Consumption Behaviour Towards Green Durable Products : The Moderating Role of Demographics

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Abstract

India is the fourth largest consumer durable product market in the world. However, due to its rapidly changing economic environment, divide between urban and rural markets and heterogeneous demographic regions, it presents unique marketing challenges for green consumer durable products. In order to attain a better understanding of Indian consumers' behaviour as a potentially highly valuable green consumer durable product market, we developed 11 hypotheses with relevant literature support and represented them in a conceptual framework. The framework was tested with primary data by obtaining structural equation modeling results to measure the correlation among the constructs, and chi-square results and goodness of fit indices were also analyzed. We conducted a survey of 472 Indian nationals across India to collect primary data. Data analysis found a very good fit of our model and obtained support for almost all the hypotheses. We also tested a proposed conceptual framework with demographics (location of living, income, qualification, and gender) as moderating variables. The results from regression analysis indicated that location of living was a significant moderating factor, while income, qualification, and gender did not register as significant.

Keywords : **green durable products, marketing, sustainable, eco-friendly, green consumer behaviour, sustainable consumption**

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Demand for consumer durable products in India is growing due to economic prosperity in the country. Environmental concern and environment-friendly products are gaining importance in India due to growing awareness for sustainable development (Yadav & Pathak, 2013). The market size from the US$ 12.5 billion in FY 2016 is estimated to grow to US$ 20.6 billion in FY2020, growing at a CAGR of 13%. Per capita income is expected to grow at a cumulative average growth rate (CAGR) of 8.6% for the period from 2015-19 (India Brand Equity Foundation, 2017).

The McKinsey Global Institute (MGI) recently suggested that if India continues to grow at the current pace, average household incomes will triple over the next two decades, making the country the world's fifth-largest consumer economy by 2025, up from the current 12th position. This situation is going to continue due to factors like growth in rural incomes, rapid urbanization, continuously growing middle-class population, changing lifestyles, and rising aspirations of the Indian people, which will boost growth of demand in this sector. A growing number of high-income individuals (HNI) and working class is also resulting in increase in demand for luxury durable products. Double income families, a significant increase in disposable income, and easy credit facility from banks have led to shorter product replacement cycles, and aspirational lifestyles have made consumer

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durables, such as air conditioners, LED TVs, washing machines, refrigerators, cars, etc. to be perceived as utility items rather than luxury possessions.

Consumer durable products consume electricity or gasoline, emit greenhouse gases, and have disposal hazards. So, the manufacturers of these products are challenged with three cardinal issues which include electricity or gasoline consumption efficiency, curbing greenhouse gas emissions, and reducing disposal hazards. Consequently, innovative companies have already launched star-rated energy efficient ACs, refrigerators, hybrid/electric cars, which plan to increase the use of environment-friendly components and reduce e-waste by promoting product recycling. To gain confidence for marketability of these products, it is important to discern the consumption behaviour of Indian consumers and their future likelihood to use green durable products.

The concept of green product and its marketing came into importance sometime during the late 1980s to early 1990s, which comprises of several important functions like product modification, changes in production process, input substitution, packaging and advertisement change, etc. (Polonsky,1994). Green marketing refers to environmentally concerned companies delivering environmentally sustainable products to provide satisfaction to consumers (Soonthonsmai, 2007). The green marketing strategy was proposed by Harrison, Fluri, Seiler, Fan, Effenhauser, and Manz (1993) to influence consumers' purchase decision by positioning green products' benefits to them. Green marketing is a business decision to identify, develop, deliver, and satisfy consumers' needs and looking after the environmental causes in a profitable and sustainable way (Peattie ,1995 ; Welford, 2000). Oyewole (2001) suggested that green marketing practices and green product consumption can be increased only through greater awareness among the consumers. He suggested to find out consumers' awareness about the environment and their preferences to pay prices according to this consideration. Jayanthi (2015) found that consumers' awareness worked as an important factor in changing the attitude towards organic foods. Hines, Czerwinski, Sawyer, and Dwyer (1986) and Newhouse (1990) indicated that consumers' attitude towards environmental attitude will have an impact on the favourable or unfavourable feelings towards environmental issues. Kassarjian (1971) saw that consumers' attitude towards air pollution level in the environment was an important factor in deciding consumer behaviour towards the environment friendly products.

Although modern technology and constant innovation have contributed towards protecting our environment, but the entire problems cannot be resolved by using mere technology (Hardin, 1993). People should be aware about environmental problems and how to save natural resources and prevent further damage by increasing consumption of green products and services. Green products are ecological or environment friendly products which will not pollute the environment and not deplete scarce natural resources (Shamdasani, Chon-Lin, & Richmond, 1993). Today, environmental consciousness is not only a government's or a social activist's concern, but it is a business decision by the companies to be competitive in the market (McCloskey & Maddock, 1994). There are people who prefer to use and support green products that satisfy their needs and also have a minimum negative impact on the environment (Ottman,1993). Pickett - Baker and Ozaki (2008) found that a market is segmented based on demographic characteristics such as gender, age, income, education, and these variables were found to be positively related to consumer attitude and the environment. Products conforming to the green norms should entirely satisfy consumers' needs because their expectations from the green products are high. Consumers expect that these products will satisfy their needs, perhaps better than non-green products, and also comply with the environmental norms.

