

# Spirituality of Green Purchase Behavior: Does Religious Segmentation Matter?

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**Abstract-** *The current decade of the 21<sup>st</sup> century has witnessed the global warming phenomenon caused by massive greenhouse gas (GHG) emissions rooted mainly from unsustainable consumption behaviour. As part of environmentally significant behaviour, the act of acquiring green or environmentally-friendly products was deemed important. Since consumers in the 21st century can be associated with a creative generation which constantly seeks to improve themselves and the world, it is therefore an attempt of this paper to investigate the influences of spirituality on willingness to purchase green products. The study also attempts to seek differences between Muslims and non-Muslims in Malaysia according to their level of spirituality and willingness to purchase green products. Data was collected via survey using self-reported questionnaires among consumers intercepted at several outlets in the central region of Peninsular Malaysia. A total of 606 usable questionnaires were finally elicited among Malaysian individual consumers. The findings indicated that spirituality has a significant influence on willingness to purchase green products. Malaysian Muslims make a difference only in spirituality while there is no difference found in terms of willingness to purchase green products. Theoretically, the findings had extended the notion of value orientation in the value-belief-norm theory by demonstrating the significant influences of spirituality dimensions on willingness to purchase green products. The implications of the study too, may benefit further policy planning and promotional campaign formulation by the government, non-government organisations, business owners, marketers, religious institutions, media and other related institutions.*

**Keywords-** *Consumer behavior; environment; green; purchase; segmentation; spirituality*

## 1. INTRODUCTION

Environmental issues are nothing new and humans have been struggling to be harmonious with the environment since early civilization (Environmental History Timeline, 2009)[14]. The current decade of the 21st century has also witnessed the phenomenon of global warming as the world's most debated environmental issue which is being faced by the whole world. According to the Fifth Assessment Report of Intergovernmental Panel on Climate Change (IPCC), global surface temperature will likely be in the range of 0.3°C to 0.7°C for the period of 2016 to 2035 (Intergovernmental Panel on Climate Change, 2015). The observed temperature was increased due to the increasing concentrations of greenhouse gas (GHG) emissions resulting from human activities which had imposed a great impact on climate change, the health of humans and the eco-system (IPCC, 2007a[26]; 2007b[27]; 2015)[28].

As individuals being the major sources of various environmental problems today (Johnson, 2009)[30] including global warming, it is therefore a major concern of the study to focus on the behavior of individuals as consumers toward the environment. Playing the role as members of families, households, and communities, an individual's pro-environmental behaviors can be regarded

as significant in mitigating various environmental problems (Peattie, 2010[49]; Stern, 1999)[60]. Thus, it is vital to analyse the factors underlying consumption behaviors of individual consumers in order to understand and perhaps mitigate the current environmental issues.

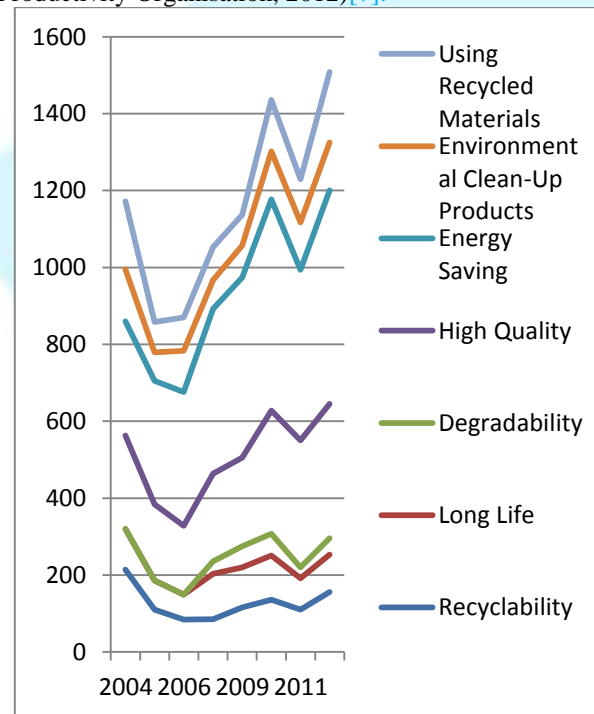
## 2. BACKGROUND OF STUDY

Studies show that environmental problems can be associated with the consumption of scarce resources in each of three phases; acquisition, usage, and disposal (Pieters, 1991)[51]. Since the acquisition of products by consumers occurs in the early stage of the consumption cycle (as opposed to recycling (Hong & Suresh, 2006))[23], the act of choosing and purchasing green products or "products which aimed to reduce its negative environmental impact" (Godfrey, 2002, p.11)[18] such as energy-efficient appliances, biodegradable detergents, and recycled papers are deemed important. Such acts also form part of green consumer behaviour i.e. the behaviour of an individual who considers environmental or social issues while making purchasing or non-purchasing decisions (Peattie, 1992)[48]. The right buying decision can reduce or even totally eliminate the risk of environmental harm in the post-purchase stages of the consumption cycle (Stern, Dietz, Ruttan, Socolow, &

