



The relationship between religiosity, materialism, and pro-environmental behavior among consumers in Central Java (Indonesia) and Bicol Region (the Philippines)

Mamik Indaryani^a, Etni Marliana^{a,*}, Mochamad Widjanarko^b, Ana E. Mirana^c,
Cherry Love B. Montales^c

^a Department of Management, Faculty of Economics and Business, Universitas Muria Kudus, Kudus 59327, Indonesia

^b Department of Psychology, Faculty of Psychology, Universitas Muria Kudus, Kudus 59327, Indonesia

^c College of Development Education, Central Bicol State University of Agriculture, Pili 4418, Philippines

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Abstract

This study aimed at examining the relationship between religiosity (intrinsic religiosity, extrinsic religiosity), materialism (centrality, happiness, success), and pro-environmental behavior (PEB) among consumers in Central Java (Indonesia) and Bicol Region (the Philippines), two areas where the population has different major religions. It used an online survey method, collecting 349 usable questionnaires from Central Java and 220 questionnaires from Bicol Region. The research indicates that PEB is affected positively by intrinsic religiosity in Central Java and by extrinsic religiosity in Bicol Region. In both countries, intrinsic religiosity had a negative impact on the success dimension of materialism, while extrinsic religiosity was found to have a positive impact on the happiness and success dimensions of materialism. The study also found that not all dimensions of materialism were negatively related to PEB. Only the centrality dimension (and the happiness dimension in Bicol Region) was found to have a negative impact on PEB. The research findings provide insights into the significance of religiosity and materialism value in the engagement of consumers in PEB. The result of the study may guide the marketers in creating initiatives that will answer both intrinsic and extrinsic religiosity as well as dimensions of materialism to formulate more successful consumer engagement in PEB.

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Introduction

Environmental problems such as plastic and toxic waste, pollution, global warming, and even climate change are considered predominantly anthropogenic in

nature (Lai & Cheng, 2016). To counteract this damage, consumers can engage in pro-environmental behaviors (PEB), defined as any behavior that can be helpful to minimize environmental impact (Steg & Vlek, 2009). These behaviors include purchasing environmentally friendly products (Felix & Braunsberger, 2016), saving energy and recycling (Pepper & Leonard, 2015), and practicing ethical consumption (Adil, 2021). The engagement of consumers in PEB helps to mitigate environment

* Corresponding author.

E-mail address: etni.marliana@umk.ac.id (E. Marliana).

deterioration and sustainably protect the planet (Bhuiyan et al., 2018; Felix & Braunsberger, 2016; Moser, 2015).

Furthermore, cultural values in society may affect how individuals perform behaviors that can benefit environmental sustainability (Bhuiyan et al., 2018). Religiosity, defined as the extent to which an individual practices and follows a religion, has often been examined by researchers as a determining factor in influencing PEB (Adil, 2021; Fang et al., 2020; Khan & Kirmani, 2018; Pepper & Leonard, 2015). Amongst other values, materialism has gained significant research attention alongside the development of the modern consumer culture (Ilter et al., 2017). Materialism emphasizes material possession to attain happiness Volkan (2016), and its followers increasingly consume more and more to consider themselves a success. As a result, materialists buy and consume products in excess to achieve happiness, which may put the environment at stake (Segev et al., 2015).

The interactions between religiosity, materialism, and PEB have not been extensively investigated. Furthermore, most of the existing studies have been conducted solely in the context of one particular country or religion (Adil, 2021; Arli & Tjiptono, 2021; Felix & Braunsberger, 2016; Islam & Chandrasekaran, 2016). As cross-cultural studies between countries have not been widely examined, there is thus a need to explore these variables in the context of different countries with different main religions (Adil, 2021; Arli & Tjiptono, 2021). Therefore, this study aims to address those voids by examining the relationship between religiosity, materialism, and PEB among customers of Central Java (Indonesia) and Bicol Region (the Philippines) from different faith backgrounds. In Indonesia, about 87 percent of the population is Muslim (Kusnandar, 2022), while about 86 percent of the people in the Philippines are Roman Catholics (Jia, 2021). The study is one of the initial studies to compare the relationship between religiosity, materialism, and PEB in the different context of consumers from different areas of two countries.