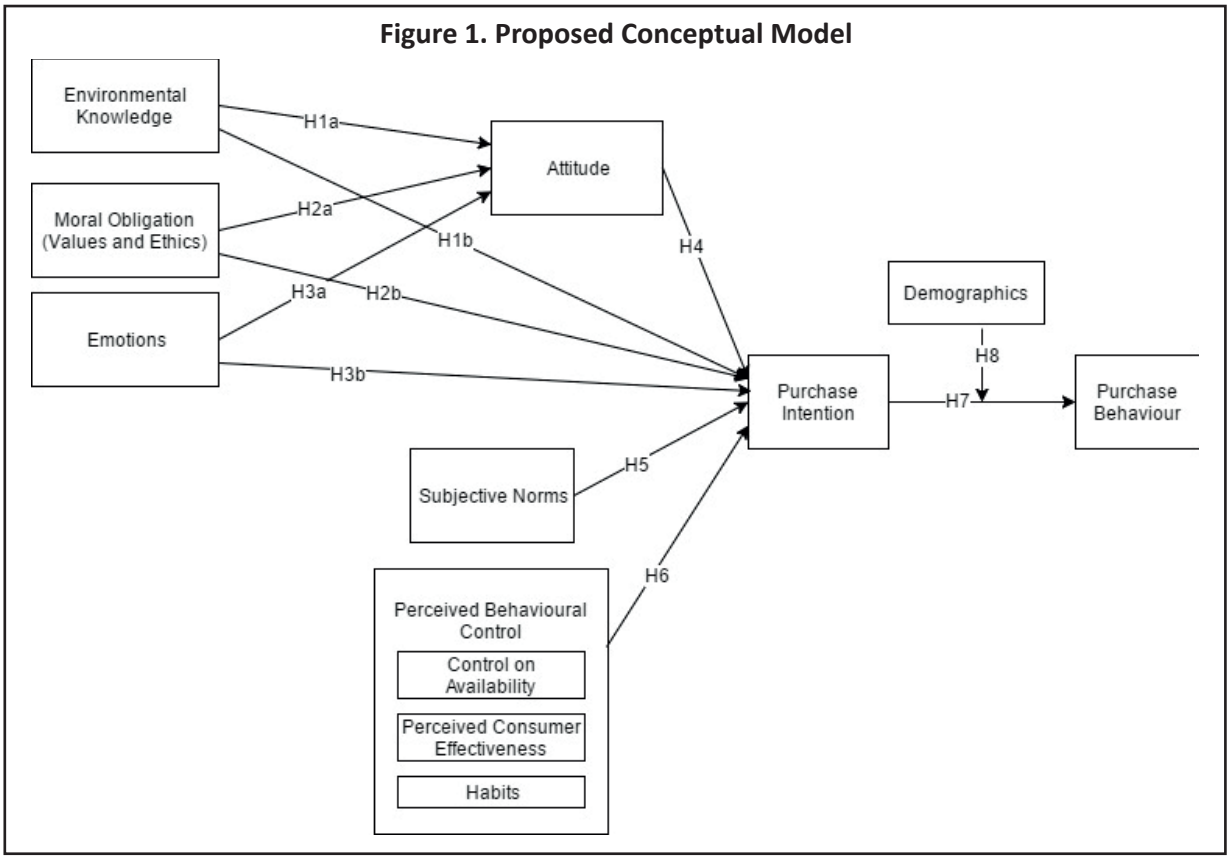
There are many research studies that provide evidence on green consumption behaviour pertaining to food products, organic food, and packaged products, but less attention has been given to green consumer durable products in the Indian context. Against this backdrop, the present study attempts to explore the factors leading to green consumption and their relationships for designing a conceptual framework on green consumption behaviour for durable products.

Literature Review

A green product relates to a sustainable environmental concept. Worldwide, many researchers have worked on this subject. Roarty (1997) explained that a "green" product includes organic, durable, non-toxic, recyclable components and uses production methods that are not harmful to the environment. Green products are produced across various categories including energy-saving consumer durable products, recycled paper products, organic foods, etc. Demand for these products is growing continuously. Consumers of green products are environment conscious and make an effort to protect the environment.

A conceptual model (Figure 1) is proposed to measure Indian consumers' environmental knowledge, moral obligation, emotion, attitude, subjective norms, perceived behavioural control, influence, purchase intention, and purchase behaviour towards green consumer durable products and examine the moderating effects of demographics on the purchase intention and purchase behaviour of green products by consumers.

Figure 1. Proposed Conceptual Model



(1) Environmental Knowledge : Environmental knowledge includes the level of awareness amongst the people about the environment and their relations with various facets of the environment and the concern to preserve it for future generations. This kind of knowledge is actually a part of the action-oriented knowledge within the cognitive psychology of the human being, because it helps to realize the effects of their action on the environment (Frick, Kaiser, & Wilson, 2004).

People with more environmental knowledge are likely to show positive attitude towards the environment. Bamberg and Möser (2007) underlined the role of awareness of knowledge about environmental problems as one of the important indirect determinants of green behaviour. Motivation for green consumerism can be

influenced by knowledge of relevant issues and previous purchase experiences (Young, Goey, Minassian, Perry, Paulus, & Geyer, 2010). Environmental knowledge leads to developing attitudes and a pattern of behaviour that shows concern for the environment. Consumers with greater environmental knowledge are likely to show more environmental concern compared to those who have less environmental knowledge.

(2) Moral Obligation (Values & Ethics) : The sense of moral obligation is a strong determinant for environment friendly behaviour. Moral obligation appears to be the only determinant with a huge predictive power compared to a series of attitudes or socio-demographic factors. Schwartz (1977) opined that moral obligation is a concept of personal (moral) norms, which means individual norms and values, that is, how an individual views what is right or wrong, which is learned throughout life. Personal norms is the feeling of consequences of violating them or adhering to that which is closely related with someone's self-concept. Moral norms, most of the time, are considered as the same with Schwartz's concept of personal norms treated as moral obligation.

When values are acquired, they become a part of an individual's value set, which influences behaviour. Hence, positive values which are required for purchasing green products can largely influence purchase behaviour. In fact, values may be used as a benchmark for developing positive attitudes, which can work as a framework for behaviour. People always weigh the implications of certain behavioural decisions according to their set of values. Environment-friendly behaviour can come from values that encompass individual interests. Many studies have witnessed that values have a great impact towards environmental attitudes and behaviours.

