

## IMPACT OF COGNITIVE FACTORS INFLUENCING ON GREEN PURCHASING BEHAVIOUR IN FMCG MARKET OF PAKISTAN

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### **Abstract:**

*In this era of modernization, the ecological marketing for business ethics and corporate social responsibility are considered to be the most effective theme for the development of marketing strategies. As far as social responsibility and business ethics are concerned the eco-friendly and green marketing topics are the major subjects, which are similar to biodiversity and sustainability. Unreasonable degree of utilization all around the world prompts extreme ecological sustainability issues, for example, a worldwide temperature alteration, water, air and land contamination, and wastage which drive society to change their ordinary utilization consumption and purchasing behavior towards the pursuit of ecofriendly environment. The purpose of this research is to find the relationship between the cognitive factors which includes Environmental Issues, Perceived Consumer Effectiveness and Environmental Advertisement influencing on Green Purchase Behaviour in order to check the research model in perspective of FMCG market of Pakistan. The proposed research model is analyzed by using (SEM) Structural Equation Modeling and the data is collected from 400 consumers using the FMCG products. Hence, the current research model adds the significant input to policymakers and marketers to design from the perspective of green marketing policies and strategies in order to manage the FMCG market of Pakistan.*

### **Keywords:**

- Structured Equation Modelling (SEM)
- Green Purchasing Behaviour
- Ecofriendly
- Environmental Issues
- Environmental Advertisement

### **1.0 Introduction:**

Unreasonable degree of utilization all around the world prompts extreme ecological sustainability issues, for example, a worldwide temperature alteration, water, air and land contamination, and wastage which drive society to change their ordinary utilization consumption and purchasing behavior towards the pursuit of ecological sustainability. Thusly, the phenomena of green purchasing behavior have been developed as another worldview of promoting discipline for advertisers and specialists in the domain of modern purchasing research (Ottman, 1998; Charter et al., 2002; Peattie and Belz, 2010; and Lai and Cheng, 2016). With respect to purchasing phenomena, various investigations have been found in developed countries towards ecofriendly behavior (Ottman, 1998; Kalafatis et al., 1999; Peattie and Charter, 2003; Zhao et al., 2014; and Yadav and Pathak, 2016). While in Asian economies like Pakistan, India and China and so forth., a couple of studies have been recognized purchasing behaviour for green products, still such writing on environmental issues and customer research is somewhat insufficient in the Pakistani setting (Chan, 2001; Mostafa, 2006; Chen and Chai, 2010; Yadav and Pathak, 2016; and Kumar et al., 2017). Among many studies on products that are good for the environment (Muposhi and Dhurup, 2017; 2011 by Rahbar and Wahid; 2015, Ahmadi and Fateme Javadi; Chin, Chin, and Wong,

2018), eco-brand, eco-label, and ecological advertisements are used to increase consumer awareness and knowledge of FMCG products, as well as to help consumers distinguish green products from other types of products (Rahbar and Wahid, 2011; 2018 by Chin, Chin, and Wong; 2017 (Muposhi and Dhurup).

In order to know the need of sustainable development, research that looks to understand the components which impact behavior related to nature friendly product has expanded quickly over the last decade, with specific consideration on green purchasing behaviour. Furthermore, over-utilization has natural effects that compromise the planet, and expanding the acquisition of ecological items which is viewed as a significant segment of reducing ecological effect (Liobikiene and Bernatoniene, 2017), considering the green buyer which is a developing zone of examination and a significant concentration for advertising. Here, natural effects perceived as "the impact of human-ruled frameworks for creation and utilization on the earth framework due to rebuilt biophysical assets" (Liu et al. 2016, p.14). Maniatis (2016) recommends that there are studies which shows the multiplication of indicators influencing consumers knowledge, green awareness and green products commitment (i.e. products having less effect on the atmosphere). Moreover, the actual missing thing is the mechanism in which how the details of these indicators will act while the decision-making process in progress. (Maniatis, 2016). He et al. (2016) also emphasis that well-informed theoretical frameworks related to customers ecological or non-ecological consumption is hard to find.