Literature Review

Influence of Religiosity on PEB

Previous studies have established that religiosity is a multi-dimensional construct consisting of intrinsic and extrinsic components (Arli, 2017; Uysal & Okumuş, 2019). Intrinsic religiosity explains religion as a means to apprehend life and indicate personal commitment towards religious beliefs and practices (Ilter et al., 2017). Meanwhile,

in the context of extrinsic religiosity, religion is a means to other external ends as well as tools to serve self-interest and achieve personal objectives (Power & McKinney, 2014).

The relationship between consumers' religiosity and PEB may stem from the basic religious principle regarding how humans should treat the environment. Religious teachings, regardless of denomination, pressure their followers to protect the environment by performing certain stewardship behaviors (Khan & Kirmani, 2018). According to Uysal and Okumuş (2019) people with intrinsic religiosity practice their religion devotedly and internalize their faith as part of their characters. Therefore, consumers with strong intrinsic religiosity are more likely to engage in environmental behaviors than non-religious people as they see it as devotion to their faith (Islam & Chandrasekaran, 2016). Meanwhile, a person with high extrinsic religiosity will use religion to gain certain benefits in society such as find comfort, build social relations, or strengthen their social status (Uysal & Okumuş, 2019). They are also more likely to perform PEB than non-religious people, but their motivation behind PEB is different than those with intrinsic religiosity. Individuals with extrinsic religiosity perform PEB to achieve acceptance and recognition from society (Wang et al., 2020). Based on the discussion above, this study proposes the following hypotheses:

H1a: Intrinsic religiosity is positively related to PEB.

H1b: Extrinsic religiosity is positively related to PEB.

Influence of Religiosity on Materialism

Materialism is defined as the importance of owning material goods and money in achieving goals and attaining happiness in life (Ilter et al., 2017; Volkan, 2016). However, many religions teach the importance of giving, sharing, and sacrificing one's possessions and the value of renouncing one's wealth and worldly goods (Ilter et al., 2017). Islam teaches its followers not to consume and buy things in excess but to use their wealth to help other people in need instead (Adil, 2021). Similarly, Catholicism and Christianity view material possession as an obstacle to faith rather than a source of happiness. Specifically, the Holy Bible warns that "the love of money is the root of all evil" (Arli et al., 2016). Given that religious teachings so strongly contradict materialism, previous scholars have shown that religiosity negatively relates to materialism (Adil, 2021; Ilter et al., 2017).

The three dimensions of materialism (i.e., centrality, happiness, and success) are widely used in studying it (Ilter et al., 2017; Segev et al., 2015; Thi Tuyet Mai, 2019; Volkan, 2016). The centrality dimension is the degree to which materialistic individuals are expected to place material

acquisition central to giving meaning to life (Segev et al., 2015). The happiness dimension, meanwhile, indicates the vital role of possession and acquisition in attaining well-being and satisfaction with life (Volkan, 2016). Finally, the success dimension emphasizes that for materialists, accumulated material possessions and achievement may project a certain image to define their success (Ilter et al., 2017). Therefore, to investigate the influence of religiosity on the materialism, this study proposes the following hypotheses:

H2a: Intrinsic religiosity is negatively related to the centrality, happiness, and success dimensions of materialism.

H2b: Extrinsic religiosity is negatively related to the centrality, happiness, and success dimensions of materialism.

Influence of Materialism on PEB

PEB are often at odds with the goals of materialists as they stress the centrality of material possession in their lives. Studies have further found that materialism negatively impacts PEB (Joung, 2013; Segev et al., 2015). A lower level of environmental behavior has been identified among materialistic people as they are predominantly focused on personal interests and the accumulation of possessions for themselves (Thi Tuyet Mai, 2019). As such, they are more likely to engage in higher consumption with little regard for the environment. To project a happy and successful life, materialists often harm the environment by purchasing products when the newest model comes out (Segev et al., 2015), practicing fast fashion (Joung, 2013), and engaging in “throwaway culture” (Evers et al., 2018). Based on the discussion above, the following hypotheses are proposed:

H3a: The centrality dimension of materialism is negatively related to PEB.

