Determinants of Environmentally Concerned Consumer Behaviour for FMCG Products

Dr. Varsha Khattri

Associate Professor FORE School of Management B-18, Qutub Institutional Area, New Delhi, India

Manika Singhal

PGDM (2019-2021)
FORE School of Management
B-18, Qutub Institutional Area, New Delhi

Abstract

Green marketing and consumers for green products have evolved significantly in recent years. Attitude and belief of the consumer towards environmentally concerned behaviour have increasingly become more important. Awareness for environmental issues have increased in the customers and they are making targeted efforts toward environment protection. This research paper strives to ascertain how the antecedents - Environmental Knowledge (EK), Environmental Concern (EC), and Perceived Consumer Effectiveness (PCE) – of Environmentally Concerned Consumer Behaviour (ECCB) are related to it, especially in arriving at purchase decision of FMCG products. The research is a survey-based study of respondents who have recent purchase experience of FMCG products. All the three chosen antecedents show a positive relationship with ECCB. Except for EK, the other two, EC and PCE, show a significant contribution in determination of ECCB. This research study is beneficial to the businesses in deciding on the 4Ps of marketing for environment friendly FMCG products. It also provides insights for arriving at major marketing policy decisions, especially marketing communication. The study adds on to the existing knowledge base, both theoretical and practical, about the three antecedents - EK, EC and PCE of ECCB.

Keywords: Environmentally Concerned Consumer Behaviour (ECCB), Environmental Concern (EC), Environmental Knowledge (EK), Perceived Consumer Effectiveness (PCE), Green Consumerism, FMCG.

Acknowledgements

The infrastructural support provided by FORE School of Management, New Delhi, India in completing this paper is gratefully acknowledged.

Introduction

In last 200 odd years of human civilization there has been tremendous growth in industry and technology leading to better quality of life and overall advancement. However, not every side of this growth story is promising. This exponentially accelerated growth has come at a huge

cost to the environment and available natural resources. The ramifications of this growth have led the human civilization in an unprecedent epoch. Human civilization is currently in times when environmental deterioration has started to adversely affect its creators. Environmental deterioration is leading to deterioration in human health. Humans are at the receiving end of the menace created by them. During the COVID-19 pandemic, high levels of pollution in air were directly related to high death rates (Wu et. al., 2020). In other words, there was a noticeable impact of rising pollution levels on the death rate. Increase in the particle pollution levels in the years before the pandemic breakout is associated with death rate increasing by 15%. This is only one such example of how the environmental damage that is created by humans has now started to directly affect them. One can find many such examples where environmental deterioration has negatively impacted human health. Over the years, there has been a spike in the level of pollution due to the extensive human interference with the intricate and delicate balance of nature. The fragile ecological equilibrium, essential to nurture life, has been unsettled by destructive consequences of day-to-day human behaviour. Earlier, it was the industrial revolution that extensively contributed to the rise in environmental degradation but now the onus is also shifting on the reckless consumer behaviour. Often it has been pointed out that humans cause environmental issues (Ramly et al., 2012) and their reckless behaviour towards the environment has been a major contributor towards environmental imbalance. Unmindful of the consequences of their consumption or ignoring these glaring consequences, consumers have done more harm to the environment than good.

On the other side, this accelerated degradation has also led to the rise in protective and caring behaviour to preserve and rejuvenate the environment to help sustain life on earth. This has not only been reflected in individual consumer behaviour but in actions of the corporations also. The fact that non-financial factors such as environmental, social, and corporate governance factors, collectively called ESG factors, are being increasingly considered by investors and corporates in investment and financial decisions brings to the fore the importance of environmental preservation and

sustainability. Companies are trying to develop a greener ecosystem for production and the theme for environment protection in marketing has gained dominance (Ottman et al., 2006). It has a two-way effect, push-and-pull factors that acts on the supply and demand to create a reinforcing loop. That is, as more and more individual consumers are becoming more aware about environment, their demand for green products is increasing. Also, as more and more companies identify that environment friendly features can be differentiating factors, they are inclined to focus on producing more green products. Terms such as green marketing, green consumerism and green products have emerged due to the increased interest of businesses and consumers in sustainability. Thus, one can safely conclude that there is a heightened awareness of 'green' things, more so, in the dynamic arena of business management and marketing management.

There is arise in demand for assurance by various stakeholders like consumers, shareholders, and local communities, that minimum social and environmental responsibility standards are catered to during the production of goods. Stakeholders want that the products they purchase are produced in a manner that is environmentally beneficial and should have either zero or minimal negative impact to the environment. This environmentally conscious behaviours have led consumer to weigh the available product options and choose green products over others. Therefore, the study of environmentally conscious behaviours of consumers has garnered more attention from the researchers, as the factors affecting consumer behaviour are of great importance for companies. It is of great significance to understand what these factors are and what role these factors play in consumer behaviour. Consumers now know and think about the effect of their purchase on the environment. Insight into green product perceptions can help businesses in multiple areas as the green demographic spreads across various age, income, and education levels(Fisher et al., 2012). This makes it even more important for companies and businesses to sincerely strive to arrive at these insights and make them an efficient tool not only for production but also utilise in all functions, especially in marketing their products and services offering.

