Developing the profile of green consumer and family decision making model: a review

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Abstract
Ecopreneur’s business activity involves the understanding of the relationships between creating and selling ecological products to eco-consumers and the environmental consequences associated with the purchase. In order to comprehend the market impact of their business, sales growth and market share, ecopreneur needs to know the demand of the green products. One effective method is to establish consumer profile modelling. Cross examining two related articles, we found the authors used socio-demographic variables and psychographic variables for profiling. They included ecologically conscious consumer behaviour to determine purchase intention and purchase behaviour. While the authors may have determined the factors influencing purchase behaviour, we discerned that the participants were students. In reality, eco-consumers are widespread. Little is known about its market in Malaysia. As such, we intend to re-examine and extend their works. At this stage, we aim to review three areas: green consumer profiling, family decision model and research methods to determine the eco-consumers’ purchase intention and behaviour. For profiling, we identified the socio-demographic variable should be split into demographic and socioeconomic status per se. Combining these two constructs with psychographic variable provide a clearer discrimination of green consumers and their demand for the types of green products. Linking these constructs to family decision making process, we posit that dual-income parents with children will play more active role in eco-products purchase decision. Additionally, we aim to identify the sex-role orientation and children influence in family decision making. In decision making model, past studies used qualitative research such as interview and focus group. In this study, we propose to use sequential mixed method of qualitative interview follow by survey for our research design. This method provides the researcher to elaborate and validate the findings.

Keywords: Green consumer profile, family decision model, socioeconomic status, sequential mixed method

JEL classification: L26

1. Introduction
The environmental degradation caused by the depletion of resources and destruction of ecosystems have impacted consumers who are concerned with the environment. Furthermore, the uncontrollable used of pesticides in farms implicate long term undesirable effects on consumers’ health (Ross et al., 2000). Green consumers are aware of all these consequences. Given the choices, green consumer would opt to purchase environmentally friendly products for consumption. Eco-friendly product or green product is produced with the concern of minimal harm to the environment and human. This includes the end of product usage for
recycling (Minton and Ross, 1997). In most cases, eco-product sold in retail shops and supermarkets has identification or description that depicts its materials, sources, and method of recycling that differentiate from other non-green product. Recently in the market, there have been significantly increasing growth of unnoticed niche market to a general market of green products. Nonetheless, not all environmental concern consumers are willing to purchase this product in the market. In order to comprehend the market impact of the business, sales growth and market share, ecopreneurs need to know the demand of the green products and understand the green consumer purchase behaviour. Profiling the consumers, ecopreneurs can understand green consumer purchase intention and behaviour, and eventually use the data for consumer segmentation. Additionally, ecopreneurs can improve their services, retaining existing consumers, and acquiring new ones (Royne, et al., 2016).

In Malaysia, little is known about how widespread green consumers are. To initiate the local green consumer profiling, Akehurst et al., (2012) and Straughan and Roberts, (1999) studies were cross-examined. In these studies, socio-demographic and psychographic variables were used with ecologically conscious consumer behaviour to establish green consumer purchase intention and behaviour. However, we discerned that the participants were students and this cohort only represented a small segment of green consumers. In the market, eco-consumers are widespread. Profiling them would reflect the true spending on green products. In this aspect, we intend to re-examine the authors’ research by reviewing the consumer profiling.

2. Literature review
2.1 Green consumer profiling
2.1.1 Socio-demographic variables
Most studies integrated participants’ demographics as part of the information to evaluate ‘who’ the consumers/buyers are (Meredith, 2013). Adding ‘socio’ to demographic, the term socio-demographic variables are often used.

In profiling consumer, Akehurst et al., (2012) used sex, age, literacy, income as socio-demographic variables in their research. While literacy (education) and income represent the socio- part of the consumers, the study found no significant relationships with green purchase intention. Similarly, when Ansar, (2013) adopted Akehurst’s socio-demographic variables, the finding was identical. We suspect that the socio-indicators for education and income were not distinctively split for the analysis. Rather, as interpreted from the results, we reason the indicators could be analysed by its means in the multiple regressions and correlations analysis respectively. Furthermore, the analysis for education and income indicators in socioeconomic status (SES) is more complex than this (see SES literature review section). In this aspect, the demographic variable is separately analysed from the socio- factors.