Sweeney, 1997)[63], thus making buying decisions as the most environmentally important consumer decisions (Thøgersen, 1999)[66]. The act of preferring and purchasing green products among people in aggregate was also able to impose considerable impacts on the environment which rendered as an environmentally significant behaviour, in a form of private-sphere environmentalism (Stern, 2000)[61]. Environmentally significant behaviour as defined by Stern (2000, p.408) is “the extent to which it (behaviour) changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere itself”. Besides, environmentally significant behaviour can also be regarded as a form of pro-social behaviour since the behaviour benefits others while there is no direct benefit enjoyed by individuals as the result of engaging in such behaviour. In short, as a form of significant environmental behaviour, the present study emphasizes the acquisition of green products through consumers’ purchases. The dearth of empirical evidence on the causal effects of spirituality on willingness to behave, including the purchases of green products (Johnson, 2009[30]; Kale, 2006) [32]also motivated a further examination on factors underlying the behaviour. Religion and religious communities are seen to be relevant in the effort to overcome various environmental problems (Sobian, 2012)[57] as religion has a role in shaping knowledge, attitudes and behaviour of the society towards the environment (Ibrahim, 2002)[24]. Besides, the study was also motivated by the need to extend the segmentation basis for green products by studying religious group particularly from the ever-growing Muslim market. According to the Pew Research Center (2016), in 2010, about 1.6 billion Muslims formed 23.2% of the world population. If current demographic trends continue, the Muslim population is projected to increase by 73% between 2010 to 2050. In 2050, Muslims are expected to make up more than 50% of the population in 51 countries, two more than in 2010, as both the Republic of Macedonia and Nigeria are projected to gain Muslim majorities. In Malaysia, Muslims represent 61.3% of the total country’s population which is the largest compared to other religious groups in the country (Department of Statistics, Malaysia, 2015)[9]. As a country which is formed by a large percentage of Muslims, maintaining a harmonious relationship with Allah, other humans and the environment should be part of daily Islamic practices which have to be central among Muslims in Malaysia. The notion has been raised in a previous study by Md Harizan, Haron, and Wahid (2013)[40] conceptually. Nevertheless, little has been understood on green purchase behaviour among Muslims in Malaysia as compared to their non-Muslim counterparts. Therefore, the objective of the study is to investigate the influence of spirituality on willingness to purchase green products and to identify any difference(s) between Muslim consumers and non-Muslim consumers in terms of spirituality and willingness to purchase green products.

## 2.1 Green Purchase Behaviour

Being the earliest phase of consumption (Pieters, 1991)[51], green purchase behaviour is deemed important since it imposes a significant impact on the environment whereby the right buying decision can reduce or even totally eliminate the risk of environmental harm in the post-purchase stages of the consumption cycle (Stern et. al., 1997)[63]. The importance of the green product choice and purchase had been highlighted in past studies (Darnall, Ponting & Vasquez, 2010[8]; Heberlein & Black, 1976[21]; Thøgersen, 2000)[67]. Green purchasing has also been central to societal desirability which might foster environmentally responsible behaviour among people in general (Hartmann & Ibanez, 2006)[20]. In addition, the act of acquiring and purchasing green products among consumers in aggregate could impose significant changes to the environment (Stern, 1999)[60]. However, the importance of green purchase behaviour cannot be fully appreciated if the formation of such behaviour is not fully understood. To date, findings pertaining to green purchase behaviour among Malaysians had been inconclusive with most Malaysians only exhibiting a moderate level of purchase (Ahmad & Juhdi, 2008[5]; Mat Said, Ahmadun, Paim, & Masud, 2003[38]; Md Harizan, 2006[39]; Md Harizan et. al., 2013[40]; Tan & Lau, 2009)[64]. The studies performed somehow reflected current market responses towards green products and services in Malaysia as shown by the increasing trend of green product availability in the Asian market (Asian Productivity Organisation, 2012)[7].



Source: Eco-products Directory, Asian Productivity Organization (2012)

Figure 1: Numbers of green products and services (by environmental issues addressed ) in Asia, 2004 to 2012.

In determining factors underlying green purchase behaviour, it was realised that past theoretical basis was mainly developed from a materialistic approach, which relied primarily on empirical evidence provided by the five senses (literally be seen, heard, tasted, touched, or smelled) without much attention given to its spirituality approach (Miller & Thoresen, 2003[43]; Salleh, 2012)[54] although spirituality was believed to have contributed towards sustainability (Jain, 2001)[29]. In other words, when spirituality prevails among individuals, the quality of human lives as well as nature will be improved. Spirituality was believed to be an important factor underlying morally-based behaviour including behaviour which is pro-environmental (Leopold, 1948)[36] such as green purchase behaviour. Despite being under researched in various disciplines, particularly in psychological studies (Hill & Pargament, 2003;[22] Pargament, 1999)[47], spirituality was deemed important in shaping pro-environmental norms and behaviour (Johnson, 2009)[30]. Previous research had been largely done in a theoretical manner with limited empirical tests pertaining to causal effects of spirituality on consumer behaviour in the marketplace (Kale, 2004[31]; Kale, 2006[32]; Miller & Thoresen, 2003[43]; Yaacob, 2009)[69]. Thus, it is important to embark on a study to further understand the essence of spirituality in determining green purchase behaviour among consumers. Based on abovementioned arguments, this paper attempts to explain the essence of spirituality in determining green purchase behaviour among consumers.