Most of the important studies focus on environmental consumer behaviour that studies the attitude-intention gap, in other words, whether intentions effectively lead to behaviour (Grimmer & Bingham, 2013). This gap is often the missing link where intentions are not translated into behaviour and, thus, becomes one of the most important aspects for further research and enquiry in the primary domain of green marketing. This paper explores the concept of environmentally concerned consumer behaviour (ECCB) and strives to understands the attitudeto-behaviour gap with the help of three variables environmental knowledge (EK), environmental concern (EC), and perceived consumer effectiveness (PCE) for FMCG products in the Indian context. These three variables were tested for their relationship with ECCB and their determination as antecedents of ECCB.

Literature Review

Environmentally concerned consumer behaviour (ECCB)

ECCB relates to the different aspects of environmental movements like, recycling, use of energy, ecologically aware decision-making (Roberts & Bacon, 1997). In other words, ECCB encompasses a wider spectrum of consumer behaviours that exhibit their concern for the environment. ECCB also relates to comparatively active and inactive roles played in exercise of activism for environment from the perspective of the consumers (Stern et al.,1995). Environmentally concerned consumers are described as consumers who prefer products that cause minimal or no negative effect on the environment (Roberts, 1996). In other words, these are consumers who assess the environmental impact of products options they have and pick those which are environment friendly. If given a choice, concerned consumers will prefer eco-friendly products over other normal product (Barber, 2010). That is, the choice and preference for environmentally beneficial products over others is a key characteristic of environmentally concerned consumers.

According to a survey by Neilson in 2019, sustainability attributes are being factored-in more by the consumers in their purchase behaviour and 73% of the customers that were surveyed by Neilson said that they are inclined to

modify their consumption habits to lessen its effect on the environment (Shoup, E. 2019). Neilson's survey highlights not only the importance of sustainability attributes in decision making process for a purchase of a product or service but also the willingness of customers to move towards goods and services that are environmentally beneficial products. Research conducted in the year 2013 concluded that the environmentally concerned consumers were well-educated individuals with greater positive attitude for re-cycling and lesser unconcern level for issues related to the earth and the environment. They also communicated a significant locus of control over legislative issues and government officials (Tilikidou, 2013). This research puts forth that environmentally concerned consumers have other relevant attributes such as good education, preference for recycling, and aware for legislative and governance issues.

Research conducted in 2012 to re-analyse the determinants of ECCB, concluded that psychographic factors weigh more than socio-demographic ones in explaining ECCB (Akehurst et al., 2012). This research highlighted that the scale was tilted more towards psychological attributes as compared to sociological and demographic attributes. Another study conducted to assess the intervening factors in the association between environmental concerns and sustainable behaviours highlighted the role played by environmental concern (EC) and environmental involvement in forming of ecologically beneficial behaviours and intentions (Thieme et al., 2015). This research posits that environmental concern (EC) and environmental involvement are key components for building behaviours and intentions that are beneficial for the environment.

Another research, conducted to assess environmentally beneficial consumer behaviour and sustainable consumption, indicated that consumers having favourable environmental attitudes behaved in a more environmentally beneficial manner. They reused and used recycled items to protect the earth, bought ecologically beneficial products for the sustenance of future generations, used their own packs to decrease use of plastic and salvaged recyclable material from trash (Yahya et al., 2016).

Environmental Knowledge (EK)

Knowledge of the environment includes knowledge about problems, consequences, and how to act. In other words, environmental knowledge consists of environmental issues, their effect, and what can one do to address these issues favourably. Consumer behaviour varies with the individual level of EK. That is, different levels of EK are related to different consumer behaviour. In other words, consumer behaviour is linked to individual's EK. Knowledge of the consumers regarding environmentally beneficially products affect their concern towards the environment and increases their participation with green products. Individuals who know the consequences of their actions and their green buying behaviour can be attributed to their environmental knowledge are Green consumers. That is, Green consumers are those who know the effect of their activities on the environment and their EK is the

reason for their buying green products. Jansson et al. (2010) found that EK positively affects curtailing behaviours like reduction in consumption of energy and adoption of environmentally beneficially technology. In case a consumer knows regarding the environment and degradation caused by pollution then their mindfulness increases and, at the same time they would advance their positive attitude towards green behaviour.

Environmental Knowledge and Environmentally Concerned Consumer Behaviour

EK is considered to significantly affect the way consumers collect and arrange information (Alba & Hutchinson, 1987; Bettman, 1979) and the way they use it to make decisions. That is, EK is an important factor in information gathering and processing and its utilization in decision making.

The following studies reflect whether EK has a relationship with and affects ECCB (Refer Table 1):

Author Contribution Argued that to increase environmental concern it is of prime importance to increase the Arbuthnot, 1974 level of knowledge. Discussed the importance of consumers' EK as the green revolution is mainly driven by McDougall, 1993 consumers. Revealed that in case the consumers have a greater understanding of the environmental issues, then they have a greater likelihood to translate it into ecologically concerned Laroche et al., 2002 consumption behaviours. Stated that EK, altruism, environmental concern, involvement in electricity purchases Paladino & Baggiere, 2008 and the social influence by peers may explain the purchase of green electricity. Observed that consumers having lesser EK may struggle in arriving at green options that Kautish & Dash, 2017 may be termed as "good" and "rational" because of probable confusions during acquiring and evaluating information.

