such as religiosity, materialism, environmental knowledge to achieve ethical consumption.

Religiosity

Religiosity is a person's belief in God and commitment to act in accordance with the principles believed to be in accordance with the rules set by God (Bakar dkk., 2013). Religiosity has long been identified as a key determinant in consumer beliefs, attitudes and behavior. Religiosity refers to one's belief in God and the degree of alignment between one's path and God's path (McCullough & Willoughby, 2009; Singhapakdi et al., 2013). In an Islamic perspective, justice is highly upheld when a person does business. The behavior of devout Muslims pays attention to the needs and rights of others, provides assistance to those in dire need regardless of economic benefits, and provides services that benefit society and the environment. Overall, Islamic scholars have demonstrated the harmony of Allah's commands with socially responsible utilization of nature and resources (Al-Aidaros et al., 2013; Graafland, 2017; Sharif, 2016).

Materialism

Materialism is a value, "a set of beliefs about the importance of possessions in one's life". Materialism can be viewed as a consumer value that focuses on the acquisition and possession of material objects (Richins & Dawson, 1992). According to Belk et al., (2003) throughout history, religions have opposed holding a materialism orientation, and instead motivated consumers to share, sacrifice and give charity. This is in line with the rules of Islam. Sharia law is a set of rules for Muslims in all aspects of life. Islamic religious values guide Muslim consumers not to consume in an unsustainable way and instead motivate them to spend wealth to help people in need (Sharif, 2016) or to avoid over-purchasing and waste.

Environmental Knowledge

Environmental knowledge is the information that individuals have about the state of the environment, climate change, environmental outlook, and ecological influences on consumption and production (Pagiaslis & Krontalis, 2010). Recent research findings show that in countries with higher gross national income (GNI) per capita, environmental knowledge levels are higher, suggesting that in many countries, environmental literacy has increased as their overall wealth has grown (Guerra et al., 2016). Environmental knowledge is an important variable that influences how people gather and use information to make moral decisions regarding ethical consumption (Kushwah et al., 2019).

Ethical consumption

The definition of ethical consumption was given by Webster in 1975, who defined it as consumers who consider the public consequences of their personal consumption or attempt to use

their consumption, purchasing power to bring about social change (Webster, Jr., 1975). This definition was refined in 1995 as consumers who buy products or services with a positive (or less negative) impact on the environment or use their purchasing power to express social concerns (Roberts, 1995). Ethical consumption is consumption that is driven by values, norms, and ethics (Cornish, 2013). Davies & Gutsche (2016) defined ethical consumption as a conscious and deliberate decision-making process. It is based on personal beliefs and values.

The Qur'an and Hadith have provided a significant understanding of human life. Muslim beliefs are divided into two important parts, namely the life of this world and the afterlife. Thus, Muslims believe that death is a transition from the life of this world to the life of the hereafter (Wilson & Hollensen, 2013). Therefore, Muslims' ethical consumption is influenced by the belief that if they consume ethically by not wasting natural resources, they will be better rewarded in the afterlife. Muslims believe the Qur'an and hadith provide insight into daily activities, even in the context of ethical consumption (Mediapro, 2020).

Religiosity and Ethical consumption

Religiosity is the strength of motivation, values, and religious beliefs (Felix & Braunsberger, 2016). Religiosity is a person's belief in God and a commitment to act in accordance with the principles believed to have been established by God (Bakar et al., 2013). Previous research showed that there is a direct influence between religiosity and ethical consumption (Felix & Braunsberger, 2016). Adil (2022) also suggested that religiosity has a significant effect on consumer ethical consumption behavior, which means that religiosity acts as a guiding force for consumers to adopt ethical consumption. Khan and Kirmani (2018) also showed that the higher the religious orientation, the higher the ethical consumption. One plausible justification is consumers' belief in the commands of Allah and Hadith.