## 2.2 Green Products

Products are defined as “environmentally-friendly” or “green” if in some ways they aim to reduce the product’s negative environmental impact (Godfrey, 2002)[18]. This conveys that the life-cycle effect of product is pertinent in defining a product as green. In another study, a green product is also defined as an innovative product in which technologies are involved in its manufacturing process with the aim of reducing the environmental impact throughout its life-cycle (Wang, 2007). The consideration of green attributes involves the choice of raw materials, the production waste, product usage, means of disposal, amount of pollution generated, and other health and safety concerns (Shrivastava, 1995)[58]. The environmentally-friendly products studied in past literature range from durable to non-durable products, mundane (daily) to occasionally purchased, and food to non-food products. Although energy-efficient products are increasingly available to consumers in the Asian market (Asia Productivity Organization, 2012)[7] besides being the most listed product range in Malaysia’s Green Directory (Malaysian Green Technology Corporation, 2012)[37], such green-technology-based products had rarely been studied in relation to consumers’ green purchases (Tang, 2005[65]; Young, Hwang, McDonald & Oates, 2009)[70] especially in developing countries. Therefore, there is a

need to embark on a study which focuses on energy-efficiency or energy-savings products.

## 2.3 Spirituality

Spirituality can be understood in various ways. In past studies, spirituality is often expressed and experienced as the governing principles or values which guide one’s connection to him or herself, others, nature, and God (Dyson, Cobb, & Forman, 1997[11]; Gomez & Fisher, 2003)[19] whilst Pargament (1999, p. 13)[47] defined spirituality as “a process through which people seek to discover, hold on to, and when necessary, transform whatever they hold sacred in their lives”. Spirituality is also understood as a process which denotes experiences one pursues in searching for one’s existence and purpose of living which embraces physical, emotional, as well as the intellectual (Mercado, 2006)[42]. Specifically, spirituality can also be defined as “one’s striving for and experience of connection with oneself, connectedness with others and nature, and connectedness with the transcendent” (Meezenbroek, et al., 2010, *in press*)[41]. Spirituality dealt with life’s deeper motivations and an emotional connection to God or its creations (Kale, 2006). In most studies, spirituality can be closely defined as religiousness or religiosity, but recent studies found that both concepts are distinct, yet overlapped in nature (Moodley, 2008). The meaning of religion has evolved in a different direction while the term spirituality is increasingly used to refer to the personal, subjective side of religious experience (Hill & Pargament, 2003)[22]. According to Koenig (2008)[33], religiousness represents an institutional, formal, outward, doctrinal, authoritarian, and inhibiting expression while spirituality denotes individual, subjective, emotional, inward, unsystematic, and freeing expression. Thus, spirituality can be said as more ‘independent’ from the context rather than religiousness.

Past studies found that spirituality is conceptualised in several components. For example, Kale (2004; 2006)[31][32] conceptualised spirituality to comprise of the inner self (inner life), meaning (mission in life), interconnectedness (recognition of the ultimate unity of all beings, a sense that there exists an energy that transcends all material categories and concepts), and the beyond (the notion of a supreme power, superior being or a transcendental force that provides a sense of purpose for everything and everyone). Therefore, it can be agreed that the understanding of inner life, meaning, interconnectedness, and the beyond or the transcendental is bounded within the essence of spirituality.

Although the role of spirituality has been largely undervalued in the past studies, recent development has also showed an increasing importance of spirituality in management studies (Kale, 2006)[32] which had appeared since 1999. The increasing number of articles on spirituality in recent studies suggested that it is worth enriching further empirical evidence on spirituality particularly in understanding the human behaviour. Since