2.1.2 Psychographic variables
Socio-demographic variable is often used alongside with psychographic variable to segment customers’ data (Mullin et al., 2000). Psychographic variable used in marketing literature explains ‘why’ consumers are interested to buy a product. It gathers the information relating to consumer’s buying habits, spending, and values (Meredith, 2013). According to Bagozzi et al., (1998) this variable refers to the state of mind of consumers’ lifestyles, attitudes and motives and how they think and feel. Acquiring this information leads to better understanding of why consumers’ behave in a manner and provides a better segmentation of consumer and product development (Henriques et al., 2009). Here, the psychographic characteristics are reviewed and identified in two perspectives: a) the consumer value on environment, and b) the consumer shopping behaviour.
Value on environment

Often, the psychographic variable varies with the objective of a research, but the eventual aim is to deduce what influence consumer buying habits and why they have interest in green product. In green consumer study, psychographic variables include altruism, perceived consumer effectiveness (PCE), environmental concern (EC), and political orientation (liberalism or conservatism). These measures have been suggested in addition to demographic variables (Straughan and Roberts, 1999). In this study, altruism is excluded due its complexity and unclear definition. Rather, we include perceived consumer effectiveness (PCE) as it measures the degree of belief in which an individual can contribute to the environment cause (Kinnear et al., 1974). The inclusion of consumer’s attitude, knowledge, values could also identify consumer motives for buying eco-friendly product (Ukenna, 2012).

Individuals with the same attitude, belief, values and lifestyles are said to possess similar psychographic traits (Keegan, 2002). Attitude is the definition of an individual’s preferences (Blackwell et al., 2006) and indicator of willingness to spend on eco-products (Chyong et al., 2006). Additionally, based on our observations, the inconvenience to shop could alter the consumer’s attitude and divert the consumer preference to purchase non eco-products. Hence, in this study, the PCE and attitude are used as psychographic variables.

Shopping behaviour

Nowadays, online shopping has become popular in most advanced countries and has become trendy in some developing countries. In the near future, consumers have choices to combine traditional with online shopping. Advancing this research area, Smith and Swinyard (2001) and Sim and Koi (2002) have developed instrument that contain psychographic statements to evaluate shopper lifestyle. Anticipating this changing trend among Malaysia consumers, we aim to adapt some of the authors’ psychographic variables of shopping lifestyle to differentiate green consumer’s purchase behaviour.

2.1.3 Socioeconomic status

As discussed earlier, gender, age, race, income, and literacy were used for socio-demographic variables (Akehurst et al., 2012; Straughan and Roberts, 1999). If the socio-demographic variables are found to be significant, it offers an efficient way to segment consumer green attitudes and behaviour. However, some studies found the domains were contradictory (Roberts, 1996; Diamatopoulos et al., 2003). In Ukenna’s et al (2012) study, they proposed incorporating social class or socioeconomic status (SES) with other demographics.

The key indicators for socioeconomic status (SES) are education, income and occupation. It measures the social standing or class of an individual or group as combination (Saegert, et al., 2006) and area-based (Lim et al., 2011). These indicators are mainly used for health research with the purpose for government or non-government body’s interventions (Braveman et al., 2005) policy initiatives (Lim et al., 2011), consumption patterns among children in dissimilar SES (Page and Ridgway, 2001), and others. Noteworthy, there is scarcity of eco-related research that integrates SES indicators.

Parental education attainment

The integration of SES with other demographics yield researcher with better understanding of the change in social structure and life outcome since these variables is often correlated. In this era, SES determines one’s access to education opportunities (Oakes and Rossi, 2003) and parental educational attainment will influence the family’s overall SES position (Lim et al., 2011). However, this claim is inconsistent as some families with high SES have relatively low education level and vice versa (Oakes and Rossi, 2003). Generally, it is recognised that education attainment is prerequisite for better occupation and household income. As such, the addition of parental education attainment would suffice green consumer segmentation study.
Parental monthly income

In most instances, parental income contributes to household income and it is an undeniable fact that family’s wealth accumulates faster with dual parental income. Researchers often have some difficulties to obtain accurate information on parental income in the questionnaire. Alternately to this approach, some authors substitute this strategy by using possession-based measure to evaluate household income and equate the parents’ affordability of certain household possessions (Lim et al., 2011; Buchmann, 2002). Nonetheless, Cowan et al., (2012) caution that this measure may not necessarily represent the accurate picture of household income or wealth as it varies in family life cycle. Typically, in Malaysia culture, the type of cars and houses own by family reflect to the general public the household wealth. Holding debt constant, these possession-based measures do provide some degree of accuracy to house wealth as they are considered as assets to a family.

Parental occupational status

In reality, the SES of children and young people is dependent on parental occupation, and occupational status. Higher-status parental occupation ensures lucrative income and better leeway for kids accessible to desired resources (Lim et al., 2011; Oakes and Rossi, 2003). A past study has shown that parental age correlates with occupational status and earnings. Mostly, when parents reached the age of mid-30s they would have achieved their desirable occupational status (Hauser et al., 2000). Implicitly, it is assumed that most Gen Xers would have reached this satisfactory occupational stage and status at this age.