The role of personal values has been accentuated as having a foremost importance for understanding purchasing behaviour towards sustainable products (Aertsens, Verbeke, Mondelaers, & Van Huylenbroeck, 2009 ; Lane & Potter, 2007; Vermeir & Verbeke, 2008), though their influence is usually assumed to be exerted through attitudes to behaviour, this causality, however, is still considered an "open question" (Grankvist, Lekedal, & Marmendal, 2007). Values related to altruism such as environment, universalism, helpfulness, and equality work as a determinant for organic food consumption (Aertsens et al., 2009 ; Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007). As an illustration, Krystallis, Vassallo, Chryssohoidis, and Perrea (2008) witnessed that helpfulness and universalism were characteristics of an individual determining the individual's regular use of organic food. Khandelwal, Bajpai, and Yadav (2016) found that seeking green product information, social value of hybrid car purchase, and social value of green product purchase was positively associated with hybrid car purchase intention among Indian consumers. According to the authors, such behaviour results from an ideology, connected to a particular value system, which affects personality measures, attitudes, and consumption behaviour. Normally, the values of an individual depicting universalism, helpfulness, honesty, integrity, equality, independence, and responsible behaviour have relations to green consumption. Individual values are known as comparatively stable beliefs about a person or social expectation of certain behaviour. Such as, people who believe in the "universalism" value might be motivated to save the environment and buy environment friendly products.

Consumers with ethical values feel concern about the society and display this concern through purchase behaviour. Ethical consumers are divided as those who have positive attitudes and desires towards ethical issues and also purchase ethical products (Auger & Devinney, 2007 ; Carrigan, Szmigin, & Wright, 2004 ; Vermeir & Verbeke, 2008). Ethical models indicate that consumers' purchase intentions are influenced by values, norms, ethics, and are likely to be socially concerned (e.g. Vermeir & Verbeke, 2008). Thus, values and ethics of an individual are an important factor in determining consumption behaviour for green products.

(3) Emotion : The evidence from detailed literature indicates that experiences of guilt have a favourable impact on an individual's future desire to undertake green consumption. Soscia (2007) observed that guilt is felt when an objective result is experienced as a direct outcome of individual action. Pride is also a sense of positive feeling that encourages ethical conduct, because these positive feelings enhance individual desire to behave as per personal standards (Tracy & Robins, 2004 ; Williams & DeSteno, 2009). Past research indicates that feeling of pride can

have a positive influence on an individual's intention to involve in future responsible choices (Patrick, Chun, & MacInnis, 2009 ; Williams & DeSteno, 2008).

(4) Attitude : As per Allport (1935), attitude is a mental and neural condition of the mind for preparedness. This type of mental condition normally influences behaviour of a person when he/she is encountered with any kind of events or situations. Attitudes are sets of beliefs about a certain object or an act which may translate into intention to carry out the act (Schwartz, 1992). Positive attitude has the ability to increase the chances of purchasing green products and determines the power of influence which is done for specific results (Follows & Jobber, 2000).

Several research studies (e.g. Kilbourne & Pickett, 2008 ; Mostafa, 2007) have empirically demonstrated that people who care for the environment are prone to change their behaviour towards environment friendly products and persuade others also for choosing environment friendly products. As per the theory of planned behaviour (Ajzen & Driver, 1991), when an individual's attitude towards adopting a particular behaviour is favourable, then the chances of adopting these behaviours are higher. Environmental attitudes are commonly perceived as preconditions for achieving environmental behaviour (Eilam & Trop, 2012).

Attitude plays a vital role in green purchasing behaviour among efficacious consumers. In terms of environmental issues, it has been examined that efficacy can be utilized in impacting the green consumerism through studying its impact on consumers' attitude (Gilg, Barr, & Ford, 2010). With regard to the effects of environmental attitudes on behaviour, the findings suggest that attitudes are the most consistent predictor of pro-environmental purchasing behaviours (Sharma & Sharma, 2014). Green claims by the organizations should be clear, true, and accurate (Chang, 2011) so that these can directly influence the attitude of efficacious consumers on purchasing decision of green products.

(5) Subjective Norms : Subjective norm refers to the existing social pressure to follow a certain behaviour (Ajzen, 1991). According to Ajzen and Fishbein (1977), subjective norms may be indicated as specific beliefs based on which people endorse or reject some behaviours while pursuing them. People not only behave under social pressure, but a subjective norm makes the information available about the suitability of the behaviour which people are going to undertake (Jager, Janssen, De Vries, De Greef, & Vlek, 2000). Subjective norm will drive action based on normative beliefs of individuals as to what their known people will think about their decisions, whether they should do certain things or not, and the conscience to comply with them.

If customers believe that important persons in their lives think organic food is good, then they will tend to buy organic food. Detailed analysis of subjective norms in several studies related to responsible sustainable behaviour has been conducted (Biel & Thøgersen, 2007) such as, study on sustainable food (Vermeir & Verbeke, 2006), organic food (Chen, 2010), and Gotschi, Vogel, Lindenthal, and Larcher (2009) identified links between subjective norms and people's intention to follow the behaviour which is both important and positive. Some other research work carried out by scholars like Siddique, Kaur, and Rajor (2010) and Shaw (2008) summarized that behaviours which improve the quality of the environment, e.g., recycling was directly linked to the social norms and the relationship tended to be positive.

(6) Perceived Behavioural Control : Perceived behavioural control comprises of :

(i) control on availability,

(ii) perceived consumer effectiveness,

(iii) habits.

(i) Control on Availability : Consumers' buying decision is a complicated process and sometimes, there are many situational factors ; for example, perceived behavioural control plays an important role in addition to the attitude

(Jager et al., 2000). Ajzen (1991) suggested that consumers' normal behaviour depends on the availability of relevant resources and presence of willingness to behave in a certain manner. He also pointed out that it is the perception of behavioural control, which is more significant than the real control. Ajzen (1991) also suggested that perceived behavioural control and consumers' behavioural intention together may directly help in finding out a certain behaviour.

The control on availability of environment friendly products and perceived consumer effectiveness are treated as two factors to express the perceived behavioural control. Availability of a product/service means the amount of difficulty or ease to find out and buy a product for consumption. Non-availability or difficulty in finding a green product may become a limitation for a highly committed consumer. Many researchers have indicated that a consumer's ability to control and display of behaviour has a positive relationship with the purchase intention and behaviour (e.g., Baker, French, & Linge, 2006). Real or perceived unavailability of green products might have a bigger role in conversion of purchase intention into actual behaviour. There is a rational behind a lesser degree of conversion of intention of using green products into the actual usage behaviour (Vermeir & Verbeke, 2006). Perceived consumer effectiveness has important links with perceived behavioural control (Vermeir & Verbeke, 2008).