However, the present ecological situations are more alarming for consumer health and wellbeing worldwide. Therefore, consumers nowadays consider to be more sensitive in their ecological attitudes, priorities and buying (Sarigöllü, E., 2009). From the last few decades, ecological issues and problems have increased and discussed. Moreover, respondents in large quantity from all over the world are concerned or much concerned due to environmental issues (Diekmann & Franzen, 1999; Dunlap & Mertig, 1995). Chan and Lam (2002) also disclosed that in the last few decades, the concerns of ecological conditions have raised. As the consumers recognized the importance of protecting the environment, environmentalism is considered to be the vital topic of market (Kalafatis et al., 1999). {Presently, consumers are more aware of the importance of ecological degradation which results more environmental awareness and willingness to purchase environmentally friendly products as well as services, for those businesses which prefer green practices (Kalafatis et al., 1999; Laroche et al., 2001; Roberts, 1996).

As per Makower (1993), 1960s era was considered to be the age of "ecological awakening", the 1970s era were known as "taking action" era, the 1980s known as "accountable" age and the 1990s were known as the "power in the marketplace" era. The organizations were subjected to public and political pressure to go green as a result growing demand of people for eco-friendly goods and services over those years. According to Peattie and Crane (2005), a new marketing trend known as "Green marketing" emerged as a result of the necessity of raising consumers' awareness of corporate efforts to meet sustainable standards, determining consumers' preferences for environmentally friendly products, and the possibility of charging a premium price. Despite this, a number of studies have shown that while environmental issues have been on the public agenda, behavioral changes have not, or not to the same extent as environmental issues (Inglehart, 1995; Oliver (2000); 1997, Tarrant and Cordell). According to Dunlap, Van Liere, Mertig, & Jones (2000) and Kaplan (2000), despite the fact that many people are aware of environmental issues and are concerned about them, this does not always translate into behavior. The majority of researchers in the green area of consumer psychology have attempted to explain the gap between consumers' reported attitudes and

their actual purchasing behavior. They used Ajzen's "Theory of Planned Behavior" a lot in this regard (Kalafatis, S. P., Pollard, M., East, R., & Tsogas, M. H., 1999).

According to the theory, attitudes, a person's perception of control, and their subjective norms influence their intentions for an action. In turn, intention may result in actual buying. In order to comprehend this discrepancy and the reasons why some people engage in eco-friendly behavior while others do not, psychologists have examined values, beliefs, motivation, and attitudes (Allen & Ferrand, 1999; 1995, Dunlap and Mertig; Garvill and Nordlund, 2002). Although, there are a lot of things that get in the way of this process, which has an effect on whether or not the attitude of being environmentally conscious will actually lead to the purchase of green products. GPA, environmental awareness (Mostafa, M. M., 2006), and perceptions of product quality and price (D'Souza et al., 2006) are just a few of the many factors that researchers found to influence this process. 2007), environmental concerns (Phau & Ong, 2007), a company's reputation (Schwepker & Cornwell, 1991), and the credibility of ecological advertising (Thgersen J, 2000).

Pakistan is currently dealing with a number of genuine natural issues that are extremely concerning for the environment and its manageable financial future. These include soil degradation, improper use of pesticides, deforestation, desertification, urban contamination, saltiness as well as waterlogging, freshwater pollution, and marine water pollution, among other things. During the summer, these issues with the environment keep the average temperature above 40°C in some parts of the country, sometimes even reaching 50°C. This situation needs to investigating the green buying habits of the generation living in the area and educating and inspiring them to purchase green products. By operationalizing and validating the relationship between environmental issues, green perceived awareness, green brands, and environmental advertisement influencing on green purchase behavior, this empirical research focuses to fill a research gap in FMCG setting of Pakistan. Hence, the current research model adds the significant input to policymakers and marketers to design from the perspective of green marketing policies and strategies in order to manage the Pakistan's FMCG market.

The sections that follow make up this paper contains the "literature review" provides a conceptual framework for the development of hypothesis, which is followed by the "methodology" as well as "analysis and results" sections with the measurement model and structural model's findings. In the next section, "discussion and implications," the study discusses the findings and their implications. The next section, "limitations and future research," discusses the potential avenues for additional research.