H1: religiosity has a positive and significant effect on ethical consumption

Religiosity and Materialism

Religious values influence consumers' orientation towards materialism (Adib & El-Bassiouny, 2012). Religion opposes holding a materialistic orientation and religion motivates consumers to share, sacrifice and give charity (Belk et al., 2003). This is in accordance with Islamic law. The law in Islam is called sharia law which is a set of rules for Muslim men and women in all aspects of their lives. Islamic religious values guide Muslim consumers not to consume in an unsustainable way and instead Muslims are motivated to spend wealth that has the purpose of helping people in need or to avoid overpurchasing and waste (Sharif, 2016). According to Adil (2022), religiosity as a negative effect with materialism, which in turn has an inverse relationship with ethical consumption.

H2 : religiosity has a negative and significant effect on materialism

Materialism and ethical consumption

Materialism as a value, "a set of centrally held beliefs about the importance of possessions in one's life". Materialism can be viewed as a consumer value placed on the acquisition and possession of material objects (Richins & Dawson, 1992). The concept of ethical consumption contradicts materialism as it demands the scarification of consumers' materialistic needs (Sharif, 2016). Polonsky et al. (2014) observed that materialism is negatively related to ethical consumption.

H3 : materialism has a negative and significant effect on ethical consumption

The Mediating Role of Materialism

Adil (2022) revealed that materialism mediates the relationship between religiosity and ethical consumption. Organic consumption may be less preferred by highly religious (especially Western) consumers, as it is believed to be part of ethical behavior (Minton et al., 2019). There are individuals who are religious, but unethical because the low or unethical consumption behavior among religious individuals is their materialistic orientation (Dávila et al., 2017). Thus, materialism is considered an influential factor in the adoption of higher consumption, which is contrary to the concept of ethical consumption (Alzubaidi et al., 2021).

H4 : Materialism mediates the effect between religiosity and ethical consumption

Religiosity and environmental knowledge

In Islam, religion is at the core of a Muslim's identity as it reflects a Muslim's daily behavior and commitment. Religiosity is a person's commitment to the fundamentals of Islam empirically and theoretically by fulfilling the rights of Allah, protecting the rights of others, following Allah's commands, avoiding bad deeds and performing worship. Harun et al., (2015) did not find a statistically significant relationship between religiosity and knowledge, because different beliefs

and thoughts among respondents led to different arguments. In the context of grant knowledge, Kamis & Abd. Wahab (2022) showed that religiosity has a positive and significant effect on grant knowledge. That is because the researchers strongly believe that Muslims must know the teachings sourced from the Qur'an and hadith, including grants because they are obliged to learn and follow all Islamic teachings as a way of life and by believing that *qada'* and *qadar* have been determined, they will prepare themselves for planning and managing inheritance in accordance with the teachings of the Qur'an and hadith (Kamis & Abd. Wahab, 2022). With this gap, this study will also examine the influence of religiosity and environmental knowledge given that Allah has ordered Muslims to protect the environment. Islam maintains the integration of humans with the environment and the environment is God's gift (blessing) (Hope & Young, 1967).

H5 : Religiosity has a positive and significant effect on environmental knowledge

Environmental Knowledge and Ethical consumption

Environmental knowledge or knowledge about environmental issues is information that individuals have about the state of the environment, climate change, environmental views, and ecological influences on consumption and production (Pagiaslis & Krontalis, 2010). A person's ethical consumption pattern is influenced by environmental issues and certain knowledge (Eden et al., 2008). Knowledge is an important variable that influences how people gather and use information to make moral decisions regarding ethical consumption (Kushwah et al., 2019). Environmental knowledge is a key determinant of ethical consumption behavior. High levels of environmental knowledge increase pro-environmental and ethical consumption behavior, including recycling, energy efficiency, resource preservation (Jung et al., 2016). Ethical consumption indicates the practice of buying products and services that minimize social and environmental damage (Carrier, 2010). The concept of environmental knowledge is useful for addressing ecological issues and reflects how much individuals want to participate in programs and activities to preserve the environment, as well as increase ethical consumption practices (Barnett et al., 2005). Nassani et al. (2023) revealed that environmental knowledge is positively related to ethical consumption. Environmental knowledge is the basis of ethical consumption. If consumers do not have environmental knowledge, they do not adopt ethical consumption (Shapiro, 2019).