In sum, by segregating the socio- from socio-demographic variables and analysing SES as composite measures, a clearer discrimination of green consumer profile can be discerned. Composite measures consisting of parental educations, incomes, and occupations are likely to have stronger correlation results (Marks et al., 2000).

2.2 Decision Making

In purchasing, decision making is a process of people making a selection out of the desirable options. The range of desirable and attainable options increases for consumers along with their buying power. Family members play a significant role in purchasing decision (Sidin et al, 2004) and together they can alter the decision making process (Chikwiche, et al., 2012). Past studies rarely included children in the loop for family purchasing decision process. Recently, there is a growing importance for marketers to include them (Flurry and Burns, 2005) due to their increasingly active role and influence in purchasing decision, their ability to generate own income through part time job and their role as the trendsetters in the family (Shoham and Dalakas, 2003).

Children’s influence in family decision making differs by age and their influences increase with age (McNeal and Yeh, 2003). For example, older children are more influential in choosing restaurant for the family when eating out. Also, when they become older, parents tend to seek opinions from them on technological products as they are perceived to be more knowledgeable and experienced on the latest technology (Fikry and Bustami, 2012). Generally, there is some effect of children influence in family’s decision making.

With regard to family decision making process, identifying the sex role for decision making is important for marketing management. Sex role ideology evolves from traditional view of distinctive role for male and female to equal distribution of power for both sexes (Sidin et al, 2004). The authors found that career oriented and highly educated women play more active role in family purchase for consumer durables, groceries and eating out decision. Comparing different cultural groups, Sidin et al, (2004) found no differences in sex role orientation. In other cases, families making joint decision were found in this modern sex role orientation and younger couples under the age of 35 were more likely to make joint decisions (Lee and Beatty,
Joint decisions are more frequently made when family members are buying expensive products or making important decisions (Martinez and Polo, 1999).

2.2.1 Factors influencing purchasing decision
For green consumer, knowledge about environment and eco-product are important to family. Based on past studies, we posited five factors necessary for consumer to make decision that lead to purchase intention and behaviour.

**Convenience**
In Malaysia, anecdotal observations on the established supermarkets like Aeon, MyDin, Giants, Tesco sold scanty green products that limit the convenience of green consumer purchase. Unlike United States, Whole Foods Market, Trader Joes, and others are one-stop green supermarkets that provide convenience to green consumer shopping. Such store convenience minimises consumers’ activities in shopping that could save time and effort (Bell et al., 1998). For dual income families, this one-stop shop convenience is likely to be the key attribute influencing the family decision to shop in such supermarket. With the under-developed transportation system in Malaysia, most consumers tend to drive to supermarket. For this reason, shopping after work or during the weekends has become a norm for most family. Accordingly, sufficient parking spaces are one of the attribute for convenience that attracts them to shop in the destination. Additionally, supermarket located close to their home or work will provide them spatial convenience and trade-off for poor public transportation system that enable them to reduce time and effort to reach the destination (Reimers, 2014; Reimers and Val, 2014).

**Price premium**
It is known that the prices for green products are generally slightly higher than other products in the supermarkets. Some consumers who have knowledge and concern about environmental issues are more willing to pay for a price premium for the products (Caputo et al., 2013). Contrasting this, the Norwegian consumers were reluctant to pay for such price for ecological foods (Torjusen et al., 2001). Similarly, the Lithuania consumers have doubts about green products and its certification (Kavaliauske et al., 2013). Nevertheless, some consumers are loyal to the product because they believe in home country origin that produces genuine green products and pay for price premium (Anselmsson et al., 2014). Additionally, brand uniqueness and price premium was found to be significantly related and consumer make choices on product based on its unique attributes.

**Product quality**
Consumer often trusts in the reputation of company in making quality products. Consumer’s perception on product quality is often complex but generally product quality dimensions are viewed by its performance, conformance, reliable, and durable (Waller and Ahire, 1996). Interestingly, a local study found that consumer would consider environmentally friendly as part of quality requirement for product purchase (Kianpour et al., 2014). Others perceive willingness to pay higher price if there is price-quality relationships for eco-products (Imkamp, 2000). However, this is contradictory for highly price-sensitive consumer (Bernard et al., 2015).