## 2.0 Literature Review & Hypothesis Development

### 2.1 Green Purchase Behaviour:

Green purchasing behavior is the practice of purchasing eco-friendly or sustainable goods that are "recyclable" and "beneficial" to the environment as well as avoiding goods that harm society and the environment (Chan, 2001; 2007 Mostafa). The purchaser doesn't affect by attitudinal components directly, but also it required some other psychological elements for example; concern, data, and client amleness with the extent of disposition genuinely just as in order to deal with customers' purchase point and their purchase lead for general green products (Straughan and Roberts, 1999; Chan, 2001; Mostafa, 2007; Kim and Choi, 2005; Tan, 2011; Kim, 2011; Paul et al., 2016; Kumar et al., 2017). According to Joshi and Rahman (2015), consumer behavior for green purchasing is typically evaluated in terms of their consumers' willingness or intention to purchase green products, as well as whether or not that conscious behavior or intention ultimately led to their purchase decision for such products in order to be beneficial for environmental sustainability.

TRA (Fishbein and Ajzen, 1975) was the first to propose that consumer behavior is influenced by intentions, attitude, and subjective norms in research on consumer behavior. Therefore TPB (Ajzen and Fishbein, 1980) used as the lengthy model of TRA includes apparent social control with the proportion of disposition standards. In the field of environmental behavioral research, including India (Zhao et al.,), such classical models have been widely used or modified to validate purchase intention and behavior for green products (Zhao et al., 2014; Paul et al., 2016; 2016 by Yadav and Pathak; 2017 by Prakash and Pathak; Hsu and co., 2017), the appropriateness of TRA and TPB as standard measures are as yet equivocal as their conflicting adequacy in the present situation of various nearby settings (Joshi and Rahman, 2015). Additionally, a variety of environmentally friendly products, including those sold in the Asian and Indian markets, adopted modified behavioral measures, healthy skin items (Hsu et al., 2017), vegetables and organic products (Kim and Chung, 2011; Zagata, 2012; Zhou et al., 2013), environmentally friendly packaging (Prakash and Pathak, 2017), products that use less energy (Ha and Janda, 2012), and green products in general (Chan, 2001; Chan and Lau, 2002; Chen and Chai, 2010; 2016 by Lai and Cheng; Yadav and Pathak, 2016).

Specifically, 'general green or ecological items' are those which are valuable to the climate and society ordinarily incorporates ecofriendly convey packs, reused papers, home grown items, energy saving bulbs, energy proficient apparatuses and vehicles, and family Items and so forth (Lee, 2008; Joshi and Rahman, 2015) Additionally such items embrace natural sound creation, are recyclable and having low squander age (Chan and Chai, 2010).

According to the aforementioned arguments, it is evident that consumer behavior is influenced not only by attitudes but also by other cognitive measures like issues, awareness, and ecological advertisement with the measure of attitude in order to deal with consumers' buying intention and purchase behavior for general ecological items (Straughan and Roberts, 1999; Chan, 2001; 2007 Mostafa; Kim and Choi, 2005; Tan, 2011; Kim, 2011; Paul et al., 2016; Kumar and other, 2017).

As recently referenced, purchasers' pro environmental perspectives and readiness to pay more for nature friendly items are identified with customary green purchasing conduct, however the moves to make as a general rule are questionable (Mendleson and Polonsky, 1995). In spite of the extraordinary premium in green promoting by analysts and associations, the interest for green items is really not as high enough to form (Bhatia and Jain, 2013). Specialists have recommended that there might be a huge hole between purchasers' anxiety and genuine green buying (Young, Hwang, McDonald, and Oates, 2010).

## 2.2 Environmental Issues:

According to environmental behavior study, environmental issues are continuously treated as individual concern tends to natural concerns (Hines et al., 1987). Environmental issues underscored as one of the most important cognitive measures for predicting one's eco-friendly behaviour in the literature of green marketing after some time. Generally, it holds the people towards the ecological issues and their status to take care of the matter (Van Liere and Dunlap, 1981; Roberts and Bacon, 1997; Straughan and Roberts, 1999; Kim and Choi, 2005; Prakash and Pathak, 2017).