(ii) Perceived Consumer Effectiveness (PCE) means the measurement of one's belief in the result of one's own actions (Kinnear & Ahmed, 1973). It refers to one's own judgement (Antil, 1978) and self assessment (Berger & Corbin, 1992) regarding the environmental aspects that influence one's behaviour in favour of the environment. It is noticed that perceived consumer effectiveness is about the individual's belief that his/her actions will make a difference in solving problems (Vermeir & Verbeke, 2006). Consumers' beliefs are an important factor in protecting environmental degradation (Sharma & Sharma, 2014).

Perceived behavioural control means the amount of control a consumer perceives to have on performing a particular behaviour (Chen, 2010). Therefore, consumers who feel to have higher control are likely to have positive behavioural intention during a particular behaviour (Ajzen, 1991). For example, when consumers are believed to have more financial resources, time, knowledge, and skills, their understanding over the control is much greater, thereby behavioural intention is also high. Hence, it is presumed that desire to purchase durable products is high when consumers have more control during purchase of these category products.

(iii) Habit : Many research works have identified previous behaviour as "habit". For instance, Towler and Shepherd (1991) used additional measures of perceived behavioural control and habit with the theory of reasoned action and witnessed that 'habit' worked as an independent factor for intention, though perceived behavioural control did not do the same. On the other hand, Godin, Valois, and Lepage (1993) saw that habit was the most important factor while performing certain behaviour in addition to all the factors used in the theory of planned behaviour.

Verplanken, Aarts, Knippenberg, and Moonen (1997) identified that people who regularly performed a behaviour in the past looked for less information when the situation arose again and were more likely to concentrate on the habitual choice than alternative offers compared to the people who rarely performed the behaviour in the past. It may be suggested that previous behaviour works as a clue for information and performing the behaviour. Therefore, there is a strong empirical and theoretical logic to include the habit factor as a determinant of behaviour in the theory of planned behaviour along with intention and perceived behavioural control for regularly performed behaviour.

Bögeholz, Böhm, Eggert, and Barkmann (2014) cautioned that, although environmental knowledge is a necessary precondition for environmental action, the extent of its influence can be questionable because first, some daily environmentally supportive actions such as saving energy or reducing waste in the households can be carried out as a matter of habit, which does not require environmental knowledge. Thøgersen (1999) put forward logic that in the immediate future, the degree of green behaviour relies largely on specific factors, for example, habit, attitude, preference, and opportunity to pursue green consumption practices.

(7) Purchase Intention : Intention is a determination to act in a certain way. Intention to purchase a specific product has been found to be a good predictor of actual behaviour in purchasing a product. The intention construct is central to both TRA and TPB. Intentions are assumed to capture the motivational factors that influence a behaviour and to indicate how hard people are willing to try or how much effort they would exert to perform the behaviour (Ajzen, 1991). Traditionally, intention is presumed to be one of the strong determinants of behaviour.

The theory of planned behaviour presumes that behavioural intention refers to the motivational drive towards behaviour. Therefore, intention is presumed to be the most important determinant of behaviour. On the other hand, behavioural intention is considered to be a function of attitude, subjective norms, and perceived behavioural control regarding a particular behaviour (Ajzen, 1991; Ajzen & Driver, 1991; Ajzen & Fishbein, 1980). In the theory of planned behaviour, intention is considered as behavioural plans in a given situation with suitable opportunities ; availability of money and time leads to the achievement of behavioural goals (Ajzen, 1996).

(8) Purchase Behaviour : An increased understanding of green consumer behaviour is fundamental for environmental and business perspectives. From the environmental point of view, to reduce the adverse impacts of consumption, it is important to achieve some of the plans suggested by the international community (UNEP, 2008). From the business and marketing point of view, the development of green products, which is environmentally harmless, would be of no use if people are not buying and using those products. Researchers have also suggested that correct purchase decisions will help in reducing adverse impacts on the environment in the subsequent part of the consumption stages (Thøgersen, 1999).

Green purchasing behaviour means the preference for such products that are environment friendly and produced according to the environmental norms and processes (Kilbourne & Pickett, 2008). There are many advantages of using green products, such as help in maintaining good health, are safe to use, and act as status symbols too (Ottman, Stafford, & Hartman, 2006). People buying environment friendly products are likely to think of themselves as people who care for the environment (Thøgersen & Crompton, 2009). Indeed, a study indicated that many people are looking for less harmful products to life and society (viz. less energy consumption, preference for renewable energy, recycling products, and reduction in wasteful purchases) and display a strong preference for green products because they get personal satisfaction out of it (Flatters & Willmott, 2009). This type of satisfaction is not only attached with the good performance of green products, but also a sense of feeling that he/she is not causing any harm to the environment (Bodet, 2008 ; Chen, 2010).

Objectives of the Study

The objective of this study is to explore the factors which influence green durable products' consumption behaviour and the correlation among these factors; and also to measure the moderation effects of demographics factors between purchase intention and purchase behaviour for green consumer durable products by Indian consumers.

Research Methodology

A research framework was developed to test the following stated hypotheses to measure the effects of environmental knowledge, moral obligation (values & ethics), emotions, attitude, subjective norms, perceived behavioural control (control on availability, perceived consumer effectiveness, and habits), and moderating effects of demographics on purchase intention and purchase behaviour of Indian consumers for green consumer durable products. The following hypotheses are tested :

↳ **H1a :** Environmental knowledge positively influences consumers' attitude towards green durable product purchase.

↳ **H1b :** Environmental knowledge positively influences consumers' purchase intention towards green durable products.

↳ **H2a :** Moral obligation (ethics & values) positively influences consumers' attitude towards green durable product purchase.

↳ **H2b :** Moral obligation (ethics & values) positively influences consumers' purchase intention towards green durable products.

↳ **H3a :** Consumers' emotions positively influence attitude towards green durable product purchase.