there is evidence that spirituality can be studied scientifically (Miller & Thoresen, 2003)[43], empirical studies pertaining to spirituality have grown towards the development of spirituality measurement scales. Meezenbroek et al. (2010)[41] stressed that, in measuring spirituality, the universality, rather than the specificity of a particular religion should be the important criteria in the spirituality measurement scales. One of the measurement scales which has fulfilled such criteria is the measurement scale developed by Gomez and Fisher (2003)[19] which measures spirituality in the multidimensional aspects of personal, transcendental, environmental, and communal. The scale developed by Gomez and Fisher (2003)[19] has been validated statistically and found to have a high construct validity (Meezenbroek et al., 2010)[41]. Apart from that, Ellison (1983) [12] has developed a scale called the Spiritual Well-Being Scale, which measures on the existence and satisfaction in life and relationship with God in both vertical and horizontal dimensions. However, Ellison's scale lacks validity since the two-factor cannot be confirmed such as in studies by Imam, Abdul Karim, Jusoh, and Mamad (2009)[25], Scott et al. (1998)[55], as well as Slater et al. (2001)[59], which makes it becomes less preferred in measuring spirituality among individuals. Personal domain of spirituality deals with the extent of one's intra-relationship with regard to meaning, purpose and values in life (Fisher, Francis and Johnson, 2000, p.135)[16]. Self-awareness is the driving force or transcendent aspect of the human spirit in its search for identity and self-worth (Fisher, 1998)[15]. To date, studies have failed to produce empirical evidence that specifically examines the influence of spirituality personal domain on green purchases. Transcendental domain of spirituality denotes the relationship of self with something or some-one beyond the human level, a Transcendent Other or ultimate concern, cosmic force, transcendent reality, or God (Fisher, Francis and Johnson, 2000, p.135)[16]. However, to date, no studies were found to establish a specific empirical relationship between transcendental domain of spirituality and green purchases. Environmental domain of spirituality is related to care as well as nurture for the physical and biological world (Fisher, Francis and Johnson, 2000, p.135)[16]. In other words, to express the feelings or experience of connection with the environment is to embrace sustainability (Jain, 2001)[29]. As far as the study is concerned, no study has yet to investigate the influence of environmental domain of spirituality on the purchase of green products. Communal domain of spirituality can be expressed in the quality and depth of inter-personal relationships, between self and others, as well as relating morality and culture. The domain includes love, justice, hope, and faith in humanity (Fisher, Francis and Johnson, 2000, p.135)[16]. From the literature, it was hardly known for any empirical evidence to be established between the effect of communal spirituality and green purchase. Thus, all further mentioned domains of spirituality would require further investigations within the context of green

purchase. By establishing the concept of spirituality based on elements defined by Meezenbroek et.al (2010)[41], the present research attempts to empirically examine the influence of spirituality within the context of green purchase behaviour in the marketplace.

## 2.4 Segmentation of Green Consumer

Market segmentation can be understood as the division of large, heterogeneous markets into smaller market segments that can be reached more efficiently and effectively with products and services that match their unique needs (Kotler, Armstrong, Wong, & Saunders, 2008)[34]. Socio-demographic segmentation has always been a beginning point in measuring market segments and trends in the marketplace, which is deemed the essential foundation of market analysis (Engel, Blackwell, & Miniard, 1995)[13]. There has been extensive research which attempted to profile green consumers based on various socio-demographic variables; age, gender, education, number of children, and income (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003[10]; Peattie, 2010[49]; Von Meyer-Höfer, Von der Wense, & Spiller, 2015)[68]. However, there has been lukewarm attentions that truly investigated green purchase behaviour based on religion segments although religiosity determinants have gained popularity in profiling consumers in marketing (Adaviah & Chin, 2014)[4]. Religion is an important cultural factor as it is the most universal and influential social institution that significantly impacts attitudes, values, and behaviours of both individual and societal levels (Mokhlis, 2009)[45]. In Malaysia, it is essential to study religious segments in order to verify particular lifestyle and consumption habits (Adaviah & Chin, 2014)[4] as the country's population is made of a diversity of ethnic and religious groups of which Islam is the largest (61.3 %) (Department of Statistics, Malaysia, 2015)[9]. Since the study on religious segmentation is important in furthering our understanding of important patterns underlying consumption between Muslims and non-Muslim consumers, it is therefore an attempt of the study to profile green consumers based on religion by examining their spiritual orientation and willingness to purchase green products.

## 3. THEORETICAL FRAMEWORK

The study is based on the notion of the value-belief-norm theory. According to the value-belief-norm theory, a pro-environmental behaviour is a function of focused beliefs about human-environment relation, their consequences, and the individual's responsibility for taking corrective action (Stern, 1999)[60]. The theory started with relatively stable values, towards more specific beliefs, through the mediation of personal norms that eventually led to pro-environmental intent or behaviour (Black et al., 1985; Stern, 1999[60]; 2000[61]; Stern & Dietz, 1994)[62]. The theory also offers a more specific view on which pro-environmental behaviour can be modelled by illustrating the influence of spirituality on willingness to

purchase green products. From the literature review, the value-belief-norms theory seems to offer an appropriate basis on which spirituality can be explained. Due to its existing three value orientations; egoistic, altruistic, and biospheric, a transcendent value orientation was proposed to provide a more integrated and holistic view (Mercado, 2006)[42] in understanding values. Lending its definition as the “governing principles or values which guide one’s connection to him or herself, others, nature, and God” (Dyson, Cobb, & Froman, 1997[11]; Gomez & Fisher, 2003)[19], a further examination of spirituality can be explained based on value-belief-norm theory as part of value orientations underlying a pro-environmental behaviour of green purchases. The operation of spirituality in the model may extend the notion of existing value orientation in the value-belief-norms theory by examining pro-environmental behaviour as the outcome of the extent of spirituality connections with the self, the transcendental, the environmental, and the communal in performing the behaviour rather than measuring behaviour as the outcome that results from the assessment between perceived benefits and costs imposed on the self, the environment, and other people as formerly understood.