Table 1: Studies reflecting EK and ECCB

Using earlier relevant studies, the first hypothesis proposed is:

H1: There exists a positive association between Environmental Knowledge (EK) and Environmentally Concerned Consumer Behaviour (ECCB) for FMCG Products.

Environmental Concern (EC)

The initial environmental research revolved around the ecological challenges and concerns (Bamberg, 2003). Later

EC emerged as a separate class of study that affects consumer decision-making (Hackett, 1992). Emergence of EC as a separate class of study reflects its evolving prominence.

EC may be described as a global or generic attitude which indirectly affects the behaviour by behavioural intentions (Gill et al., 1986). That is, EC may be defined as the precursor to intentions. Dunlap & Jones (2002) defined EC as the cognizance of the environmental problems by an

individual and their readiness to be part of the answer. In other words, EC is knowing about the problems and willing to be the part of the solutions.

Schultz (2000) postulated that EC comprises of three distinctive factors by relating concern for self, others, and the biosphere. In a cluster analysis conducted on ECCBs, Bodur & Sarigollu (2005) pointed out three evident segments: actively concerned, passively concerned, and unconcerned. According to Abdul-Muhmin (2007), factors that increase ECare related to threat perceptions and knowledge of the global environmental issues, previous environmental affinity, and perceptions regarding psychological results of environmentally affinity.

Environmental Concern and Environmentally Concerned Consumer Behaviour:

Roberts & Bacon (1997) observed that the probability of an individual's ECCB is contingent on the extent of his EC. That is, the likelihood of one's ECCB is dependent on one's EC. Their study also found out that ECaffects many ecologically aware consumer behaviours, like general recycling behaviour and ecologically aware decision-making. Some other studies have also tried to establish a link between EC and ECCB(Hansla et. Al., 2008; Paul et al., 2016).

The following studies reflect whether EC has a relationship with and affects ECCB (Refer Table 2):

Contribution Author Found that EC can significantly impact the degree of individual's motivation for Furman, 1998 change of behaviour and social practices to ease the environmental problem. Suggest that EC can also be used like a heuristic, to help consumers to structure the Bamberg, 2003 decision question with probable solutions and decision criterion that are important to the individual. Depicted that EC affects the association amid self-construal and pro-environmental Arnocky et. Al., 2007 behaviour structure. Observed that the attention of consumers is increasing towards EC and they are now Van Doorn & Verhoef, 2011 inclined to shell out more for sustainable products. Argued that EC can influence other attributes of environmentally friendly products Sharma & Joshi, 2017 like perceived risks, perceived relative advantage, and perceived parity.

Table 2: Studies reflecting EC and ECCB

Using earlier relevant studies, the second hypothesis proposed is:

H2: There exist a positive association between Environmental Concern (EC) and Environmentally Concerned Consumer Behaviour (ECCB) for FMCG Products.

Perceived Consumer Effectiveness (PCE)

Kinnear et al. (1974) state that PCEmay be defined as the confidence of the environmentally concerned consumer to change the situation of perpetual environmental deterioration. In other words, the self-belief that an environmentally concerned consumer has that she can reverse the process of never-ending degradation of the environment. Antil (1984) defined PCE as a measure of

one's assessment of his ability to impact environmental resource problems and modelled PCE as a primary determinant of environmentally conscious behaviour. That is, how effective one perceives one's ability to alter the outcome by their actions.

In an environmental study, PCE was depicted as the consumer's internal locus of control that his individual actions could positively make a contribution to the protection of the environment (Cleveland et. al., 2012).In other words; PCE is the self-belief of a person that his individual actions may have a share in the preservation and protection of the environment.

Perceived Consumer Effectiveness and Environmentally Concerned Consumer Behaviour

Roberts (1996) observed about PCE that it was the sole

most potent predictor of ECCB, which surpassed all other examined correlates, whether demographic or psychographic. In previous studies also, PCE was seen as the main antecedent of ECCB (Roberts, 1996; Akehurst et

al., 2012; Taufique & Vaithianathan, 2018).

The following studies reflect whether PCE has a relationship with and affects ECCB (Refer Table 3):

Table 3: Studie	s reflecting	PCE	and]	ECCB
-----------------	--------------	------------	-------	-------------

Author	Contribution
Wiener & Doescher, 1991	Their study concluded that the level of PCE of a consumer impacts his probability of acting as a ecologically aware consumer and there exists a positive correlation between PCE and ECCB.
Berger & Corbin, 1992	Claimed that PCE moderated the degree of relationship between environmental attitudes and green consumer behaviours.
Vermeir & Verbeke, 2006	Established that there exists a positive correlation between PCE and the attitude of buying sustainable dairy products, which were further related to purchase intention.
Wesley et al., 2012	Investigated that low PCE level in consumers led to low motivational attitudes and ensuing purchase behaviour.