H3b: The happiness dimension of materialism is negatively related to PEB.

H3c: The success dimension of materialism is negatively related to PEB.

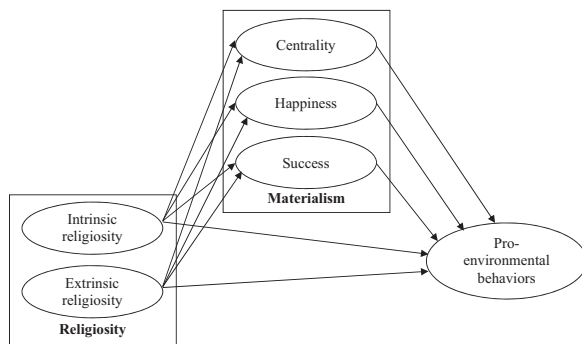


Figure 1 Conceptual framework

Methodology

Measures and Data Collection

The questionnaire was divided into four parts. The first part asked the personal data of the respondents, including age, sex, location, and religion. The second part consists of 10 items that measure both intrinsic and extrinsic religiosity (5 items each). The questionnaires adapted measures from the existing literature, including Allport and Ross’s religiosity scale, which has been used to study consumers attitude by Arli (2017). The religiosity items were measured using seven-point Likert scales (ranging from 1 = strongly disagree to 7 = strongly agree). Therefore, a higher mean value indicates higher intrinsic/extrinsic religiosity of each individual.

The third part of the questionnaire was intended to measure materialism. It was measured using Richins’ materialism scale, which is widely used by other researchers in the context of consumer behavior (Polonsky et al., 2014; Volkan, 2016). In total, 18 items were used to measure three distinct dimensions of materialism: success (6 items), centrality (7 items), and happiness (5 items). The materialism items were also measured using seven-point Likert scales (ranging from 1 = strongly disagree to 7 = strongly agree).

The fourth part of the questionnaire was focused on the items that measured PEB. The items were adapted from Ertz et al. (2016) and were measured using a seven-item scale to assess the frequency of certain environmentally friendly actions (i.e., using reusable products; eating locally grown food; recycling; purchasing eco-friendly products). The item of commuting by bike, walking, or public transit is omitted from the questionnaire because it is not suitable for the condition in Central Java where most people are using motorcycles as a result of poor public transportation and pedestrian facilities.

The questionnaires were distributed using an online survey Google Form platform. The questionnaire link was sent through WhatsApp Messenger to the group of staff members of universities, school personnel, and college students. In order to generate more heterogeneous samples respondents were also informed to distribute the online survey to other people. The respondents of this study came from several cities in the province of Central Java in Indonesia (i.e., Kudus, Semarang, Pati, and Jepara), as well as Bicol Region in the Philippines (i.e., Ligao, Naga, Iriga, and the municipality of Pili).

In Central Java, the questionnaires were translated into Bahasa following a back-translation process. Meanwhile, the questionnaires were distributed in English in Bicol Region as

the majority of the population is bilingual. Data were collected from a convenience sample of 349 respondents from Central Java and 220 respondents from Bicol Region (all adults aged 18 or over). Among the respondents from Central Java, 91.7 percent were Muslim; 60.1 percent were female; and 55.9 percent were in the age group of 18–25 years. Among the respondents from Bicol Region, 86.8 percent were Roman Catholics; 73.2 percent were female; and 52.3 percent were in the age group of 18–25 years.

Data Analysis

Partial least square structural equation modeling (PLS-SEM) was used to analyze our conceptual model. SmartPLS 3.2 (SmartPLS GmbH, Bönningstedt, Germany) software was used to perform the analysis.