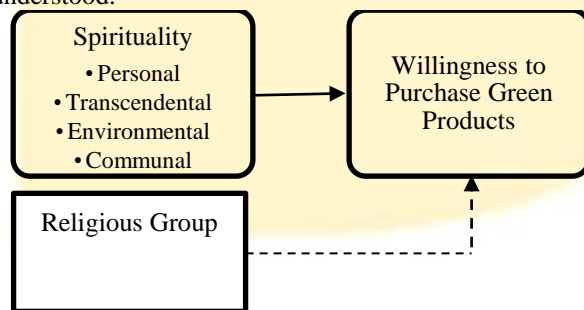


Figure 2: Theoretical Framework

#### 4. HYPOTHESIS DEVELOPMENT

Since spirituality is an exploration of the inner self and a discovery of the interrelationships of that self with the broader reality (Kale, 2004)[31], goods and services which facilitate such exploration are therefore providing spiritual utility to consumers. Based on literature reviews, there have been mixed findings regarding the relationship between spirituality and environmental behaviour. As mentioned earlier, spirituality leads to righteousness of behavioural conduct through connectedness to sacredness. Therefore, spirituality could potentially imply a positive influence on any efforts which protect the environment, including purchasing green products. A conceptual study by Jain (2001)[29] proposed that the link between spirituality and pro-environmental behaviour can be further supported since the concept of sustainability is well-bounded within spirituality whereby spirituality ensures sustainability to be maintained. Apart from theoretical support, there was limited evidence of spiritual influences in pro-environmental consumer behaviours

(Rao, Ball & Hampton, 2006[52]; Stern, 1999)[60]. A study by Rao et al. (2006)[52] found that respondents who reported high in spirituality exhibited strong ethical considerations in their purchase and consumption while those who reported low in spirituality reported to have no effect on their purchase and consumption considerations. Moreover, Stern (1999) [60] asserted that people who believe that nature is sacred, whether for theistic reasons or not, are more likely to engage in pro-environmental consumer behaviours. Therefore, based on theoretical and limited empirical arguments which support that spirituality has a positive influence on pro-environmental behaviour, it can be proposed that spirituality has a significant positive influence on green purchase behaviour.

**H1: Spirituality has a significant positive influence on willingness to purchase green products.**

H1a: Personal spirituality has a significant positive influence on willingness to purchase green products.

H1b: Transcendental spirituality has a significant positive influence on willingness to purchase green products.

H1c: Environmental spirituality has a significant positive influence on willingness to purchase green products.

H1d: Communal spirituality has a significant positive influence on willingness to purchase green products.

A study by Gilliat-Ray and Bryant (2011) found that British Muslims who demonstrated significant engagement in environmental conservation projects indicated an important sense of agency, belonging and ownership of local spaces in Britain. This has marked an evaluation of the growing internalisation of Islamic values among Muslims in Britain. In developing sustainable well-being subjective indicators for Malaysian Muslims, Abu Bakar, Mohamed Osman, Bachok, Ibrahim, and Abdullah (2015)[3] found that religion and value systems to be an important indicator for external condition dimension which signifies human interdependence with other humans and the environment. Since spirituality is deemed to be part of value definition (Dyson, Cobb, & Froman, 1997[11]; Gomez & Fisher, 2003)[19], it is therefore expected that Malaysian Muslims would make a difference in their extent of spirituality.

**H2: Muslim consumers and non-Muslim consumers differ in spirituality.**

H2a: Muslim consumers and non-Muslim consumers differ in personal spirituality.

H2b: Muslim consumers and non-Muslim consumers differ in transcendental spirituality.

H2c: Muslim consumers and non-Muslim consumers differ in environmental spirituality.

H2d: Muslim consumers and non-Muslim consumers differ in communal spirituality.