↳ **H3b :** Consumers' emotions positively influence purchase intention towards green durable products.

↳ **H4 :** Consumers' attitude positively influences green durable product purchase intention.

↳ **H5 :** Subjective norms positively influence consumers' purchase intention towards green durable products.

↳ **H6 :** Perceived behavioural control (control on availability, perceived consumer effectiveness, and habits) positively influence consumers' purchase intention towards green durable products.

↳ **H7 :** Consumers' purchase intention positively influences purchase behaviour towards green durable products.

↳ **H8 :** Consumers' demographic factors moderate between purchase intention and purchase behaviour towards green durable products.

(1) Sample and Data Collection : Respondents were selected from across India for online survey, and offline survey was conducted in Kolkata & rest of West Bengal during June 10, 2016 to July 31, 2016 by using the convenient sampling technique as it is less time consuming and convenient too. Out of the total 472 respondents, 90 were offline respondents and 382 were online respondents.

(2) Instruments and Measures : A questionnaire was designed to measure Indian consumers' environmental knowledge, moral obligation (values & ethics), emotions, attitude, subjective norms, perceived behavioural control (control on availability, perceived consumer effectiveness, and habits), subjective norms, purchase intention, and behaviour towards green consumer durable products. In the questionnaire, the first five questions were on environmental knowledge, next five questions were on moral obligation (values and ethics), three questions on emotions, five questions on attitude, six questions on subjective norms, 12 questions were on perceived behavioural control (four each for control on availability, consumers' perceived effectiveness, and habits), five questions on purchase intention, and last five questions were on purchase behaviour towards green durable products. They were measured by using a 5 - point Likert Scale (1: *strongly disagree* to 5: *strongly agree*).

Data Analysis and Results

The constructs were selected from literature review sources, and an exploratory factor analysis (EFA) was used to explore the representative factors available in the sample under study. Then confirmatory factor analysis was applied to validate the factors obtained from EFA. Structural equation modeling (SEM) results were obtained to measure the correlation among the constructs, and chi-square results and goodness of fit indices were analyzed. Results of the SEM and hypotheses of the model were also analyzed. Empirical results were obtained for

Table 1. Results of Exploratory Factor Analysis (EFA)

Dimensions and Respective Variables	Factor Loadings	Variance (%)	Cumulative Variance (%)	Cronbach's α
Environmental Knowledge		22.850	22.850	.582
Environmental Knowledge (EK1)	.867			
Environmental Knowledge (EK2)	.830			
Environmental Knowledge (EK3)	.851			
Environmental Knowledge (EK4)	.844			
Environmental Knowledge (EK5)	.823			
Moral Obligation		9.007	31.857	.621
Moral Obligation (MO1)	.715			
Moral Obligation (MO2)	.682			
Moral Obligation (MO3)	.632			
Moral Obligation (MO4)	.679			
Moral Obligation (MO5)	.667			
Emotions		5.347	37.203	.664
Emotions (EMO1)	.624			
Emotions (EMO2)	.713			
Emotions (EMO3)	.689			
Attitude		4.046	41.249	.719
Attitude (ATT1)	.675			
Attitude (ATT2)	.632			
Attitude (ATT3)	.514			
Attitude (ATT4)	.667			
Attitude (ATT5)	.572			
Subjective Norms		3.811	45.061	.808
Subjective Norms (SN1)	.582			
Subjective Norms (SN2)	.507			
Subjective Norms (SN3)	.663			
Subjective Norms (SN4)	.596			
Subjective Norms (SN5)	.741			
Subjective Norms (SN6)	.573			
Perceived Behavioural Control		3.399	48.460	.814
Perceived Behavioural Control (PBC1)	.660			
Perceived Behavioural Control (PBC3)	.638			
Perceived Behavioural Control (PBC4)	.578			
Perceived Behavioural Control (PBC5)	.470			
Perceived Behavioural Control (PBC10)	.631			
Perceived Behavioural Control (PBC11)	.399			
Purchase Intention		3.074	51.534	.699
Purchase Intention (PI1)	Deleted			
Purchase Intention (PI2)	Deleted			
Purchase Intention (PI3)	.677			
Purchase Intention (PI4)	.508			
Purchase Intention (PI5)	.448			
Purchase Behaviour		2.901	54.435	.696
Purchase Behaviour (PB1)	.550			
Purchase Behaviour (PB2)	.559			
Purchase Behaviour (PB3)	.417			
Purchase Behaviour (PB4)	.711			

moderation between purchase intention and purchase behaviour by applying SPSS version 23 and AMOS version 21. Three levels of analyses, namely exploratory factor analysis, followed by confirmatory factor analysis (measurement model), reliability and validity tests were performed under this study, and their results are discussed in the following paragraphs.

The initial measures of sampling adequacy for factor analysis, that is, the KMO (Kaiser-Meyer-Olkin) and the Barlett's test of sphericity were .905 and p <.000, which are according to the prescribed norms to prove that factor analysis for the study was appropriate. The analysis extracted eight factors which explained 54.435% of the total variance (shown in Table 1).

The first factor was named Environmental Knowledge as the items like, "When people misuse nature, it damages the environment" was with maximum factor loading followed by, "I do not purchase products that harm the environment," "I don't buy products from environmentally irresponsible companies," "Recycling of products is good for resource conservation," "It is important for me to use durable products with eco-friendly components."

The second factor was named Moral Obligation (Values and Ethics) and had maximum loading on the item, "I feel buying environment friendly durable products is in line with my values" followed by, "I feel a personal obligation to buy environment friendly products," "Promoting green durable products helps to preserve the environment for future generations," "I feel very concerned about environmental issues" and, "I often buy durable products made with recycled materials to reduce e-waste."