Confirmatory factor analysis (CFA) was conducted to assess the model measurement's validity. During the process of CFA, some items with factor loadings less than .5 in both studies were deleted from the model because they were considered irrelevant as indicators. The AVE values of each construct in both studies were found to be greater than .5, which supports the constructs convergent validity. Table 1 indicates that the composite reliability value is greater than the recommended threshold of .7 (Hair et al., 2019), thereby ensuring construct reliability of both studies. Discriminant validity was also examined to ensure that the measures of the constructs were distinct from each other. Table 2 shows that both of the studies demonstrated good discriminant validity as the square root of the AVEs exceeded the values of the inter-construct correlations (Thi Tuyet Mai, 2019).

Table 1 Convergent validity and construct reliability

Construct and Items		Central Java			Bicol Region		
		Factor Loading	AVE	CR	Factor Loading	AVE	CR
Intrinsic religiosity			.645	.900		.515	.841
RInt1	I enjoy reading about my religion	.780			.767		
RInt2	It is important to me to spend time in private thought and prayer	.679			.689		
RInt3	I have often had a strong sense of God's presence	.812			.628		
RInt4	My whole approach to life is based on religion	.865			.769		
RInt5	I try hard to live all my life according to my religious beliefs	.865			.725		
Extrinsic religiosity			.578	.872		.518	.840
RExt1	What religion offers me most is comfort in times of trouble and sorrow	.763			.620		
RExt2	Prayer is for peace and happiness	.768			.732		
RExt3	I pray mainly to gain relief and protection	.777			.830		
RExt4	I go to a religious service because I enjoy seeing people I know there	.757			.815		
RExt5	I go to a religious service because it helps me to make friends	.735			.620		
Centrality			.711	.831		.778	.875
MCen1	I usually buy only the things I need.	.846			.848		
MCen2	I try to keep my life simple, as far as possessions are concerned	.840			.915		
Happiness			.662	.854		.708	.879
MHap2	My life would be better if I owned certain things I don't have	.885			.792		
MHap4	I'd be happier if I could afford to buy more things.	.785			.861		
MHap5	It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like."	.765			.870		
Success			.576	.845		.571	.840
MSuc1	I admire people who own expensive homes, cars, and clothes.	.738			.792		
MSuc2	Some of the most important achievements in life include acquiring material possessions.	.790			.861		
MSuc4	The things I own say a lot about how well I'm doing in life.	.762			.870		
MSuc5	I like to own things that impress people.	.745			.712		
PEB			.635	.874		.682	.895
Highlighter questions: What percentage of the time do you do each of the following:							
PEB1	Use reusable products (e.g., reusable bag, bottle)	.711			.799		
PEB2	Eat locally grown food	.819			.756		
PEB3	Recycle	.816			.872		
PEB4	Purchase eco-friendly products	.836			.872		

Notes: AVE means average variance extracted; CR means composite reliability.

Table 2 Descriptive statistics and discriminant validity

Construct	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)
Central Java								
(1) Intrinsic religiosity	6.357	0.914	0.803					
(2) Extrinsic religiosity	6.087	1.184	0.739	0.760				
(3) Centrality	2.175	1.100	-0.304	-0.241	0.843			
(4) Happiness	3.776	1.390	0.020	0.171	0.061	0.813		
(5) Success	3.726	1.363	-0.017	0.151	0.038	0.544	0.759	
(6) PEB	4.832	1.623	0.325	0.203	-0.209	-0.126	-0.096	0.797
Bicol Region								
(1) Intrinsic religiosity	6.087	1.061	0.718					
(2) Extrinsic religiosity	5.885	1.366	0.669	0.720				
(3) Centrality	2.061	1.084	-0.289	-0.382	0.882			
(4) Happiness	3.909	1.369	0.031	0.128	-0.016	0.842		
(5) Success	3.923	1.500	0.102	0.311	-0.109	0.403	0.756	
(6) PEB	5.634	1.278	0.138	0.237	-0.212	-0.159	0.058	0.826

Note: SD means standard deviation; diagonal elements (in bold) mean the square root of AVE of each construct

Results and Discussion

A bootstrapping method with 5000 iterations of resampling was performed to test the hypotheses of the proposed model. The path coefficients and significance level of the bootstraps were used to examine the relationships between the constructs. Table 3 presents the results of the hypothesis testing for each study.