H6: environmental knowledge has a positive and significant effect on ethical consumption

Mediating role of environmental knowledge

According to Baron & Kenny (1986) a variable can be treated as a mediating variable if all three paths are significant. First, path "a" between the exogenous variable and the mediating variable must be significant. Second, path "b" between the mediating variable and the exogenous variable must be significant. Third and finally, path "c" between the exogenous variable and the endogenous variable must be significant. Researchers argue that environmental knowledge mediates the effect of religiosity on ethical consumption. That is because religiosity affects environmental knowledge (Kamis & Abd. Wahab, 2022). And environmental knowledge affects ethical consumption (Shapiro, 2019). The findings of Kamis & Abd. Wahab (2022) showed that higher levels of religiosity were associated with deeper grant knowledge. Michel et al., (2022) showed that environmental knowledge has a positive effect on ethical consumption. Many studies focus on food consumption, for example Kushwah et al., (2019) found that consumer knowledge has the highest impact on purchasing decisions for organic goods. Other opinions suggest that consumers in developing countries are willing to pay more, and even potentially lower their standard of living for environmental preservation. This is in accordance with previous research on the influence between religiosity and environmental knowledge, as well as between environmental knowledge and ethical consumption. Thus, environmental knowledge has a mediating effect on the relationship.

H7: environmental knowledge mediates the effect between religiosity and ethical consumption

III. RESEARCH METHODS

This study used a quantitative approach because it referred to previous research conducted by Adil (2022) and Nassani et al., (2023) on the same topic. The data source used was respondents' answers from questionnaires distributed online. The criteria for respondents were adults (at least 18 years old), from Indonesia and Muslim. This study selected respondents who have a minimum age of 18 years because they are adults and are considered legally mature (Hurlock, 2006). To test each item using a five-point Likert scale from 1 which means strongly disagree to 5 which means

strongly agree. The analysis technique used was Structural Equation Modeling-Partial Least Square. Determination of the number of representative samples depends on the number of indicators multiplied by 5 to 10 (Hair et al., 2011). The number of indicators in this study were 19 items. Thus, the minimum number of samples in this study was 95. After data selection, 153 questionnaires could be used.

The questionnaire was divided into three sections. Section A aimed to determine the demographics of the respondents. Section B was a screening question that aimed to determine the sample size that matched the researcher's sample criteria. There were 3 screening questions in the questionnaire to identify respondents who fit the criteria of this study: 1) Do you start from 18 years old?, 2) Are you from Indonesia?; Are you Muslim? Next was section C which aimed to elicit responses to the main research variables. An open-ended question was added at the end of the questionnaire that allowed respondents to describe their consumption ethics in a few sentences (maximum 3 lines).

Ethical consumption is defined as consumers who consider the public consequences of their personal consumption or efforts to use their consumption, purchasing power to bring about social change (Webster, Jr., 1975). The operational definition of ethical consumption in this study is the consumption of products made by Muslim consumers who consider the public consequences of their personal consumption or efforts to use their consumption, purchasing power to bring about social change, such as to preserve the environment and society.

Religiosity is a person's belief in God and a commitment to act in accordance with the principles believed according to the rules set by God (Bakar et al., 2013). The operational definition of religiosity is Muslim consumers' belief in God and commitment to caring for the environment and society with principles that are believed to be in accordance with the rules set by God.

Materialism is a value, "a set of beliefs about the importance of possessions in one's life". Materialism can be viewed as a consumer value that focuses on the acquisition and ownership of material objects (Richins & Dawson, 1992). The operational definition of materialism in this study is the value held by Muslim consumers which is a belief about the importance of ownership in one's life that focuses on the acquisition and ownership of material objects.