Purchasers environmental concern apparently increases when utilization behavior turns out to be more equipped towards naturally delicate labor and products, and purchasers change their buying behavior to become greener (Kilbourne and Pickett, 2008). This is seen as' how buyers might interpret the eco-marking of green items starts to impact their buying cycle in the entirety of its stages (Laroche et al., 2001; 2013a, Norazah; 2013b; Rex and Baumann, 2007). It is realized that reusing education brings about an upsurge in the pace of recycling

among customers (Sidique et al., 2010a, 2010b); additionally, self-declaration claims on green product packaging that the product is eco-friendly, ozone-friendly, hygiene, pesticide-free, and recyclable aid consumers in selecting and promoting healthy products. Similarly, consumers' protective feelings toward the environment are also stoked by such choices (Bei and Simpson, 1995).

A significant number of studies on customers' environmental issues have been directed in Western nations (Boztepe, 2012; Haws et al., 2014; Kai et al. 2013; Maniatis, 2015; Thogersen et al., 2012; Tseng and Hung; 2013). Moreover, it is also observed by Lee (2008), there are hardly any examination chips away at ecological perspectives in Asian nations, including Malaysia; and Biswas and Roy (2015a; 2015b) call for new exploration endeavors to analyze the movement of customers' mentalities, expectations, and conduct towards green items. Moreover, in existing investigations, there is little use of the hypothesis of utilization esteems as conceptualized by Sheth et al. (1991) as the hypothetical supporting to relate the two factors of purchasers' choice to buy green items, and customers' environmental issues.

Biswas and Roy (2015a) don't find that purchaser green item appropriation is affected by social and information esteem. Moreover, this irrelevant finding additionally agrees with earlier exploration contemplates (Biswas and Roy, 2015a; Kalafatis et al., 1999; Shamdasani et al., 1993). These analysts found that social worth isn't legitimately huge as a clarification of the choice to consume green items, and that such decision was chiefly dictated by close to home elements, for example, character and disposition (Shamdasani et al., 1993), as opposed to prevalent difficulty (Kalafatis et al., 1999), and an innate commitment to ensure the climate, which they saw just like the duty of government and driving organizations (Laroche et al., 2001). This can be credited to the way that numerous clients stay unaware of worldwide environmental issues, and for the presence of green products.

Clients having product information are more inspired by the plan and style of green items, and have a solid desire to take a stab at something new to decrease their normal purchasing. In addition, high epistemic worth can likewise be an antecedent of positive customer environmental issues as appeared while picking and spending on items. Laroche et al. (2001) express that customers with product information are inclined to receive new products. Adequate data on the ecological results of a green item (for example how it follows guideline concerned after-life removal), and different qualities of the green item supposedly was significant in affecting buyers' decision to purchase green items and continue that behavior (Biswas and Roy, 2015b).

As to expanding environmental concerns, Pakistani purchasers are on a similar balance as worldwide consumers (Jain and Kaur, 2004; Chitra, 2007; Mahapatra, 2013; Khan and Kirmani, 2014). According to Khan et al. (2012), concerning in Pakistan is mounting over an ever-developing rundown of environmental issues attributable to expanding industrialization as additionally weight of developing population. The analysts have demonstrated that buyers who are worried about climate are bound to include green products purchasing (Vernekar & Wadhwa, 2011; Khan and Kirmani, 2014; 2015). An enormous number of analysts have likewise seen that customers want green products even to the point that they are eager to pay a premium for these products (Coddington, 1990; Myburgh-Louw and O'Shaughnessy, 1994; Laroche et al., 2001; Cheah and Phau, 2011; Khan and Kirmani, 2015). The specialists have likewise explored the factors which impact natural concern and along these lines, character of purchasers towards green items (Laroche et al., 2001; D'Souza et al., 2006).