Using earlier relevant studies, the third hypothesis proposed is:

H3: There exists a positive association between Perceived Consumer Effectiveness (PCE) and Environmentally Concerned Consumer Behaviour (ECCB) for FMCG Products.

Environmental Knowledge, Environmental Concern, Perceived Consumer Effectiveness and ECCB:

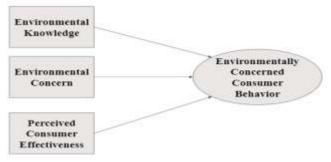
The fundamental question of interest to marketers is to assess the extent to which EK, EC and PCE predict ECCB. This leads to development of the fourth hypothesis:

H4: The psychographic variables (environmental knowledge (EK), environmental concern (EC) and perceived consumer effectiveness (PCE)) are significant in explaining the ECCB for FMCG Products.

Conceptual Framework

Based on the review of the literature, a conceptual framework wasformulated, as exhibited in figure 1.

Figure 1: Conceptual Framework



Research Methodology

This research work followed a quantitative route wherein a self-administered survey questionnaire was used online for collecting data. The survey was conducted during the months of June and July 2020 targeting respondents who have recent purchase experience of FMCG products. Management institutes located in Delhi were shortlisted from National Institutional Ranking Framework (NIRF, 2020) list and their management faculties were approached to facilitate appointment with student representatives to procure a mailing list of the students willing to participate in the study. This exercise resulted in 307 responses out of which 228 responses were found to be valid for the study.

The questionnaire aimed at measuring the EK, EC, PCE and ECCB and was adapted from relevant studies as were evident from extensive literature review conducted for this study. The variables chosen for EK were adapted from Abdul-Muhmin (2007) and Stoimenova (2016), EC from Antil and Bennett (1979), Abdul-Muhmin (2007), PCE from Robert (1996) and Abdul-Muhmin (2007) and ECCB from Robert (1996) and Robert & Bacon (1997) respectively. The construct was measured on a five-point Likert scale where the range from 1 to 5 denoted the continuum from strongly disagree to strongly agree.

Data Analysis and Results

Reliability Analysis

Factor Analysis employing Principal Component Analysis together with the varimax of Kaiser Normalization was utilized to assess the scale dimensionality. The scale reliability was tested by utilizing item-total correlations and Cronbach's Alpha.

Items shortlisted for further analysis had loading of more than 0.05 on one factor. Significant results were displayed in the Kaiser-Mayer-Olkin test for assessing sampling adequacy (KMO=0.0862) and Barlett's Test of Sphericity.

Thus, highlighting appropriateness of factor analysis. Table 2states the final items and loading utilised in this research. The Reliability Analysis on the instrument produced varied results, on some parameters. Cronbach's alpha was as high as 0.918 as seen in case of EK (Refer Table 4) and 0.827 in case of ECCB Scale. Overall, for all the parameters the Cronbach's Alpha resulted in a coefficient greater than 0.65, confirming the internal consistency of the instrument. A coefficient > 0.6 is considered satisfactory and reasonable (van Griethuijsen et al., 2015; Taber, K. S., 2018). A satisfactory and reliable coefficient shows that there is enough internal consistency and the random errors are at controllable levels.

Table 4: Reliability Estimates and Factor Loadings

Factors	Scale Items	Factor Loadings	No. of Items	Cronbach Alpha	
	EK1	0.871			
	EK2	0.846			
Environmental Knowledge	EK3	0.858	6	0.918	
Environmental Knowledge	EK4	0.839	0		
	EK5	0.836			
	EK6	0.799			
	EC1	0.683			
	EC2	0.786			
	EC3	0.636			
Environmental Concern	EC4	0.567	7	0.742	
	EC5	0.749			
	EC6	0.614			
	EC7	0.586			
	PCE1	0.723		0.686	
D . 1.6	PCE2	0.615			
Perceived Consumer Effectiveness	PCE3	0.818	5		
Effectiveness	PCE4	0.601			
	PCE5	0.662			
	ECCB1	0.703			
	ECCB2	0.742			
	ECCB3	0.774			
Environmentally Concerned Consumer Behaviour	ECCB4	0.771	7	0.827	
Consumer Benaviour	ECCB5	0.759			
	ECCB6	0.633			
	ECCB7	0.646			

Correlation Analysis

For testing the hypotheses Likert scale data (ordinal in nature) had to be converted into interval data (continuous in nature). The descriptive statistics consisting of minimum and maximum values, mean and standard deviations for all the mean responses is presented in Table 5.

For testing H1 - there exists a positive relationship between EK and ECCB for FMCG products - Pearson correlation on the mean measures of factors EK and ECCB resulted in a statistically significant level of positive correlation with significance level of 0.001 at P<0.01, though the correlation was weak with r=0.226 (Refer Table 6).

Thus, the significance level proves H1.

For testing H2, the existence of a positive association between EC and ECCB for FMCG products, Pearson

correlation on the mean scores of factors EC and ECCB resulted in a statistically significant level of positive correlation with significance level of 0.000 at P<0.01, though the correlation was moderate with r=0.398 (Refer Table 6).

Thus, the significance level proves H2.