Although there were no clear studies that profiled green consumer based on religion as opposed to other demographic variables, there have been studies that examined the influence of religiosity on green purchase behaviour. For example, Alam, Mohd, and Hisham (2011)[6] found that there has been a significant influence

of religiosity on Muslim consumer behaviour and purchasing decisions among Muslims in Shah Alam and Bangi in Malaysia while Mohd Suki and Mohd Suki (2015) found that religiosity-based personal environmental values significantly influenced green food consumption between Muslim and non-Muslim consumers. Another study by Adaviah and Chin (2014)[4] had so far conceptually postulated whether religiosity had a role to play in profiling Malaysia's green hotel consumers based on religious affiliation and commitment towards ecologically conscious behaviour. Based on studies done, it can be postulated that:

***H3: Muslim consumers and non-Muslim consumers differ in willingness to purchase green products.***

## 5. METHODOLOGY

The unit of analysis in the present study is working adults, aged 18 years and above. A total of 650 samples which made up the overall contact rates were collected. The actual survey was carried over a period of three months at several malls located within the central region of Malaysia. A systematic random sampling was used to collect data from respondents. The central region of Malaysia, which comprises of several states i.e. Perak and Selangor and also the federal regions of Kuala Lumpur and Putrajaya, was chosen as the location of the study since it constitutes the largest share of the Malaysian population as compared to other regions in Malaysia besides offering samples that are contextually appropriate to the study. Additionally, the choice of location was also motivated by past research of Abdul Wahid, Rahbar, and Tan (2011)[1], whereby future studies might focus on other places in Malaysia rather than in Penang state alone. All items were adapted from previous studies. Six items measuring willingness to purchase green products were adapted from Roberts (1996)[53] while a total of 17 items were adapted from Gomez and Fisher (2003) which measure each dimension of spirituality; self/personal (4 items), transcendental (4 items), environmental (4 items), and communal (5 items). All items were measured on the 5-point Likert scale. (1="Strongly disagree" to 5="Strongly agree"). The measurement items were validated by experts and undergone a pilot test prior to actual data collection. Statistical Packages for Social Science (SPSS) Version 22.0 was used to store and analyse the data from the completed questionnaires. First, the frequency analysis was run to generate the profile of respondents. Then, the factor analysis and the reliability analysis were run on the independent (spirituality) and the dependent variable (willingness to purchase green products) to ensure both inter-item consistency and construct validity. After data had been reduced through the factor and reliability analysis, a descriptive analysis was performed to acquire the means and standard deviations for the independent and dependent variables. A correlation analysis was performed to determine the inter-correlations between variables studied. Regression

analysis was operated to test the hypothesized relationships between spirituality and willingness to purchase green products. Finally, an independent t-test analysis was run to identify differences between Muslim consumers and non-Muslim consumers in terms of spirituality and willingness to purchase green products.

## 6. RESULTS AND FINDINGS

Out of the total 650 questionnaires distributed, 635 were returned, representing 97.69% response rate. However, 606 out of 635 questionnaires were usable, representing 93.23% usable rate. The largest age group was from 18 to 35 years old (54.3%) while the smallest age group was over 65 years old (2.5%). Male respondents (51.5%) exceeded female respondents (48.5%) by 3%, while Muslims represented the largest group (41.6%) followed by Buddhists (40.3%), Hindus (8.1%), Christians (7.8%), and others (2.3%). Married (53.6%) respondents outnumbered single (44.6%) and separated (1.8%) respondents. The largest race group was Chinese (48.8%), followed by Malays (41.1%), Indians (8.9%), and others (1.2%). In terms of personal monthly income, the largest group of respondents had incomes between RM 1,001.00 to RM 2,000.00 (29.2%). The majority of the respondents had attained a Sijil Pelajaran Malaysia (SPM<sup>1</sup>) level of education (39.1%), followed by Diploma (19.1%).

Confirmatory factor analysis was run on the independent variable (spirituality) and dependent variable (willingness to purchase green products). For spirituality, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.913 indicating sufficient inter-correlations while the Bartlett's Test of Sphericity was significant (Chi-square = 6104.27,  $p < 0.01$ ). Eigenvalues greater than 1.0 and the total variance explained was 74.68% of total variance. Items were extracted into four components as expected. Transcendental spirituality was associated with 46.80% of the variance in the original data, followed by communal spirituality (15.07%), environmental spirituality (6.82%) and personal spirituality (6.00%). An item which represented the environmental spirituality was removed from further analysis due to low loadings. The number of items retained was four for transcendental spirituality, four for personal spirituality, five for communal spirituality, and three for environmental spirituality. For willingness to purchase green products, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.867 indicating sufficient inter-correlations while the Bartlett's Test of Sphericity was significant (Chi-square = 2005.07,  $p < 0.01$ ). Eigenvalues greater than 1.0 and the total variance explained was 73.69% of total variance. All items loaded into a single component as expected. An item was removed due to low loadings leaving five items which represented willingness to purchase green products.

<sup>1</sup> SPM or the Malaysian Certificate of Education is a national examination taken by all fifth-year secondary school students in Malaysia which is equivalent to eleventh grade in America's K-12 (education) (Lembaga Peperiksaan, 2013).