Environmental Knowledge is information that individuals have about the state of the environment, climate change, environmental views, and the ecological effects of consumption and production (Pagiaslis & Krontalis, 2010). The operational definition of environmental knowledge in this study is the information possessed by Muslim consumers about the state of the environment, climate change, environmental views, and the ecological effects of consumption and production.

Measurement of religiosity variables consists of 5 items that refer to the research of Kalamas et al., (2014) and Khan & Kirmani (2018). Environmental Knowledge consists of 5 items adopted from Mostafa (2007). Materialism consists of 3 items adopted from Richins (2004). Ethical consumption consists of 6 items adopted from Kushwah et al., (2019). The measurement items of this research variable are in accordance with table 1.

Table 1. Variable Measurement Items

Variable	Indicator	Source
Religiosity	1. I have a strong sense of Allah's presence	Kalamas et al. (2014) dan Khan & Kirmani (2018)
	2. I strive to live my life in accordance with my religious beliefs	
	3. It is important for me to take time to pray privately	
	4. Environmental circumstances are ultimately under Allah's control	
	5. What our neighborhood will be like in the future, only Allah can say	
Environmental Knowledge	1. I understand that I can buy products that are safe for the environment.	Mostafa (2007)
	2. I know more about product recycling than anyone else	
	3. I know how to choose products to tackle the amount of waste in landfills (TPA)	
	4. I know about the symbols used on product packaging related to the environment	
	5. I care about environmental issues.	
Materialism	1. I admire people who own expensive things	Richins (2004).

Ethical consumption	<ol style="list-style-type: none"> 2. I like a lot of luxury in my life 3. I would be happier if I could afford more things 4. I plan to use ethical products. 2. I prefer to buy products with packaging that can be easily recycled 3. I already use environmentally friendly products. 4. When I have a preference between two products, I choose the one that is less harmful to others. 5. When I have a preference between two products, I choose the one that is less harmful to the environment. 6. I want to buy household chemicals (such as cleaning solutions, detergents) that are ecologically safe. 	Kushwah et al. (2019)
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The stages of analyzing this research were using SEM-PLS by following 2 steps, namely the outer model and inner model. The measurement model aims to assess the validity and reliability of the model. The validity test is to determine the ability of research instruments to make measurements (Cooper & Schindler, 2019). Meanwhile, the reliability test is to measure the consistency of the measuring instrument. After evaluating the outer model, the next is the inner model which will be evaluated by looking at the results of R2 and the path coefficient (Jogiyanto, 2011).

The empirical model of this research is as follows:

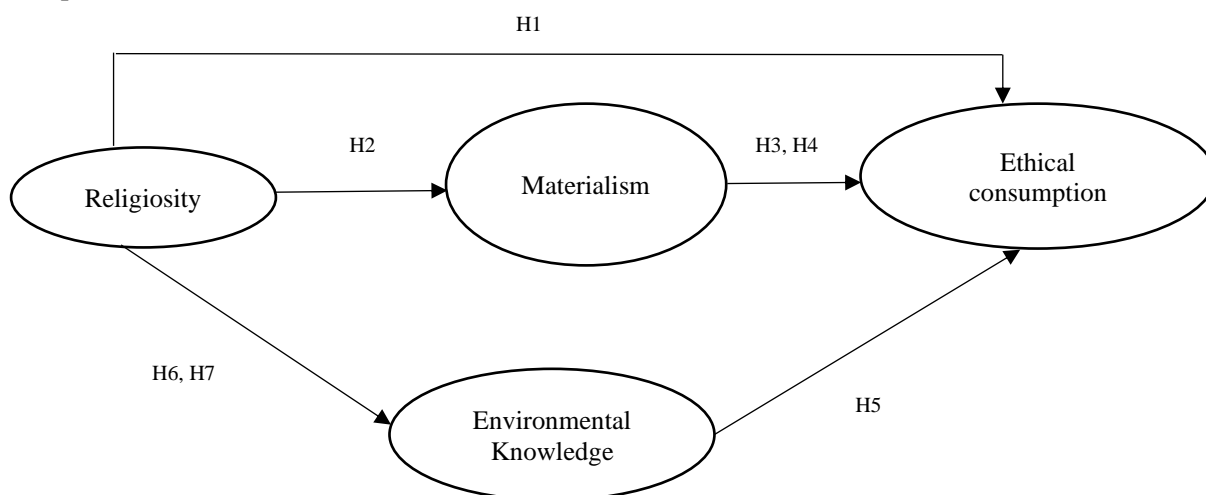


Figure 1. The Empirical Model

IV. RESULTS AND DISCUSSION

This study obtained 153 respondents with respondent demographics based on age, age, total monthly expenditure and latest education. Based on gender, the majority of this study were female as many as 117 (76.5%), while male respondents were 36 (23.5%). Based on age, the majority of respondents were 18-30 years old as many as 148 (96.7%), 31-43 years old as many as 4 (2.6%), 44-56 years old as many as 1 (0.7%) and >56 years old as many as 0 (0%). Based on total monthly expenditure, the majority of respondents in this study had monthly expenditure of 1 - 5 million (92.15%). Meanwhile, based on the latest education, the majority of respondents were undergraduate, as many as 118 (77.12%).

Table 2. Respondent Demographics

Respondent Profile	Number	Percentage
Sex		
Female	117	76,5%
Male	36	23,5%
Age		
18 – 30 years old	148	96,7%
31 – 43 years old	4	2,6%
44 – 56 years old	1	0,7%
>56 years old	0	0%

Total expenses per month

Rp 1.000.000 – Rp 5.000.000	141	92,15%
Rp 6.000.000 – Rp 10.000.000	9	5,88%
Rp 11.000.000 – Rp 15.000.000	0	0%
>Rp 15.000.000	3	1,97%

Education Background

High School	21	13,72%
Diploma	9	5,88%
Bachelor	118	77,12%
Magister	5	3,26%
Doctoral	0	0%

This study used outer model evaluation: loading factor, composite reliability, average variance extracted, and cross loading. The loading factor value is acceptable > 0.5. Composite reliability was used in measuring internal consistency whose value is acceptable if > 0.6 and the AVE value is acceptable if > 0.5 (Haryono, 2016). Meanwhile, Cronbach's Alpha is acceptable if it has a value > 0.7.

Table 3. Construct reliability and validity

Loading Factor	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
0.715			
0.700			
0.781	0.800	0.862	0.555
0.735			
0.791			
0.902			
0.906	0.866	0.918	0.789
0.856			
0.895			
0.906	0.898	0.924	0.709
0.787			
0.697			
0.669			
0.780			
0.677			
0.853	0.857	0.895	0.588
0.847			
0.755			

Table 3 reveals that this study had a loading factor value > 0.5, so this research data can be retained to follow the next test or can be said to be valid. Furthermore, the measurement of construct reliability was by composite reliability value and Cronbach alpha values. This study shows that the composite reliability value was > 0.6 and the Cronbach alpha value was > 0.7, which means that the variable constructs passed the reliability test. This study had an AVE value > 0.5, which means that it has good validity adequacy for latent variables.

Table 4 shows that indicators had higher loading values for each latent variable measured compared to indicators for other latent variables. Thus, all constructs have good discriminant validity.