**H1: There is positive and significant impact of environmental issues on green purchase behavior**

**2.3 Perceived Consumer Effectiveness:**

Perceived Consumer Effectiveness (PCE) has seen massively by a few researchers as a significant indicator of green consumption behavior (Kinnear et al., 1974; Ellen et al., 1991; Mostafa, 2006; Kim and Choi, 2005; Tan, 2011; Kim, 2011; Dagher and Itani, 2014). Seen the purchaser viability at first is outlined by Kinnear et al. (1974) consider as a proportion of a person conviction that the person can have a compelling commitment on contamination reduction. Ellen et al. (1991) characterized the buyer viability as the purchasers' view of what degree to which their activities can have any kind of effect in unraveling eco-friendly issues. While trying to understand the different elements that may impact the naturally aware purchasing behavior, past examinations have recognized a few factors that are critical indicators of possible purchasing behavior: Ecological Information (EI) (Chan and Lau 2000; Kaiser, Wölfling, and Fuhrer 1999), Environmental Concern (EC) (Ellen, Wiener, and CobbWalgren 1991; Mainieri et al. 1997; Polonsky et al. 2014), and Green Purchasers Adequacy (GPA) (Cleveland, Kalamas, and Laroche 2012; Kinnear, Taylor, and Ahmed 1974; Roberts 1996).

PCE is characterized as a consumer's explicit conviction that the actions of a purchasers can have any kind of effect in the arrangement (Ellen, Wiener, and Cobb-Walgren 1991, 103). This specific develop is like self-viability (Bandura 1986), the last referring to the faith in one's capacity to accomplish objectives through exertion. Nature is an element of prominent beliefs (Fishbein 1967; Wesley, Lee, and Kim 2012); hence, PCE is not the same as character, which is 'an assessment of an issue' (Kim and Choi 2005, 593; Tesser and Shaffer 1990), or EC (Ellen, Wiener, and Cobb-Walgren 1991). In a natural investigation, PCE (for example ecological conviction) can be characterized as an interior locus of control held by a customer that one's own activities can have any kind of effect in securing the climate (Cleveland, Kalamas, and Laroche 2012). With financial movement come different natural issues that sway society, and convictions come from individual and social qualities (for example family or network wellbeing) that are undermined by natural corruption (Hofstede and Bond 1984). Findings from early environmental literature suggest that PCE was a strong predictor of environmentally aware behavior. For instance, Kinnear, Taylor, and Ahmed (1974) reported that PCE influenced selection of detergent type and the degree of shopping for JOURNAL OF MARKETING COMMUNICATIONS eco-friendly products. In a follow-up study, Webster (1975) confirmed that PCE predicted the use of low-phosphate detergents and returnable bottles, the boycott of companies involved in labor disputes, and participation in recycling efforts. Another study also found that belief in one's effort to solve the energy crisis was negatively related to energy consumption levels (Seligman et al. 1979).

Applying the theory of reasoned action, Bang et al. (2000) examined the impact of belief on attitude and suggested that confidence in the positive outcomes of using renewable energy was positively related to attitude toward the act of paying more for renewable energy. They suggested that consumers' beliefs are 'the building blocks for stronger and more stable attitudes' (464). Vermeir and Verbeke (2006) also suggested that GPA was positively correlated to attitude toward buying sustainable dairy products and, in turn, to purchase intention.

Wesley, Lee, and Kim (2012) further tested the 'belief-attitude-behavior' model among Korean consumers, exploring the relationships among belief (i.e. PCE), personal and social attitudes (i.e. motivational attitude), and socially responsible purchase behavior, including environmentally conscious purchasing (i.e. ECCB). Findings suggested a mediating role of attitude between belief and ecologically conscious purchase behaviour. When PCE was lower, so were motivational attitudes and subsequent purchase behavior.

Studies have shown that PCE is a critical predictor of green behavior, but the data is largely based on the separate impacts of environmental variables (e.g. Ellen, Wiener, and Cobb-Walgren 1991; Kinnear, Taylor, and Ahmed 1974; Roberts 1996). The current study developed a holistic model for the influence of PCE in conjunction with other variables (e.g. EI and GB).

**H2: Perceived Consumer effectiveness has positive and significant effect on green purchase behavior.**

**2.4 Environmental Advertisement:**

Marketing scholars, as well as practitioners have paid great attention to the issue of natural environment since early 1970's (Kassarjian, 1971; Fisk, 1973). Most generally, green marketing refers to the incorporation of environmental dimensions into marketing activities (Crane, 2000). According to Polonsky's (1994) widely cited definition, green or environmental marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs with minimal detrimental impact on the natural environment.