The third factor Emotion had maximum factor loading on the item, "I feel bad that the govt. is not doing enough to control environmental pollution" followed by, "I get frightened that most of the durable products are made of toxic materials" and, "I get frustrated to know that industries are causing pollution. "

Table 2. Measurement Model : Reliability and Validity

Dimensions and Respective Variables	Factor Loadings	SMC	Cronbach's α	Composite Reliability	AVE
Environmental Knowledge			0.832	0.825	0.692
Environmental Knowledge (EK1)	.867	0.743			
Environmental Knowledge (EK2)	.830	0.691			
Environmental Knowledge (EK3)	.851	0.715			
Environmental Knowledge (EK4)	.844	0.728			
Environmental Knowledge (EK5)	.823	0.681			
Moral Obligation			0.621	0.621	0.537
Moral Obligation (MO1)	.715	0.435			
Moral Obligation (MO2)	.682	0.429			
Moral Obligation (MO3)	.632	0.407			
Moral Obligation (MO4)	.679	0.423			
Moral Obligation (MO5)	.667	0.419			
Emotions			0.679	0.664	0.562
Emotions (EMO1)	.624	0.401			
Emotions (EMO2)	.713	0.431			
Emotions (EMO3)	.689	0.425			
Attitude			0.719	0.713	0.594
Attitude (ATT1)	.675	0.421			
Attitude (ATT2)	.632	0.407			
Attitude (ATT3)	.514	0.327			
Attitude (ATT4)	.667	0.419			

Attitude (ATT5)	.572	0.339			
Subjective Norms			0.808	0.803	0.653
Subjective Norms (SN1)	.582	0.347			
Subjective Norms (SN2)	.507	0.321			
Subjective Norms (SN3)	.663	0.417			
Subjective Norms (SN4)	.596	0.392			
Subjective Norms (SN5)	.741	0.493			
Subjective Norms (SN6)	.573	0.339			
Perceived Behavioural Control			0.714	0.709	0.589
Perceived Behavioural Control (PBC1)	.660	0.413			
Perceived Behavioural Control (PBC3)	.638	0.411			
Perceived Behavioural Control (PBC4)	.578	0.342			
Perceived Behavioural Control (PBC5)	Deleted				
Perceived Behavioural Control (PBC10)	.631	0.407			
Perceived Behavioural Control (PBC11)	Deleted				
Purchase Intention			0.699	0.699	0.572
Purchase Intention (PI1)	Deleted				
Purchase Intention (PI2)	Deleted				
Purchase Intention (PI3)	.677	0.419			
Purchase Intention (PI4)	.578	0.342			
Purchase Intention (PI5)	.548	0.324			
Purchase Behaviour			0.696	0.689	0.561
Purchase Behaviour (PB1)	.550	0.325			
Purchase Behaviour (PB2)	.559	0.328			
Purchase Behaviour (PB3)	Deleted				
Purchase Behaviour (PB4)	.711	0.431			

The fourth factor Attitude had maximum factor loading for the item, "I have a favourable attitude towards purchasing green durable products" followed by items like, "I will not buy products from companies responsible for environmental pollution, even if that causes difficulty for me," "I will go out of the way to buy environment friendly durable products," "I am willing to pay more for eco-friendly durable products" and, "my green durable products' purchase will have a positive impact on the environment."

The fifth factor Subjective Norms had maximum factor loading on the item, "People influence my decision and will approve of my decision of buying environment friendly durable products" followed by, "People important to me think that I should use "green" durable products soon, " "Using environmentally durable products helps me to express myself, " "People important to me think that I should buy eco-friendly durable products, " "By buying environment friendly durable products, I express that I care for the environment " and, "Use of environment friendly products helps me to achieve the type of life I want to lead. "

The sixth factor Perceived Behavioural Control had maximum factor loading on the item "Green durable products might have a limited range of models, shapes, designs, and sizes available" followed by, "Green durable products might not be readily available, " "If the green durable product is available, I only buy that," "Obtaining information about green durable products is difficult," "There is no way to ensure genuine green durable products,

even if it claims so" and, " I always try to buy durable products with green labelling marks."

The seventh factor Purchase Intention had a maximum factor loading on the item, "When I have a choice between two equal products, I choose the one with less harmful effect on the environment" followed by the items, "When I see a green durable product store, I wish to visit and buy" and, "I prefer to buy green durable products, even if they are expensive."

The eighth factor Purchase Behaviour had a maximum factor loading on the item, "At present, I have at least one green durable product" followed by, "I make a special effort to buy environment friendly durable products, " "I have purchased green durable products in the last six months" and, " I have switched products for ecological reasons."

The measurement model (Table 2) provides the quantitative measures regarding validity and reliability of the constructs. For assessing convergent validity of the construct, Cronbach's α, composite reliability, average variance extracted (AVE), and factor loadings were used. The validity and reliability of the constructs were tested subject to the suggestions given by Fornell and Larcker (1981). All the constructs showed standardized factor loadings ranging from EK : .867 - .823, MO : .715 - .632, EMO : .713 - .624, ATT : .675 - .514, SN : .741 - .507, PBC : .660 - .578, PI : .677 - .548, and PB : .711 - .550, thus indicating good convergent validity among all the latent variables. To measure the internal consistency among the items, Cronabch's α was used which ranges from 0.62 to 0.83, which indicates a good consistency. All values of composite reliability surpass the minimum threshold of 0.60. The AVE ranges from 0.53 to 0.69, meeting the minimum acceptable limit of 0.5. Moreover, square multiple correlation (SMC) was also used to ensure discriminant validity of each item. SMC value of each item was found less than its standardized factor loadings and the value was also above the minimum criterion of 0.3.

The Table 4 lists all of these values. Finally, discriminant validity among the constructs was also validated as the square root of average variance extracted (AVE) was greater than the correlation of each construct. The Table 3 summarizes the values of correlations and square root of average variance extracted.

Hypotheses testing followed the process of the test of moderating effects using structural equation modeling (SEM) with AMOS 21 statistical packages. With regard to goodness of fit index, this research used several indices simultaneously in order to assure model fit appropriateness. As shown in the Table 4, the χ^2/df value of 1.661 indicates a satisfactory level as it is below the recommended value of 3.0 (Bollen & Long, 1993). Other representative indices such as GFI and AGFI have values .990 and .959, respectively, which are above the generally accepted level of 0.9 (Hayduk, 1987). At .037, the RMSEA is below the recommended cut-off level of 0.08 (Browne & Cudeck, 1993). These accepted multiple fit indices allowed us to consider the results of the structural model analysis as an excellent fit of the proposed model for the data.