The results of reliability analyses show that the Cronbach alpha coefficient value of all variables was above 0.7 (i.e. 0.91 for willingness to purchase green products, 0.83 for personal spirituality, 0.95 for transcendental spirituality, 0.86 for environmental spirituality, 0.83 for communal spirituality) indicating an acceptable and good internal consistency reliability of validated measurement scales (Sekaran, 2003)[56]. The mean for personal spirituality, transcendental spirituality, environmental spirituality, and communal spirituality was 3.83, 3.32, 3.78, 3.86 respectively while the mean for willingness to purchase green products was 4.04. Kurtosis and skewness for all variables were within the acceptable values (+2.00), concluding that the data was normally distributed (George & Mallery, 2003)[17]. All variables are positively correlated with each other (ranging from 0.37 to 0.65). A multiple regression analysis was run to test the relationship between spirituality and the willingness to purchase green products. In table 1, the R<sup>2</sup> value was 0.46, meaning that the 46.0% variation in the willingness to purchase green products was explained by personal spirituality, environmental spirituality, and communal spirituality and the model is significant (F=126.74, p<0.01). The Durbin-Watson test is within the 1.5 to 2.5 range, indicating no auto-correlation error, which means that items in the independent variables had no overlapping statements. The graph was normally distributed and linearity can be concluded from residual plots between the independent variables and the dependent variable (see figure 3 and 4). Tolerance values for all predictors were more than 0.10 while VIF values for all predictors were less than 10, indicating no multi-co linearity error. Therefore, the model is fit.

Table 1. The results of multiple regression analysis of the relationships between the spirituality and willingness to purchase green products.

Variables	Std. Beta
<b>Spirituality</b>	
Personal Spirituality	.28**
Transcendental Spirituality	-.02
Environmental Spirituality	.09*
Communal Spirituality	.41**
R <sup>2</sup>	.46
Adjusted R <sup>2</sup>	.45
F value	126.74**
Durbin-Watson	1.87
*p<0.05, **p<0.01	
(Dependent variable: Willingness to purchase green products)	

The results showed that personal spirituality ( $\beta=0.28$ , p<0.01), environmental spirituality ( $\beta=0.09$ , p<0.05), and communal spirituality ( $\beta=0.41$ , p<0.01) significantly influenced willingness to purchase green products in a positive way, while transcendental spirituality did not impose any significant effect on willingness to purchase

green products. Hence, H1a, H1c, and H1d are accepted while H1b is not accepted. Overall, H1 is almost fully accepted. An independent t-test was run to identify differences in spirituality and willingness to purchase green products between Muslim consumers and non-Muslim consumers. The results are shown in table 2.

Table 2. Independent t-test on spirituality and willingness to purchase green products between Muslim consumers and non-Muslim consumers

Factors	Muslims	Non-Muslims	t-value	Sig.
Spirituality	3.87	3.57	5.99	.00**
Personal	3.92	3.77	2.70	.00**
Transcendental	3.73	3.02	8.92	.00**
Environmental	3.87	3.72	2.54	.01*
Communal	3.95	3.79	3.13	.00**
Willingness To Purchase Green Products	4.10	4.00	1.68	.10
*p<0.05, **p<0.01				

Based on the results, there are significant differences between Muslim consumers and non-Muslim consumers in spirituality. Muslim consumers scored higher in all dimensions of spirituality compared to non-Muslim consumers. However, there is no significant difference between both groups in terms of willingness to purchase green products. Therefore H2 is accepted while H3 is rejected.

## 7. DISCUSSION AND IMPLICATIONS

The results of the multiple regression analysis showed that spirituality imposed a significant positive influence on willingness to purchase green products through its personal, environmental, and communal dimensions. The highest influencing factor was communal spirituality, followed by personal spirituality and the least by environmental spirituality. Transcendental spirituality did not impose any significant impact on willingness to purchase green products. The findings expanded the notion of spiritual values examined in the previous study by elaborating it into personal, environmental, and communal dimensions which were found to be significant in influencing willingness to purchase green products. Personal spirituality significantly determined willingness to purchase green products. The positive relationship between personal spirituality and willingness to purchase green products suggested that people are thrown into their inner strength to find answers to meaning and purpose in life through spiritual pursuits when engaging with green products. Consumers with high feelings and experiences in personal spirituality tend to behave in a way that matches his or her personal spirituality values. The findings empirically demonstrated and expanded the earlier notion by Abou-Youssef, Kortam, Abou-Aish and El-Bassiouny (2011)[2] which mentioned that ethical or moral behaviour was strongly associated with intrinsic religiosity that involves personal spirituality. Feelings and

sensations related to personal existence, identity, and self-worth with respect to green purchase were significantly influential in determining willingness to purchase green products among consumers. On the other hand, the act of purchasing green products was perceived not to have any relation with God. The findings revealed that consumers did not really consider their interconnections with God while purchasing green products. They seemed not to accept that the purchasing of green products is indeed an act of devotion to God. As previously asserted by Miller and Thoresen (2003)[43] and White (1967), a reason which could explain the non-significance of the transcendental influence of morally-right behaviour is consumers might have been driven into secularist thinking. Secularist thinking led people into the marginalization of God in all aspects of thinking and behaviour in life except only to those which are ritualistic according to religion.