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Marketing researchers, just as specialists have given extraordinary consideration to the issue of friendly environment since mid-1970's (Kassarjian, 1971; Fisk, 1973). Generally, green promoting refers to the reason of ecological measurements into marketing exercises (Crane, 2000). According to Polonsky's (1994) broadly referred to definition, green or ecological advertising comprises of all exercises intended to create and encourage any trades expected to fulfill human desire or needs, with the end goal that the fulfillment of these necessities and needs happens with insignificant unfavorable effect on the favorable environment.

The investigation, directed by Kangun, Carlson, and Grove (1991), demonstrated that the greater part of the green promotions inspected contained in any event one deceiving or tricky case, which was attributed to the absence of satisfactory guidelines in ecological publicizing and the serious rivalry winning in the commercial center. In a comparative vein, Carlson et al's. (1993) content examination of 100 green notices uncovered that by and large ecological cases were misdirecting instead of worthy in nature.

The examinations zeroed in on purchasers' perspectives and responses to ecological advertising claims. For instance, Newell et al. (1998) found that misleading natural cases negatively affected purchaser perspectives toward corporate validity, the commercial itself, the brand advertisement, and the aim to purchase the item referenced in the promotion. Additionally, Chan's (2000) concentrate among 800 Chinese purchasers distinguished meaningful cases as being more successful (as far as making great mentalities toward the

notice, the brand promoted, and buy goal) than affiliated cases when the source nation was seen as being earth benevolent, while the opposite was genuine when the source nation was seen as being naturally non-accommodating.

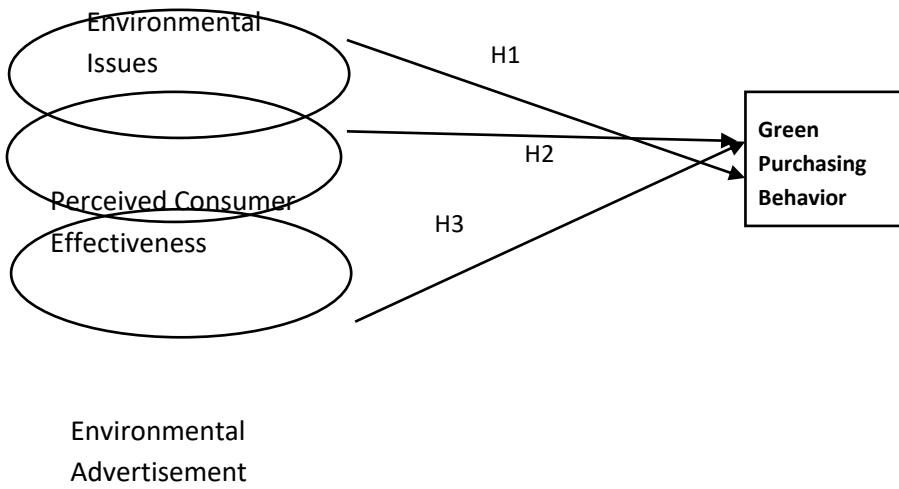
Central purposes of natural advertisement claims allude to the item's eco-accommodating traits, the company's ecologically amicable innovation, creation strategy, or removal technique, the affiliation of the firm with a natural action appreciating public help, furthermore, autonomous explanations of a real sort identified with the climate (Carlson et al., 1993).

The greater part of the data with respect to ecological advertising and the issues related with it has showed up in the showcasing and publicizing exchange press (Landler 1991; Lawrence 1990; Lawrence and Colford 1991). Until now, important academic exploration regarding the matter of natural advertisement has been to some degree restricted (Mayer, Scammon and Zick 1992; Scammon and Mayer 1991); and the wonder has only sometimes been tended logically (Kangun, Carlson and Grove 1991).

**H3: Environmental Advertisement has a positive and significant impact on green purchase behavior**

**The Proposed Research Model:**

On the basis of current study, we provide the hypothesized research model which is represented in Figure 1, where the impact of cognitive factors Environmental Issues, Perceived Consumer Effectiveness and Environmental Advertisement directly influenced on Green Purchase Behavior.



**Figure 1: Research Model of the Study**

**3.0 Research Methodology:**

To analyze the quantitative study, an all-around organized questionnaire was utilized to test the relationship of the future model. The language used for field study is Pakistani English as it is also official language of Pakistan.