The current study indicated that in Central Java, intrinsic religiosity was found to positively influence PEB. Conversely, it was extrinsic religiosity that was found to positively influence PEB in Bicol Region. It may thus be implied that PEB is more likely to be performed by consumers with high intrinsic religiosity in Central

Java and by consumers with high extrinsic religiosity in Bicol Region. Because most of the respondent from Central Java are Muslim and Bicol Region are Roman Catholics, these findings may indicate, that between those religions, the dimensions of religiosity may exert different influences on how consumers perform PEB (Arlı, 2017).

Islam has a fundamental teaching that followers must look after the environment and conserve its natural resources because God dislikes wasteful behavior (Khan & Kirmani, 2018). Therefore, Muslims from Central Java with high intrinsic religiosity participate in environmental activities as part of their devotion to live according to that religious principle. Meanwhile, in Catholicism, humans are responsible for protecting the environment because

Table 3 Results of hypothesis testing

Structural Path	Central Java			Bicol Region		
	PC	p	Status	PC	p	Status
H1a: Intrinsic religiosity → PEB	0.322	***	s	-0.055	0.280	ns
H1b: Extrinsic religiosity → PEB	-0.045	0.266	ns	0.229	*	s
H2a:			s			ps
Intrinsic religiosity → Centrality	-0.278	***		-0.059	0.254	
Intrinsic religiosity → Happiness	-0.238	**		-0.104	0.159	
Intrinsic religiosity → Success	-0.292	***		-0.202	*	
H2b:			ns			ps
Extrinsic religiosity → Centrality	-0.034	0.347		-0.342	***	
Extrinsic religiosity → Happiness	0.345	***		0.201	*	
Extrinsic religiosity → Success	0.365	***		0.439	***	
H3a: Success → PEB	-0.021	0.376	ns	0.066	0.247	ns
H3b: Centrality → PEB	-0.116	*	s	-0.136	*	s
H3c: Happiness → PEB	-0.103	0.050	ns	-0.211	**	s

Note: PC means path coefficient; p means p-value; s means the hypothesis is supported; ps means hypothesis is partially supported; ns means the hypothesis is not supported.

* p < .05, ** p < .01, *** p < .001.

God has tasked them with governing creation and being good stewards of the earth (Pepper & Leonard, 2015). Roman Catholics from Bicol Region with high extrinsic religiosity tend to engage in PEB because by performing stewardship behaviors, it might help satisfying their need for social relations and recognition.

The results further confirm extant literature's findings that religiosity has a certain impact on PEB (Fang et al., 2020; Felix & Braunsberger, 2016). Therefore, marketers should consider the level and dimensions of religiosity as a segmentation variable when positioning their green products and services (Islam & Chandrasekaran, 2016). For consumers with high intrinsic religiosity, for example, firms and environmental groups can advertise that performing certain PEB is a form of obedience to God and their religious teachings. Conversely, for consumers with high extrinsic religiosity, the products and services can be marketed through unique religious campaigns or social events. These campaigns will be appealing for those consumers to gain social connections and recognition (Arlı, 2017).

The current results also indicate that intrinsic religiosity dimension has a negative impact on all dimensions of materialism both in Central Java and Bicol Region. However, the link between intrinsic religiosity and centrality and happiness was not significant in the context of Bicol Region. Such might provide evidence that consumers in Bicol Region perceive acquiring material possessions to have meaning, and satisfaction in life does not significantly contradict their religious teachings. In both countries, intrinsic religiosity demonstrated the highest effect on the success dimension of materialism, indicating that consumers with high intrinsic religiosity (e.g., those who follow religious teachings in their daily lives) are less likely to consider material possession as an essential factor in defining their image of success.