Apart from transcendental spirituality, the feelings or experiences of unity and connectedness with the environment was proven to significantly influence willingness to purchase green products. The findings provided empirical support for the earlier notion by Jain (2001)[29] which stipulated that the feelings or experience of connection with the environment were able to embrace sustainability. The results also supported an earlier study by Stern (1999) who found that the environmental dimension of spirituality contributed to pro-environmental behaviour. In his findings, people who believe that nature is sacred, whether for theistic reasons or not, are more likely to engage in green purchase by being willing to purchase green products. Communal spirituality was found to significantly determine willingness to purchase green products. By involving the sense of love, justice, hope, and faith in humanity through intra-personal relationships between oneself and others in purchasing green products, a higher willingness to purchase green products can be achieved. The findings seemed to be closely related to a study by Abou-Youssef, Kortam, Abou-Aish and El-Bassiouny (2011)[2] which mentioned extrinsic religiosity which concerned with way social networks were able to determine behavior. However, the previous study did not involve any spiritual elements in its understanding of extrinsic religiosity. Based on the significance of communal spirituality, the effects of connectedness with social networks were deemed to be influential in green purchases.

Religious segmentation of green products has yet to offer a promising market segment in Malaysia. Although the current green market seems to attract Muslim consumers spiritually, the actual green purchase behavior is still farther to achieve. Nevertheless, religion, as a form of socio-demographic segmentation basis, is deemed to be a viable starting point of green market segmentation which is expandable through the combination of other behavioural aspects as had been asserted earlier by Diamantopoulos et al. (2003)[10]. Findings has also extended the understanding of green lifestyles and

consumption habits among green consumers as proposed earlier by Adaviah and Chin (2014)[4].

Theoretically, the essence of spirituality is worth being studied in order to better understand and enrich knowledge pertaining to factors underlying green purchase behaviour. By incorporating spirituality in the present study, the effects of spirituality elements on green purchase which have not been studied empirically before can be further examined. The understanding of the notion of values in value-belief-norm theory was further extended through the significant influence of spirituality on willingness to purchase green products. Findings showed that spirituality, through its personal, environmental, and communal dimensions significantly influenced willingness to purchase green products in a positive direction. In other words, the cultivation of spirituality is believed to strengthen consumers' willingness in purchasing green products. Moreover, the studies on spirituality might accommodate the marketing programmes in fulfilling the needs of consumers in the 21<sup>st</sup> century who are striving for well-being and identity through inner-self-searching as asserted by Kotler, Kartajaya, and Setiawan (2010)[35]. Insights provided by the study might further illuminate the path between spirituality and green consumer behaviour and provides an avenue for future empirical examinations. Besides, the study has expanded the current limitation in understanding green market segmentation by supporting that religious groups do make a difference in the spirituality of green consumers particularly among Muslims. The spiritual dimensions within Muslims in the study have yet to be materialised in making them to purchase green products. However, based on significant relationships between personal spirituality, environmental spirituality, communal spirituality and willingness to purchase green products, the relationships could be further explained in a more refined study.

Practically, the findings of the study might build upon existing findings which might assist the government, non-government organizations, business owners, marketers, media, and other related institutions in understanding the determinants of green purchase behavior among consumers. Besides, the essence of spirituality might yield some important insights to be benefited by institutional players in nurturing green purchase among consumers. Due to the significance of spirituality in triggering green purchase behavior, the maximization of the spirituality feelings and experiences that are related to green products was proposed in order to trigger higher green purchase among consumers. By realising the importance of green products that consumers placed in their interconnections with their spiritual dimensions, marketing campaigns as well as other promotional activities can be formulated accordingly.

There are several limitations of the study. First, due to limited resources, the central region of Malaysia was selected as the location of study. Therefore, the study might not be generalised to consumers in other regions in



Malaysia. Future research may examine the model in other regions or states in Malaysia. Second, the study only examined spirituality determinants of green purchase behaviour. Other behavioural, psychological and sociological aspects may be incorporated into the model for future investigation. Third, the notion of transcendental spirituality may need to be further examined due to its non-significance influence on green purchase behaviour among consumers. The understanding of transcendental spirituality was somehow relative when it was measured among consumers with different religious faiths. The reality is that the scales have yet to attain a universal determination of transcendent realities as it was developed on the basis of comparison between multi-faith respondents as its standard. It is therefore important to gain some idea of the future respondents' world-view before attempting to measure their transcendental spiritual orientations.

## 8. CONCLUSION

Global warming, one of the most complicated environmental problems faced by the world today, can be traced back to individual consumer choices of products available in the marketplace. Although the act of purchasing green products was deemed as an environmentally significant behaviour, the spiritual explanations underlying such behaviour remained to be further investigated. The paper is therefore, an attempt to provide empirical evidence underlying spiritual influences in green purchase behaviour aside from illuminating the religious segmentation of green consumers between Muslims and non-Muslims. Findings may benefit academicians, researchers, policy makers and practitioners who deal with green consumer behaviour and green marketing all over the world.

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