**3.1 Research Technique:**

The questionnaire comprises of two sections; first area comprises of segment details of respondents or focuses population comprises old enough gathering, Income gathering, sex, education, conjugal status, and occupations. The other/second part includes questionnaire items intended to measure environmental issues, green perceived awareness, environmental advertisement and green purchasing behaviour using five-point like scale.

**3.2 Data Collection Methods:**

Data will gather from young adult and educated section of consumers using FMCG products and are (18 or above) via self-directed questionnaires. The green purchasing behaviour under scrutiny is effectively understand by young generation and literate population which prompts to react the review more fittingly instead of minors and less instructed (Chan, 2001; Paul et al., 2016; Kumar et al., 2017).

### **3.3 The Sampling Designs:**

In this study the data will gather through three significant metropolitan cities of Pakistan by using purposive convenient sampling and the subjects were established significantly via young adults and educated sectors who are consuming the FMCG products also having an awareness of climate change.

### **3.4 Data Analysis:**

Data collection would be measurably investigated by utilizing the instruments for SPSS Software. To guarantee advantageous, brisk investigation of data, representations in tables and diagrams will be worked out. Survey after the completion will be scrutinize for consistency of Data. Based on reactions which will be given by respondents the things will be planned as groups and they will likewise be given codes for convenient use of the Statistical Package for SPSS.

## **4.0 RESULTS AND ANALYSIS:**

It includes the results related to the dependent variable's statistical application, independent variables as well as their relations which are mutual. It reviews the descriptive statistics, correlation analysis, regression analysis and Diagnostic Analysis.

The first section contains model fit, validity and reliability of the items included three sections of the results and discussion segment. The second section addressed the structural model. Finally, the direct, indirect and total effects studied on Green Purchase Behaviour of a customer examined. Researchers used the structural equation model (SEM); the testing was carried on using SPSS. Also, the analysis was carried out to evaluate both the constructs' indirect and direct results. The primary technique used in various regression methods and approaches has been identified as the (SEM) structural equation model (Baron & Kenny, 1986). The systemic relationship between exogenous and endogenous interactions is used to define it.

Third Section is correlation matrix of data which stated and discussed the inter-relation of variables. Forth Section contains multiple regression analysis which describes this study research model equation. Fifth section is the discussion of diagnostic Analysis which attempted to ascertain that either all verification checks be maintained during that statistical tool's application or not. Sixth section includes robustness analysis which presents the results from robustness investigation and explains whether the findings are robust to alternative measurements of variables by using a minor change in sample size data. Seventh section is summary which discusses the overall chapter at a glance.

### **4.1 Confirmatory Factor Analysis**

Confirmatory factor analysis is widely used in social science research (Edwards, 2008). It is employed to assess how well the measurements of a construct align with the understanding the essence of a concept as presented by the author. The differences in construction are objectively demonstrated by the discriminating validity. The connection between the dependent and independent variables is the one that is generally critical to fulfill our theoretical framework. The values somewhere in the range of 0.4 and 0.59 are viewed as

moderate while  $c$  somewhere in the range of 0.6 and 0.89 are considered as strong values. The minimum loading value of the variable is more significant than for the other 0.70 objects (Hair Jr et al., 2016). Two indicators are higher than 0.50 things relevant to consumer effectiveness, making them accurate, and no values are excluded. Besides, the tables found that the three Environmental Concern indicators' value is above 0.50, indicating the measurements' reliability.

#### 4.2 Convergent Validity

Table 2 shows that every CR and AVE measurement is greater than 0.50, as suggested by (Kline & Rosenberg, 2009). Furthermore, the convergent validity of the construct is indicated by its AVE loadings exceeding the minimum value of 0.50 (Hair et al., 2010). According to the numbers in the preceding table, convergence validity is confirmed because the AVE values are greater than 0.5. The degree of interaction between at least two measurements of a comparable construct is known as internal consistency (Carmines & Zeller, 1979). Hair et al. (2010) state that the CR values are suitable in relation to the predetermined threshold of 0.70. An element's composite dependability ranges from 0.85 to 0.94. The dependability of the building calculation's internal stability is shown in the table. Convergent validity is suggested by the table, which even shows the average variance of values achieved above 0.5 (Hair et al., 2010).