Table 3. Correlation Among the Constructs

Constructs	*Mean*	*SD*	EK	MO	EM	ATT	SN	PBC	PI	PB
Environmental Knowledge (EK)	19.14	3.179	**0.842**							
Moral Obligation (MO)	19.35	3.130	-0.202**	**0.859**						
Emotions (EM)	11.83	2.041	-0.135**	-0.011**	**0.814**					
Attitude (ATT)	19.39	3.512	0.104**	0.139**	0.015**	**0.770**				
Subjective Norms (SN)	24.31	3.680	-0.095**	-0.273**	0.069**	0.103**	**0.769**			
Perceived Behavioural Control (PBC)	46.49	6.640	-0.025**	-0.087**	0.232**	0.038**	0.314**	**0.935**		
Purchase Intention (PI)	19.80	3.180	0.142**	-0.002**	0.219**	0.174**	0.347**	0.534**	**0.724**	
Purchase Behaviour (PB)	20.26	3.048	0.129**	0.250**	0.430**	-0.317**	0.119**	-0.248**	-0.050**	**0.759**

Note: Diagonals (Bold and Italics) represent the square root of average variance extracted while the other entries represent the correlation, mean, and *SD* (standard deviation) ; $^{**}p < 0.01$.

Table 4. Chi- Square Results and Goodness of Fit Indices

Fit Indices	Obtained Value	Norm*
χ^2	612.649	N/A
Scaled χ^2/df	1.661	>1 &<5
Goodness of Fit Index (GFI)	0.990	>0.90
Adjusted Goodness of Fit Index (AGFI)	0.959	>0.80**
Tucker-Lewis Index (TLI)	0.918	>0.90
Comparative Fit Index (CFI)	0.923	>0.90
Incremental Fit Index (IFI)	0.921	>0.90
Root Mean Square Approximation Method (RMSEA)	0.037	<0.08

*Norm : Sources : Bagozzi and Yi (2012) **Norm for AGFI : Chau and Hu (2002)

Table 5. Results of Proposed Hypotheses in the Model

Path	β Coeff.	*t*-value	*p*-value	Status
H1a. Environmental Knowledge → Attitude	0.37	7.82	0.000	Accepted
H1b. Environmental Knowledge → Purchase Intention	0.23	4.51	0.032	Accepted
H2a. Moral Obligation → Attitude	0.21	3.94	0.023	Accepted
H2b. Moral Obligation → Purchase Intention	0.16	3.74	0.019	Accepted
H3a. Consumers' Emotions → Attitude	0.24	5.01	0.000	Accepted
H3b. Consumers' Emotions → Purchase Intention	0.27	6.07	0.003	Accepted
H4. Attitude → Purchase Intention	0.39	7.96	0.000	Accepted
H5. Subjective Norms → Purchase Intention	0.20	3.52	0.004	Accepted
H6. Perceived Behavioural Control → Purchase Intention	0.17	3.79	0.028	Accepted
H7. Purchase Intention → Purchase Behaviour	0.43	8.29	0.000	Accepted

Notes: *$p < 0.001$; ** $p < 0.01$; *** $p < 0.05$

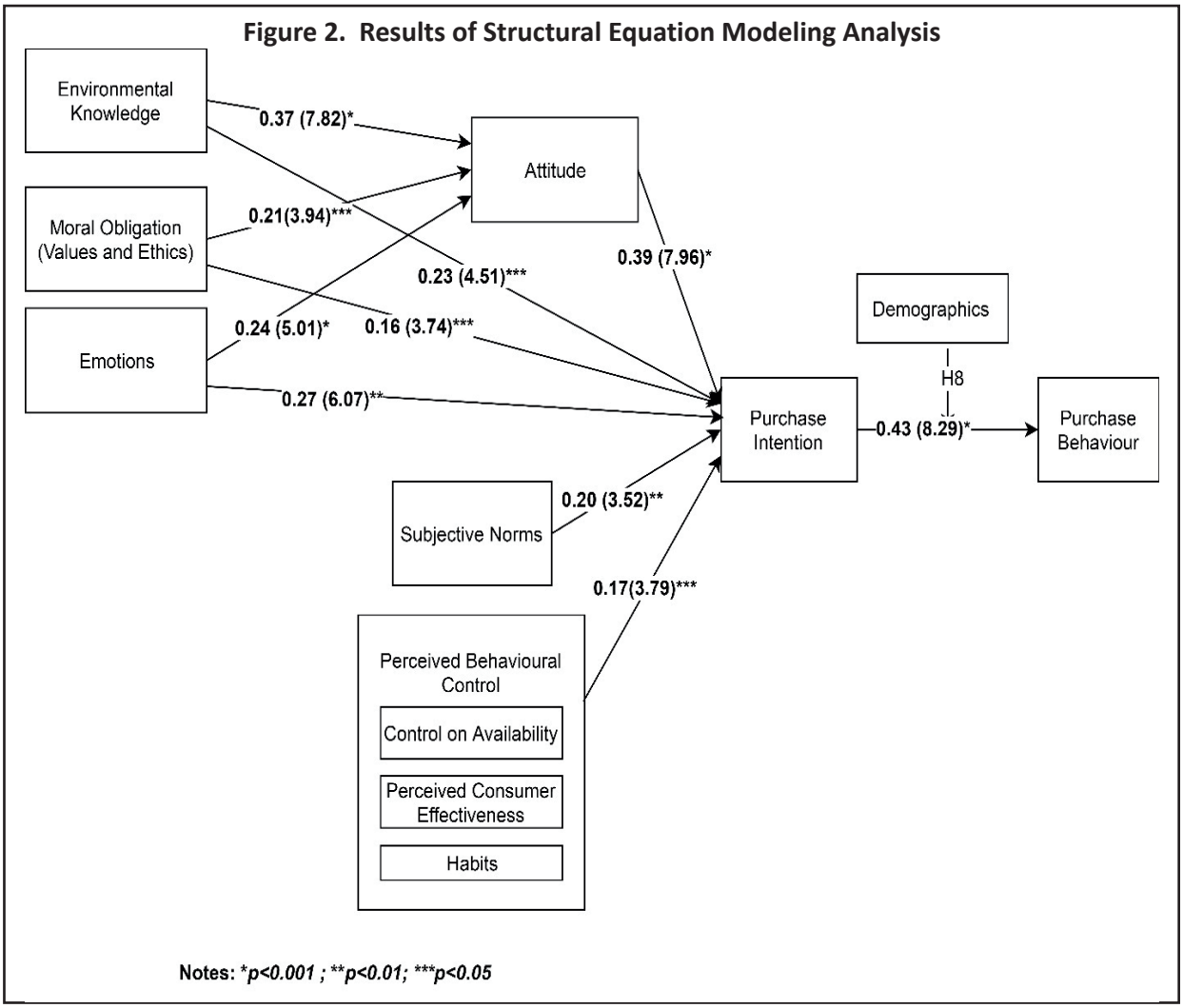
The Table 5 summarizes the appropriateness of the estimated model and results pertaining to structural path estimates. The hypotheses results show that following hypotheses are accepted: H1a (Environmental Knowledge → Attitude, $\beta = 0.37$; $t = 7.82$, $p < 0.000$) ; H1b (Environmental Knowledge → Purchase Intention, $\beta = 0.23$; $t = 4.51$, $p < 0.032$) ; H2a (Moral Obligation → Attitude; $\beta = 0.21$; $t = 3.94$, $p < 0.023$) ; H2b (Moral Obligation → Purchase Intention; $\beta = 0.16$; $t = 3.74$, $p < 0.019$) ; H3a (Consumers' Emotions → Attitude; $\beta = 0.24$; $t = 5.01$, $p < 0.000$) ; H3b (Consumers' Emotions → Purchase Intention ; $\beta = 0.27$; $t = 6.07$, $p < 0.003$) ; H4 (Attitude → Purchase Intention; $\beta = 0.39$; $t = 7.96$, $p < 0.000$) ; H5 (Subjective Norms → Purchase Intention ; $\beta = 0.20$; $t = 3.52$, $p < 0.004$); H6 (Perceived Behavioural Control → Purchase Intention ; $\beta = 0.17$; $t = 3.79$, $p < 0.028$) ; and H7 (Purchase Intention → Purchase Behaviour; $\beta = 0.43$; $t = 8.29$, $p < 0.000$).