For testing H3, the existence of a positive association between PCE and ECCB for FMCG products, Pearson correlation on the mean scores of factors PCE and ECCB resulted in a statistically significant level of positive correlation with significance level of 0.000 at P < 0.01, though the correlation was moderate with r = 0.454 (Refer Table 6).

Thus, the significance level proves H3.

Table 5: Means and Standard Deviations

Descriptive Statistics							
	N	Min.	Max.	Mean	Standard Deviation		
EK	228	2.33	5	4.4671	0.55949		
EC	228	1.86	4.71	3.9862	0.52944		
PCE	228	2	4.6	3.7026	0.55673		
ECCB	228	1.14	5	3.6685	0.67724		
Valid N (listwise)	228						

Table 6: Correlation Matrix

	Correlations	PCE	ECCB	EK	EC
	Pearson Correlation	1.00	0.454**	0.245**	0.500**
PCE	Sig. (2-tailed)		0.00	0.00	0.00
PCE ECCB	N	228	228	228	228
	Pearson Correlation	0.454**	1.00	0.226**	0.398**
ECCB	Sig. (2-tailed)	0.00		0.001	0.00
	N	228	228	228	228
	Pearson Correlation	0.245**	0.226**	1.00	0.379**
EK	Sig. (2-tailed)	0	0.001		0.00
	N	228	228	228	228
	Pearson Correlation	0.500**	0.398**	0.379**	1.00
EC	Sig. (2-tailed)	0.00	0.00	0.00	
	N	228	228	228	228

Regression Analysis

Multiple Regression analysis was employed to assess which factors affect the ECCB for FMCG products and which factors affect ECCB the most. ECCB for FMCG products was chosen as the independent variable and EK, EC and PCE were chosen as independent variables.

All the independent variables have been retained because the correlation between ECCB (dependent variable) with each of the independent variables was not too high to result in multi-collinearity. The Normal P-Plot also showed a regular enough straight and there is no large deviation, thus, corresponds to normality.

The Adjusted R Square of 0.239 (Refer Table 7) implies that the model composed of three variables explains 23.9% of the variance of the ECCB for FMCG products. Level of

significance from ANOVA of 0.000 highlights the significance of this result. (Refer Table 8)

The beta values and level of significance (P<0.05) derived from regression analysis implied that PCE (Beta=0.336; significance=0.000) and EC (Beta=0.205; significance=0.004) make a significant contribution to the ECCB for FMCG products. EK (Beta=0.066; significance=0.292), however, was not related to the ECCB for FMCG Products due to a high level of significance (P>0.05).

Thus significance level proves H4, the psychographic variables (EK, EC, and PCE) are relevant in explaining the ECCB for FMCG Products, to the extent that two of the psychographic variables namely, EC and PCE, can explain the ECCB for FMCG products while EK failed to do so.

Table 7: Summary of Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	0.499^{a}	0.249	0.239	0.59075			
a. Predictors: (Constant), PCE, EK, EC							

Table 8: ANOVAa

Model		Sumof Squares	df	Mean Square	F	Sig.			
1	Regression	25.942	3	8.647	24.779	0.000b			
1	Residual	78.173	224	0.349					
	Total	104.115	227						
a. Dependent Variable: ECCB									

b. Predictors: (Constant), PCE, EK, EC

Table 9: Regression Coefficients

			ndardized fficients	Standardized Coefficients	t	Sig.	95.0% Confidence for B	ce Interval		
	Model	В	Std. Error	Beta			Lower Bound	Upper Bound		
1	(Constant)	0.753	0.386		1.948	0.053	-0.009	1.514		
	EK	0.08	0.076	0.066	1.055	0.292	-0.069	0.23		
	EC	0.262	0.09	0.205	2.919	0.004	0.085	0.439		
	PCE	0.409	0.082	0.336	5.012	0	0.248	0.569		
	Denoted the Vericles ECCD									

Dependent Variable: ECCB

P value- 0.05

Conclusion and Managerial Implications

The findings of this research study concluded that there exists a positive association between the variables environmental knowledge (EK), environmental concern (EC), and perceived consumer effectiveness (PCE) - with environmentally concerned consumer behaviour (ECCB). EC and PCE have moderate levels of correlation with ECCB. EK has low levels of correlation with ECCB as compared to EC and PCE. Regression analysis to assess which factors affect ECCB most while purchasing FMCG products showed no significant contribution of EK. On the other hand, EC and PCE with moderately high beta coefficients showed significant contribution in predicting ECCB. In other words, during the buying process and purchase decision making of a FMCG product by the consumer the extent of ECCB exhibited by the consumer is more related to the levels of EC and PCE of the consumer as compared to the EK of the consumer. EK was not instrumental in determining the ECCB demonstrated by the consumer.

Notwithstanding the limits of generalization of the sample, this study observed that Indians, even though having a fair education about environment, are less probable to get affected by EK at the time of making a purchase of green FMCG products. This finding undermines the favourable impact of educating about the environment. Though it might appear counter-intuitive, but it highlights an important aspect that imparting knowledge may not necessarily lead to the intended behaviour. That is, awareness is not enough to lead to intent to behaviour, and behaviour modification towards intended behaviour necessitates more intervention at different levels and not only educating for the intended behaviour.