Table 4. Cross Loading

Environmental Knowledge	Ethical Consumption	Materialism	Religiosity
0.438	0.669	- 0.287	0.341
0.453	0.780	- 0.348	0.347
0.522	0.677	- 0.259	0.281
0.549	0.853	- 0.422	0.504
0.513	0.847	- 0.421	0.458
0.424	0.755	- 0.403	0.504
0.715	0.471	- 0.214	0.459
0.700	0.411	- 0.108	0.282
0.781	0.443	- 0.239	0.343
0.735	0.509	- 0.126	0.289
0.791	0.506	- 0.279	0.438
- 0.255	- 0.415	0.902	- 0.409

- 0.268	- 0.456	0.906	- 0.405
- 0.180	- 0.381	0.856	- 0.381
0.457	0.496	- 0.392	0.895
0.453	0.534	- 0.476	0.906
0.428	0.497	- 0.519	0.906
0.428	0.384	- 0.219	0.787
0.298	0.288	- 0.169	0.697

This study measurements were made using probability and t-statistics and hypothesis testing using a p-value with an alpha of 5% (<0.05). Meanwhile, hypothesis testing used the t-statistic value with an alpha of 5% (>1.96). Table 5 shows that all hypotheses are accepted. In the first hypothesis, religiosity had a positive and significant effect on ethical consumption by looking at the t-statistic value of 2.626 > 1.96 and the original sample value of 0.187, thus, H1 was accepted. In the second hypothesis, religiosity had a negative and significant effect on materialism by looking at the t statistical value of 5.313 > 1.96 and the original sample value of - 0.449, so, H2 was accepted. In the third hypothesis, materialism had a negative and significant effect on ethical consumption by looking at the t statistical value of 4.222 > 1.96 and the original sample value of - 0.262, so, H3 is accepted. In the fifth hypothesis, religiosity had a positive and significant effect on environmental knowledge by looking at the t statistical value of 5.724 > 1.96 and the original sample value of 0.495, thus, H5 is accepted. In the sixth hypothesis, namely environmental knowledge had a positive and significant effect on ethical consumption by looking at the t statistical value of 7, 624 > 1.96 and the original sample value of 0.469, thus, H6 is accepted.

Table 5. Hypothetical Test

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P-Values
Religiosity -> Ethical Consumption	0.187	0.182	0.071	2.626	0.009
Religiosity -> Materialism	-0.449	-0.449	0.084	5.313	0.000
Materialism -> Ethical Consumption	-0.262	-0.260	0.062	4.222	0.000
Religiosity -> Environmental Knowledge	0.495	0.500	0.086	5.724	0.000
Environmental Knowledge -> Ethical Consumption	0.469	0.478	0.062	7.624	0.000

Table 6 suggests that materialism had a mediating effect on the effect of religiosity on ethical consumption by looking at the p-value of 0.001 <0.05. Thus, H4 can be accepted. Furthermore, there was a mediating effect of environmental knowledge on the effect of religiosity and ethical consumption by looking at the p-value of 0.000 <0.05. Thus, H7 can be accepted.

Table 6. Mediation Test

	Original Sample	Sample	Standard Deviation	T Statistics	P Values
Religiosity -> Materialism -> Ethical Consumption	0.118	0.117	0.037	3.195	0.001
Religiosity -> Environmental Knowledge -> Ethical_Consumption	0.232	0.239	0.053	4.391	0.000

The effect of religiosity on ethical consumption

Testing the hypothesis of this study showed that religiosity has a significant positive effect on ethical consumption by looking at the t-statistic 2.626 > 1.96 and the original sample value of 0.187. The positive meaning means that if religiosity increases, then ethical consumption will also increase. Adil (2022) argued that religiosity has a significant effect on ethical consumption behavior, which means that religiosity acts as a guiding force for consumers to adopt ethical consumption. This is in line with the findings of Khan & Kirmani (2018) which revealed that the higher the religious orientation,

the higher the ethical consumption. Based on the answers to open questions, respondents argued that protecting the environment and paying attention to ethical consumption is important because Islam also teaches to protect the environment as a form of khalifah on earth, although in practice it is also not easy. Muslims have a responsibility and respect for the environment, humans and nature through ethical consumption (Iran dust & Bamdad, 2014). Thus, Muslims' ethical consumption is influenced by the belief that if Muslims consume ethically, that is, not wasting natural resources, they will get better rewards in the afterlife.