In order to investigate the moderating effects of demographics between purchase intention and purchase behaviour, we performed regression analysis and achieved the following coefficients as depicted in the Table 5. Location of living, income, qualification, and gender of respondents are independent variables and purchase behaviour is the dependent variable. The *p* - value of city of living only is <.05, so we conclude that location of living of respondents is moderating between purchase intention and purchase behaviour. However, other factors like income, qualification, and gender have *p* - value >.05. Hence, with respect to H8 (demographics factors), the hypothesis is accepted only for city of living, and it is rejected for the other factors. We conclude that these factors are not moderating between purchase intention and purchase behaviour.

Table 6. Moderation Results of Demographics

Model		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.002	.048		-.040	.968
	PI_X_Location	-.116	.048	-.114	-2.407	.016
	PI_X_Income	-.025	.050	-.025	-.505	.613
	PI_X_Qualification	-.104	.054	-.099	-1.943	.053
	PI_X_Gender	.022	.041	.025	.535	.593

Figure 2. Results of Structural Equation Modeling Analysis



The Table 6 summarizes the hypotheses related to moderating factors, that is, demographic factors (location, income, qualification, gender). The Figure 2 summarizes the significant and non-significant paths of the final model. The details of the findings are dealt in the discussion section of the study.

Discussion and Managerial Implications

The objective of this study is to explore the impact of various constructs, for example, environmental knowledge,

moral obligation (values and ethics), emotions on the green durable product purchase attitude as well as on the purchase intention, followed by the impact of attitude, subjective norms, perceived behavioural control (control on availability, perceived consumers' effectiveness, and habits) on the green durable product purchase intention and its influence on purchase behaviour including moderating role of demographic factors (location of living, income, qualification, and gender) between green durable product purchase intention and purchase behaviour. For a better understanding of the aforesaid objectives, we developed eleven hypotheses (H1a-H8) with relevant literature support and represented them in a conceptual framework, and the results of the SEM analysis are shown in the Figure 2. The framework has been tested with statistical analysis supported by primary data. Data analysis finds a very good fit of our model and obtains support for almost all the hypotheses.

The green marketing philosophy is becoming strong among the Indian people, and this trend has forced the marketers to rethink and plan their business strategies in a more creative and environment-friendly way (Tara, Singh, & Kumar, 2015). This study has significant business and managerial implications. First, marketers of green consumer durable products could be benefited from the outcome that environmental knowledge has a positive impact on attitude building leading to purchase intention and favourable purchase behaviour. Similarly, moral obligation, that is, ethics & values and emotions of people also lead to developing positive attitude, purchase intention, and favourable purchase behaviour for green durable products. On the other hand, subjective norms of the society where people live, perceived behavioural control, which includes easy availability of green durable products, perceived consumers' effectiveness, and habits also have a positive impact towards green durable product purchase intention and favourable purchase behaviour.

In addition to these, we have studied whether demographic factors such as location of living, income, qualification, and gender influence the green durable product purchase intention and purchase behaviour of people. The study reveals that city of living of people significantly influences green durable product purchase intention and purchase behaviour favourably. Other factors like income, qualification, and gender do not significantly influence green durable product purchase intention and purchase behaviour. Therefore, marketers of green durable products in India may take note of the above facts for product development and design their market segmentation strategies accordingly to become successful.

Limitations of the Study and Future Research Avenues

Other than the above factors which we have taken for our study, factors like personality, culture, etc., may also influence green durable product purchase intention and behaviour. These factors have not been taken into consideration for our study. Under the demographic factors, we did not consider age of the people, which could also positively influence green durable product purchase intention and purchase behaviour. Future researchers may consider these areas for their studies.

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