The finding with respect to the effects of belief of the consumer that PCE strongly predicted ECCB was consistent with the earlier research, (Roberts, 1996; Taufique & Vaithianathan, 2018). This study found that Indian consumers felt confident about solving environmental problems and believe that their behaviour holds power to change the environment. That is, the assessment by the consumer of the effectiveness of their

ability to make a significant impact by their actions is instrumental in determining their environmentally beneficial behaviour. This finding conflicts with the idea that consumer belief does not transfer to actual behaviour (Heo & Muralidharan 2019). In this research, PCE has appeared to be the best predictor of ECCB. Marketers and advertisers can employ this insight in devising both short-term and long-term marketing strategies. PCE can help change the consumers' ECCB in a positive way to lead to consumption patterns that are sustainable. Marketers may utilise this to devise action plan that enhances the PCE of the consumer and make them realise the potential of their buying behaviour in safeguarding the environment.

The predictor of ECCB which was second-best was EC. This finding pointed out that higher the concern a consumer has for the environment, the higher probable he or she is to change his or her buying behaviour. That is, the generic attitude the consumer has toward the environment is the second -best determinant of environmentally beneficial behaviour of the consumer. This was consistent with earlier studies (Albayrak et al., 2013; Mostafa, 2007). This shows that Indians are aware of the necessity to consume more mindfully so as to protect and safeguard the environment and ensure sustainability. Environmentally concerned consumers show environment friendly behaviours and consume ecologically consciously, therefore, companies should diligently address the EC of the consumers. Addressing the EC of the consumer may act as an impetus to their ECCB which in turn can be translated to higher purchase of green products.

The results of this research can assist marketers in drafting an effective go-to-market strategy comprising the 4Ps of marketing, especially product and promotion, which is aligned with the increasing awareness of consumers about the environment and ecology. Marketers have to be mindful of these significant factors, that is, PCE and EC, that play a major role in ECCB demonstrated by the consumers. These factors when addressed adequately may lead to higher predictability of desired ECCB and resulting sales.

As identified in the study, PCE and EC are being strong predictors of ECCB illustrate the market sentiment for

green and environment friendly products. Indians are gradually becoming more considerate towards the consequences of their consumption pattern on the environment and have conviction that they have enough power to make a change. Corporates can tap into this opportunity by launching environment-friendly products. Brands can use this sentiment and leverage the secondary associations with herbal and eco-friendly ingredients. Products, which do not have eco-friendly ingredients, can enhance sustainability by using eco-labels, eco packaging, reusable containers, etc.

The results of this study are of most use to the marketers in drafting effective integrated marketing communication for their brands. The marketers can create communication messages that can explain ways in which the product addresses ecological problems. This will provide consumers more information as to how they can contribute to environment protection and enable them to make more informed purchase decisions. Since PCE and EC together exert a strong influence on ECCB, marketers can use this to strengthen consumer self-belief in their product or service (like green hotels) by including substantive claims in their promotion that can benefit both the consumers and the environment. To reinforce this belief, marketers can further use positive testimonials from the actual customers.

Finally, the marketers can exert a greater effect on the consumers if they successfully substantiate green claims made by them (Karna et al. 2001). According to indications by the results of this research, consumers believe that they can change the world by their purchase decisions. Hence, if companies make claims that they are seriously concerned about and actively engaged in addressing the environmental problems then more customers would like to identify and associate with such brands and companies. Companies can use this insight as a game-changer by providing an impetus to companies to devise plans and strategies to increase environmentally conscious products and services being offered by them. This in turn will have an overall positive effect for the environment.

In conclusion, this research could have a vital and meaningful influence in understanding the role of consumers in as far as safeguarding the earth from depletion of resources is concerned. Further, it contributes to the body of research on green marketing of FMCG products and could reveal which marketing strategies should be used by the companies to further enhance the understanding of consumer needs with respect to the green products.

Limitations and Future Scope of Research

The conclusions of this research ought to be seen in the light of constraints to this research so that it could pave the way for further research in this field. Scales used in the study have developed over time and need to be further validated and improved. Future research can be focussed on devising scales that are in line with emerging trends and the way the subject area is evolving. Cross-sectional study, as in the current one, have constraints which can be dealt with longitudinal research to further examine these findings and establish more reliable cause-effect relationships. The respondents of the study are students from business schools in Delhi, which limits the potential of the conclusions and gives scope for further studies with larger sample size and across regions to further test the applicability of these findings. Given the specific academic background of the respondents there may be deviations between the chosen sample and population at large. The study was conducted in one Indian market and more studies may be conducted in different countries with a larger population to measure the environmentally concerned behaviours of consumers in other emerging countries. Self-administered survey questionnaires, which were utilised for data collection in this study, have specific inherent limitations for describing consumer behaviour. Future research may use a combination of various methods. In the earlier study (Roberts, 1996), the factors considered were EC, PCE and liberalism, while in the current research EK, EC and PCE have been studied. However, there are many antecedents to ECCB which have been analysed by earlier studies (Khare, 2014; Riley & Kohlbacher, 2015; Brochado et al., 2017). Other antecedents of ECCB may also be included to the study and measured accordingly for a more comprehensive and broad-based study of ECCB. The proposed interplay of

variables may be investigated to determine the behavioural intentions, which may or may not affect actual environmentally conscious consumer behaviour. Though having its foundation on the earlier research, this study not only provides actionable insights for marketers but also broadens the academic thought together with providing an impetus for further area-specific study in the discipline of marketing of green products.