The effect of religiosity on materialism

Testing the hypothesis of this study shows that religiosity had a significant negative effect on materialism by looking at the t-statistic $5.313 > 1.96$ and the original sample value -0.449 . The negative meaning means that if religiosity increases, then materialism decreases. Adil (2022) suggested that religiosity has a negative effect with materialism, which in turn has an inverse relationship with ethical consumption. That is because religion is against materialism orientation. Islam commands its followers to share, sacrifice and give charity (Belk et al., 2003). Materialism is widely seen as an essential life value concerning attitudes, behaviors and beliefs such as hedonic behavior and money (Raggiotto et al., 2018). Levels of materialism result from different levels of religiosity (Raggiotto et al., 2018). Materialism can be viewed as the value that consumers place on the acquisition and possession of material objects. However, some are more prone to luxury goods and food consumption patterns. When assessed through a broader set of materialistic goals (e.g. money and consumer value), which are influenced by the level of religion (Junaidi et al., 2022)

The influence of materialism on ethical consumption

Testing the hypothesis of this study shows that materialism had a significant negative effect on ethical consumption by looking at the t-statistic $4.222 > 1.96$ and the original sample value -0.262 . The negative meaning means that if materialism increases, then ethical consumption decreases. Sharif (2016) argued that the concept of ethical consumption is contrary to materialism because it requires scarification of consumers' materialistic needs. Raggiotto et al., (2018) suggested that religiosity and materialism have a negative effect, which leads to low or unethical consumption behavior. Materialism is considered an influential factor in the adoption of higher consumption, which is contrary to the concept of ethical consumption (Alzubaidi et al., 2021)

The mediating role of materialism

Testing the hypothesis of this study shows that materialism had a mediating effect on the effect of religiosity on ethical consumption by looking at the p-value of $0.001 (<0.05)$ and t-statistics $3, 195 (>1.96)$. Adil (2022) revealed that materialism mediates the relationship between religiosity and ethical consumption. There are individuals who are religious, but unethical because the low or unethical consumption behavior among religious individuals is their materialistic orientation (Dávila et al., 2017). Thus, materialism is considered an influential factor in the adoption of higher consumption, which is contrary to the concept of ethical consumption (Alzubaidi et al., 2021). Based on the answers to the open question, the respondents of this study think that environmentally friendly products are important, because their use can be recycled again. As well as benefits such as protecting natural resources, reducing emissions, reducing energy use, reducing waste, reducing environmental pollution and to keep God's earth greener. Thus, research respondents argue that they protect the environment because of religious orders. Norris & Inglehart (2012) argued that in a society surrounded by the values of material gain, it will tend to ignore religious values. Therefore, the research shows that religious people are less materialistic (Usmani & Ejaz, 2020)

The effect of religiosity on environmental knowledge

Testing the hypothesis of this study shows that religiosity had a positive significant effect on environmental knowledge by looking at the t-statistic $5.724 > 1.96$ and the original sample value of 0.495 . The positive meaning means that if religiosity increases, then environmental knowledge will also increase. Kamis & Abd. Wahab (2022) suggested that religiosity has a positive and significant effect on knowledge. This is because the researchers strongly believe that Muslims must know the teachings sourced from the Qur'an and hadith, because they are obliged to study and follow all Islamic teachings as a way of life and by believing that qada' and qadar have been determined, they will prepare themselves for planning and management in accordance with the teachings of the Al-Quran and hadith (Kamis & Abd. Wahab, 2022).

The environmental crisis is actually a crisis of religiosity and the separation of religion from

secular life may be the most important factor leading to the emergence of the environmental crisis. With an emphasis on the importance of moral beliefs and religious values, a return to religious traditions is suggested as a solution to the environmental crisis. Based on the answers to the open questions, the respondents of this study are of the opinion that consuming environmentally friendly products is part of the effort to save the environment from destruction. As Caliphs on earth, we must be able to protect the environment starting with small sustainable habits. Allah is the creator and sustainer of all things, and humans as His khalifah on Earth. So, protecting the environment as a concern for some things belonging to Allah and humans are also responsible for the environment.