Although extrinsic religiosity had a negative relationship with the centrality dimension of materialism, this relationship was only significant in Bicol Region. In addition, unexpected results were found as the association between extrinsic religiosity and the happiness and success dimensions of materialism was positively significant in both countries under study. This result implies that consumers with stronger extrinsic religiosity (e.g., those who practice religion to meet certain personal and social needs) are more likely to feel that material possessions are less central in giving life meaning. However, it appears that by acquiring more possessions, they may still feel more satisfied and successful with life. Perhaps, it is because these consumers feel that the

material possessions they have received are blessings from God. These findings support the notion that consumers with strong intrinsic religiosity and consumers with strong extrinsic religiosity may not have the same values when it comes to consumption and PEB (Arlı et al., 2016).

In other words, the results show that consumers' religiosity is not always in contrast with materialism. Marketers thus have the opportunity to sell materialistic products (e.g., luxury and expensive products) toward consumers with high extrinsic religiosity. However, they might need to design different communication strategies to market the products as representing the happiness and success of God's blessing upon the consumer (Arlı et al., 2016).

The study also revealed that the relationship between the success dimension of materialism and PEB was found to be insignificant in both countries. This finding indicates that the weight that consumers give success does not really impact how they perform PEB. The current study also found a significant negative relationship between the centrality dimension of materialism and PEB in both countries, implying that consumers with strong believe that material acquisition is a central part of their life are less likely to perform PEB. Furthermore, a negative association was also found between the happiness dimension of materialism and PEB. However, a significant association was only found in Bicol Region alone. As such, the PEB of consumers in Central Java is not likely to be affected by how consumers accumulate possessions to seek happiness. On the other hand, consumers in Bicol Region are less likely to perform PEB when they hold the strong happiness value of materialism.

These findings may suggest that PEB does not reflect materialism as materialistic consumers tend to be indifferent or even less concerned about performing environmentally friendly behavior in their lives. Perhaps such consumers are less interested in engaging in PEB because these behaviors do not fit their image of a meaningful, happy, and successful life. There is thus a need to change the perception of PEB to attract materialistic consumers. Firms and environmental groups can answer this call by designing more options for green products and services that represent the desired image of materialistic consumers. These options should be promoted to such a degree that they symbolize higher life satisfaction, status, and achievement (Thi Tuyet Mai, 2019). In this way, materialistic consumers may be encouraged to possess green products and perform green behavior that is less harmful to the environment.

Conclusion and Recommendation

The current study addresses the need for a more empirical study on the issues of religiosity, materialism, and PEB. As such, it is a pioneering study linking each dimension of religiosity (i.e., intrinsic and extrinsic) with the dimensions of materialism (centrality, happiness, and success) and PEB in the context of different area in two countries with different main religions. The research findings provide insights into the significance of the religiosity and materialism value in the engagement of consumers in PEB.

This study indicates that in different religious contexts, the tendency to engage in PEB can be determined by different dimensions of religiosity. In Central Java with the majority of respondents Muslim, intrinsic religiosity was found to positively influence PEB. To improve the customers engagement in PEB, business activities may link the act of PEB with the practice of religious teaching. Meanwhile in Bicol Region where the majority of respondents are Roman Catholics, it was extrinsic religiosity that was found to positively influence PEB. Therefore, customer PEB can be strengthened by promoting PEB as a tool to achieve social connection with other followers of the religion. This further indicates that religiosity is not always opposed to materialism as extrinsic and intrinsic religiosity might be differently associated with materialism. Finally, materialistic consumers tend to be indifferent or even less interested in practicing PEB because these behaviors do not convey their desired image. Therefore, marketers need to change the perception of materialistic customers by associating PEB with a meaningful, happy, and successful life.

The current study acknowledges the following limitations. First, this study only compared two areas of developing countries in the region of Southeast Asia. Future research may design cross-cultural studies from different levels of economic development and other regions to enhance the findings' generalizability. It is also suggested that research collects data from a broader sample to have better representation of a country population. Second, in this study, gender, age, and socio-economic class were not taken into account as the factors that might exert the relationship between variables that were studied. Therefore, the researchers suggest to consider those factors as controlled variables in future studies. Third, this study used several behaviors to measure the concept of PEB. Future research may consider exploring a specific PEB since certain behaviors may be affected differently by religiosity and materialism.

Conflict of Interest

The authors declare that there is no conflict of interest.

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