References

- Abdul-Muhmin, A. G. (2007). Explaining consumers' willingness to be environmentally friendly.
 International Journal of Consumer Studies, 31(3), 237-247.
- Akehurst, G., Afonso, C., & Gonçalves, H. M. (2012).
 Re-examining green purchase behaviour and the green consumer profile: new evidences. *Management Decision*.
- Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of consumer research*, 13(4),411-454.
- Albayrak, T., Aksoy, Ş., & Caber, M. (2013). The effect
 of environmental concern and scepticism on green
 purchase behaviour. *Marketing Intelligence & Planning*.
- Antil, J. H. (1984). Socially responsible consumers: Profile and implications for public policy. *Journal of macromarketing*, 4(2), 18-39.
- Antil, J. H., & Bennett, P. D. (1979). Construction and validation of a scale to measure socially responsible consumption behavior. *The conserver society*, *51*, 51-68.
- Arbuthnot, J. (1974). Environmental knowledge and recycling behavior as a function of attitudes and personality characteristics. Proceedings of the Division of Personality and Society Psychology, 1(1), 119-121.
- Arnocky, S., Stroink, M., & DeCicco, T. (2007). Selfconstrual predicts environmental concern, cooperation, and conservation. *Journal of Environmental Psychology*, 27(4), 255-264.

- Bamberg, S. (2003). How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of environmental psychology*, 23(1), 21-32.
- Barber, N., Taylor, D. C., & Deale, C. S. (2010). Wine tourism, environmental concerns, and purchase intention. *Journal of Travel & Tourism Marketing*, 27(2), 146-165.
- Berger, I. E., & Corbin, R. M. (1992). Perceived consumer effectiveness and faith in others as moderators of environmentally responsible behaviors. *Journal of Public Policy & Marketing*, 11(2), 79-89.
- Bettman, J. R. (1979). Memory factors in consumer choice: A review. *Journal of Marketing*, 43(2), 37-53.
- Bodur, M., & Sarigöllü, E. (2005). Environmental sensitivity in a developing country: consumer classification and implications. *Environment and Behavior*, *37*(4), 487-510.
- Brochado, A., Teiga, N., & Oliveira-Brochado, F. (2017). The ecological conscious consumer behaviour: are the activists different? *International Journal of Consumer Studies*, 41(2), 138-146.
- Cleveland, M., Kalamas, M., & Laroche, M. (2012). "It's not easy being green": Exploring green creeds, green deeds, and internal environmental locus of control. *Psychology & Marketing*, 29(5), 293-305.
- Dunlap, R. E., & Jones, R. E. (2002). Environmental concern: Conceptual and measurement issues. *Handbook of environmental sociology*, *3*(6), 482-524.
- Fisher, C., Bashyal, S., & Bachman, B. (2012). Demographic impacts on environmentally friendly purchase behaviors. *Journal of Targeting, Measurement and Analysis for Marketing*, 20(3-4), 172-184.
- Furman, A. (1998). A note on environmental concern in a developing country: Results from an Istanbul survey. *Environment and Behavior*, 30(4), 520-534.
- Gill, J. D., Crosby, L. A., & Taylor, J. R. (1986). Ecological concern, attitudes, and social norms in voting behavior. *Public Opinion Quarterly*, *50*(4), 537-554.

- Grimmer, M., & Bingham, T. (2013). Company environmental performance and consumer purchase intentions. *Journal of business research*, 66(10), 1945-1953.
- Hackett, P. M. (1992). The understanding of environmental concern. *Social Behavior and Personality: an international journal*, 20(3), 143-148.
- Hansla, A., Gamble, A., Juliusson, A., & Gärling, T. (2008). The relationships between awareness of consequences, environmental concern, and value orientations. *Journal of environmental psychology*, 28(1), 1-9.
- Heo, J., & Muralidharan, S. (2019). What triggers young Millennials to purchase eco-friendly products? The interrelationships among knowledge, perceived consumer effectiveness, and environmental concern. *Journal of Marketing Communications*, 25(4), 421-437.
- Jansson, J., Marell, A., & Nordlund, A. (2010). Green consumer behavior: determinants of curtailment and eco-innovation adoption. *Journal of consumer* marketing, 27(4), 358-370.
- Karna, J., Juslin, H., Ahonen, V., & Hansen, E. (2001). Green Advertising. *Greener Management International*, (33).
- Khare, A. (2014). Consumers' susceptibility to interpersonal influence as a determining factor of ecologically conscious behaviour. *Marketing Intelligence & Planning*.
- Kinnear, T. C., Taylor, J. R., & Ahmed, S. A. (1974). Ecologically concerned consumers: who are they? Ecologically concerned consumers can be identified. *Journal of marketing*, 38(2), 20-24.
- Kautish, P. and Dash, G. (2017), "Environmentally concerned consumer behavior: evidence from consumers in Rajasthan", Journal of Modelling in Management, Vol. 12 No. 4, pp. 712-738. https://doi.org/10.1108/JM2-05-2015-0021
- Laroche, M., Tomiuk, M. A., Bergeron, J., & Barbaro-Forleo, G. (2002). Cultural differences in environmental knowledge, attitudes, and behaviours of