**Goods and services tax (GST)**
In 2015, the Malaysia government introduced the goods and services tax (GST) on every goods levied on transactions made by consumers. This includes the importation of goods and services
This tax scheme has confused most consumers on food price increase. Although the government assured the GST will not be imposed on staple foods like rice, sugar and cooking oil (TST, April 2015), this tax is applied on green products. With this added tax value cascaded to higher price for eco-products, eco-consumers are likely to account for this factor in purchase decision as it affects their monthly household spending.

Household spending
Lastly, household spending is one imperative decision factor that affects consumer purchase behaviour. Generally, there is a linkage between higher socioeconomic status family and spending on healthier food for health and wellbeing (Carrillo et al., 2013). Moreover, women are more likely to spend on foods that benefit their health (Pothisalak and Chryssochoidis, 2009). In Malaysia urban area, the mean monthly household consumption was RM 3,500 (USD 1 = RM 4.00) and mean income was about RM 6,800 (DSM, 2014). This implies an average family would spend about 50% of the household earnings for the basic amenities. All other things being equal, a dual income family is more affordable than single income family in terms of household spending.

2.3 Ecologically conscious behaviour (ECCB)
Profiling green consumers using ecologically conscious behaviour (ECCB) is an effective measure to determine green consumer intention and behaviour in purchasing eco-products as it considers a wide variety of behaviours (Akehurst et al 2012; Straughan and Roberts, 1999). Ecologically conscious consumers tend to purchase products that are manufactured with least harm on the environment (Roberts, 1996). Akehurst et al (2012) found consumers with higher ECCB have shown higher green purchase intention and has positive impact on green purchase behaviour. Straughan and Roberts (1999) professed that ECCB use as standalone construct is not an effective method for profiling the green segment. The authors proposed that it should incorporate socio-demographic variables and psychographic variables.

2.4 Green consumer purchase intention (GPI) and behaviour (GPB)
GPI implies consumers are likely to purchase an environmentally friendly provided the product’s green attributes are genuine (Oliver and Lee, 2010) and GPB refers to the consumer’s final act of purchase facilitates by intention (Akehurst et al., 2012). Past studies revealed some consumers with high ecologically conscious do not necessarily have purchase intention. They perceived risks in using the products as they are concerned with how products are produced and distributed. Often, the intention to purchase these products is the result of a trade-off between the environmental issues and the individual consequences of using this particular product (Imkamp, 2000). Local consumers may not have this in-depth reflection or concern on the complete supply chain of green products affecting their purchase intention and behaviour.

3. Scope of study
In this research scope, we focus on household with parents from Generation X or Gen X cohort, with dual income, and have at least one child in the family. In our literature search, there was no specific definition for those who were born as Gen X. For example, Casini, et al., (2015) specified those born between 1972 and 1981; Appelbaum, et al., (2005) used cohort born between 1961 and 1981; Littrell et al., (2005) suggested between 1965 and 1975. We adopted Appelbaum’s, et al., (2005) definition as it states a twenty years timeline. Added to the scope, we adopted Stevens-Garmon’s et al (2007) approach to household survey where each household is categorised into user and nonuser group for green products. Assumption is made
that some non-green consumers are unaware of their purchase include green products. The scope is narrowing to green products sold in retail shops and supermarkets, and probing consumers’ intention to use the traditional and/or online shopping for these products.

4. Research Method
Based on the literature review, the research framework in Figure 1 is proposed. In this study, we aim to use sequential exploratory mixed method of quantitative research design follow by qualitative interview. The framework consists of reflective and formative measurement models. All constructs are reflective model except the decision making construct is formative model. In the former, the latent constructs cause the measured variables and in the latter, the measured variables cause the construct (Hair et al., 2010). This method provides the researcher to elaborate and validate the findings. For hypotheses testing, the IBM SPSS analysis of moment structures (AMOS) software is used.

Figure 1 – Research framework of green consumer and family decision making model
Source: Developed for this study

H1. Demographic and psychographic variables (perceived consumer effectiveness, attitude, and lifestyle) are relevant in explaining the ECCB.
H2. Socioeconomic status (high SES vs. middle SES vs. low SES) is relevant in explaining ECCB.
H3: Consumers with higher SES are likely to involve more family members in decision making for green product purchase.
H4: There is a positive relationship between ECCB and family decision making.
H5: There is a positive relationship between ECCB and GPI.
H6: There is a positive relationship between family decision making and GPI.
H7: There is a positive relationship between GPI and GPB.

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References
AKEHURST, G., AFONSO, C. & GONCALVES, H. M. 2012. Re-examining green purchase


FIKRY, A. & BUSTAMI, M. R. 2012. The impact of teenagers’ gender and product importance on


of Functional Foods, 1(2), 222-228.