The effect of environmental knowledge on ethical consumption

Testing the hypothesis of this study shows that environmental knowledge had a significant positive effect on ethical consumption by looking at the t-statistic value of 7.624 (>1.96) and the original sample value of 0.469. The positive meaning means that if environmental knowledge increases, it will also increase. Nassani et al., (2023) revealed that environmental knowledge is positively related to ethical consumption. Environmental knowledge is the basis of ethical consumption. If consumers do not have environmental knowledge, they do not adopt ethical consumption (Shapiro, 2019). Knowledge is an important variable that influences how people gather and use information to make moral decisions regarding ethical consumption. Environmental knowledge is a key determinant of ethical consumption behavior (Kushwah et al., 2019). If consumers have sufficient environmental knowledge, consumers will prefer to buy ethical products and increase ethical consumption behavior (Delistavrou et al., 2017).

The mediating role of environmental knowledge

The results of hypothesis testing suggest that there was a mediating effect of environmental knowledge on the influence of religiosity and ethical consumption by looking at the p-values of 0.000 (<0.05) and t-statistics 4.391 (>1.96). The results of this study regarding the mediation effect implement the opinion of Baron & Kenny (1986) which stated that a variable can be treated as a mediating variable if all three paths are significant. First, path "a" between the exogenous variable and the mediating variable must be significant. Second, path "b" between the mediating variable and the exogenous variable must be significant. Third and finally, path "c" between exogenous variables and endogenous variables must be significant. Research conducted by Kamis & Abd. Wahab (2022) argued that religiosity affects environmental knowledge and according to Shapiro (2019) environmental knowledge berpengaruh affects ethical consumption.

V. CONCLUSION

The findings of this study have contributed theoretically to explain the relationship between religiosity, materialism, environmental knowledge, and ethical consumption. Based on the findings, religiosity has a positive and significant effect on ethical consumption, religiosity has a negative and significant effect on materialism, materialism has a negative and significant effect on ethical consumption, materialism has a mediating effect on the effect of religiosity on ethical consumption, religiosity has a positive and significant effect on environmental knowledge, environmental knowledge has a positive and significant effect on ethical consumption, there is a mediating effect of environmental knowledge on the effect of religiosity and ethical consumption. Therefore, the findings of this study contribute to the development of ethical consumption theory in various aspects: (1) understanding the relationship between religiosity to materialism and environmental knowledge of Muslim consumers in the Indonesian context; (2) understanding the factors that influence the creation of ethical consumption; (3) this research is a guiding step to examine the complex relationship between religiosity, materialism, environmental knowledge to ethical consumption. This research is one of the studies that proposed materialism and environmental knowledge as mediating the effect of religiosity on ethical consumption; (4) this research also contributed to the field of Islamic economics, especially consumption ethics to increase knowledge and become reference material for learning or subsequent research.

Practically, the findings of this study can help marketers to better understand Muslim consumer behavior and develop better marketing strategies according to the needs and expectations of Muslim consumers. Thus, managers must be careful when modifying individual perceptions of ethical consumption. Managers should provide accurate information and avoid unethical practices to promote ethical consumption in Indonesia.

The limitations of this study are: 1) This research was conducted in developing countries so that the findings cannot be generalized to developed countries. Thus, it is recommended that future research

be conducted in developed countries; 2) This research only focused on Muslim consumers. Thus, future researchers are advised to consider consumers of other religions as well; 3) This study only evaluated a cross-sectional data set obtained from a survey, and the impact of time on causality and inference was not considered. Future research may use longitudinal data to further explore the relationship between religiosity, materialism, environmental knowledge and ethical consumption.

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