- Canadian consumers. Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration, 19(3), 267-282.
- McDougall, G. H. (1993). The green movement in Canada: Implications for marketing strategy. *Journal of International Consumer Marketing*, 5(3), 69-87.
- Mostafa, M. M. (2007). Gender differences in Egyptian consumers' green purchase behaviour: the effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, 31(3), 220-229.
- NIRF (2020), National Institutional Ranking Framework, Ministry of Human Resource Development, Government of India, India Rankings 2020: Management as retrieved from https://www.nirfindia.org/2020/ManagementRanking.html on 15th June 2020.
- Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment: Science and Policy for* Sustainable Development, 48(5), 22-36.
- Paladino, A., & Baggiere, J. (2007). Are we "green"? An empirical investigation of renewable electricity consumption. *ACR European Advances*.
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of retailing and consumer* services, 29, 123-134.
- Ramly, Z., Hashim, H., Yahya, W.K., & Mohamed, S.A. (2012). Environmentally Conscious Behavior among Malaysian Consumers: An Empirical Analysis. Jurnal Pengurusan 35, 111 121.
- Riley, L. S., & Kohlbacher, F. (2015). Values As Antecedents For Ecologically Conscious Consumer Behavior Among Seniors: A Cross-Cultural Comparison. In Marketing Dynamism & Sustainability: Things Change, Things Stay the Same... (pp. 728-731). Springer, Cham.
- Roberts, J. A. (1996). and Implications for Advertising. *Journal of business research*, *36*, 217-231.

- Roberts, J. A., & Bacon, D. R. (1997). Exploring the subtle relationships between environmental concern and ecologically conscious consumer behavior. *Journal of business research*, 40(1), 79-89.
- Schultz, P. W. (2000). New environmental theories: Empathizing with nature: The effects of Perspective taking on concern for environmental issues. *Journal of social issues*, *56*(3), 391-406.
- Sharma, A., & Joshi, S. (2017). Green consumerism: overview and further research directions. *International Journal of Process Management and Benchmarking*, 7(2), 206-223.
- Shoup, E. (2019, December 3). Nielsen: Which sustainability attributes matter most to consumers? Retrieved from https://www.foodnavigator-usa.com/Article/2019/12/03/Nielsen-Which-sustainability-attributes-matter-most-to-consumers. Retrieved on- 15th May 2020.
- Stern, P. C., Dietz, T., & Guagnano, G. A. (1995). The new ecological paradigm in social-psychological context. *Environment and behavior*, *27*(6), 723-743.
- Stoimenova, B. (2016). Knowledge and attitudes about green consumption in Bulgaria. *Economic Themes*, 54(4), 499-515.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273-1296.
- Taufique, K. M. R., & Vaithianathan, S. (2018). A fresh look at understanding Green consumer behavior among young urban Indian consumers through the lens of Theory of Planned Behavior. *Journal of cleaner* production, 183, 46-55.
- Thieme, J., Royne, M. B., Jha, S., Levy, M., & McEntee, W. B. (2015). Factors affecting the relationship between environmental concern and behaviors. *Marketing Intelligence & Planning*.
- Tilikidou, I. (2013). Evolutions in the ecologically conscious consumer behaviour in Greece. Euromed Journal of Business.

- Van Doorn, J., & Verhoef, P. C. (2011). Willingness to pay for organic products: Differences between virtue and vice foods. *International Journal of Research in Marketing*, 28(3), 167-180.
- van Griethuijsen, R. A., van Eijck, M. W., Haste, H., den Brok, P. J., Skinner, N. C., Mansour, N., ... & Bou Jaoude, S. (2015). Global patterns in students' views of science and interest in science. *Research in science education*, 45(4), 581-603.
- Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude—behavioral intention" gap. *Journal of Agricultural and Environmental ethics*, 19(2), 169-194.
- Wesley, S. C., Lee, M. Y., & Kim, E. Y. (2012). The role
 of perceived consumer effectiveness and motivational
 attitude on socially responsible purchasing behavior in
 South Korea. *Journal of Global Marketing*, 25(1), 2944.
- Wiener, J. L., & Doescher, T. A. (1991). A framework for promoting cooperation. *Journal of Marketing*, 55(2), 38-47.
- Wu, X., Nethery, R. C., Sabath, B. M., Braun, D., & Dominici, F. (2020). Exposure to air pollution and COVID-19 mortality in the United States: A nationwide cross-sectional study. Retrieved from https://www.medrxiv.org/content/10.1101/2020.04.05. 20054502v2. Retrieved on-15th May 2020.
- Yahya, W. K., Musa, N. D., & Hashim, N. H. (2016). Understanding Environmentally Friendly Consumer Behavior. In *Regional Conference on Science*, *Technology and Social Sciences (RCSTSS 2014)* (pp. 909-921). Springer, Singapore.