#### 4.3 Discriminant Validity

The purpose of the discriminant validity assessment is to determine if a reflective measurement item has the strongest relationship with its markers within the SPSS path model (i.e., relative to all other measurement items) (Hair Jr et al., 2016). As per Fornell and Larcker (1981), the square root of the Average variance extracted can be employed to determine discriminant validity for each observed variable. In this research, the required value for discriminant validity exceeds 0.50, and values above 0.50 are presented in every indicator. A discrimination value below 0.50 signifies a strong degree of discrimination among the variables.

#### 4.4 R Square

The predictability of independent factors on the dependent variable is shown by R square. According to table 4, consumer emotion accounts for .865 percent of the explanation of independent variables. Meanwhile, the GPB defines the dependent variable intention to use as having a variance of 0.75 per cent.

#### 4.5 Hypothesis Validation

The study hypotheses are tested during this step using bootstrapping methods in SPSS-SEM. At 97.5 per cent confidence level, all route coefficients had t-values larger than 1.96 ( $p < 0.005$ ), indicating that relationships are significant.

#### 4.6 Discussion

The exploration of the results uncovered by the hypothesis examination. It clarifies the degree of relationship between one variable and another while also establishing the research aim and the status of hypotheses by contrasting them with earlier research. This research aimed to identify how the factors of Environmental Concern, Perceived Consumer Effectiveness, and Environmental Advertising influence Green Purchasing Behavior in Karachi, Pakistan. To meet these goals, the data was gathered by backing a theoretical model for statistical analysis.

#### Table 1.

Confirmatory Factor Analysis

	Environmental Issues	Perceived Consumer Effectiveness	Environmental Advertisement	Green Purchase Behavior
EI1	0.929			
EI2	0.933			
EI3				
EI4	0.925			
PCE1		0.909		
PCE2		0.922		
PCE3		0.945		
PCE4		0.912		
EA1			0.911	
EA2			0.934	
EA3			0.965	
GPB1				0.945
GPB2				0.955
GPB3				0.924
GPB4				0.935

**Table 2.**

Convergent Validity Test Results

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Environmental Issues	0.922	0.950	0.864
Perceived Consumer Effectiveness	0.902	0.941	0.854
Environmental Advertisement	0.905	0.953	0.825
Green Purchase Behavior	0.940	0.936	0.847

**Table 3.**

Discriminant Validity Test Results

	Environmental Issues	Perceived Consumer Effectiveness	Environmental Advertisement	Green Purchase Behavior
Environmental Issues	0.952			
Perceived Consumer Effectiveness	0.805	0.920		
Environmental Advertisement	0.866	0.755	0.905	
Green Purchase Behavior	0.830	0.635	0.852	0.945

**Table 4.**  
 R- Square Values

		R Square	R Square Adjusted
Environmental Issues		0.865	0.864
Perceived Consumer Effectiveness		0.744	0.740
Environmental Advertisement		0.813	0.817

**Table 5.**  
 Hypothesis Summary

	Estimate	S.E	T Statistics	P Value	Results
Environmental Issues -> Green Purchase Behavior	0.245	0.020	9.755	0.000	Supported
Perceived Consumer Effectiveness -> Green Purchase Behavior	0.536	0.073	5.247	0.000	Supported
Environmental Advertisement -> Green Purchase Behavior	0.351	0.044	4.523	0.000	Supported

The above table 5. comprises the discussion of findings revealed by the hypothesis testing. It explains to which extent one variable is related to another variable as well as defines the research objective and hypotheses status by comparing them with the previous studies. The aim of this research was to recognize how the determinants of Environment Issues, Perceived Consumer Effectiveness, and Environmental Advertisement have an effect on Green Purchasing Behavior in Karachi, Pakistan. In order to achieve these objectives, the data was collected by supporting a theoretical model to statistically examine. The Table 5 elaborates the research hypotheses and their results.

In the current study H1 stated that environment issues affect the green purchase behavior. Table 5 exhibits that a significant and positive connection between environmental issues and green purchase behavior with coefficient or T value 0.975 and the P value is 0.00. This means that every 1 unit increase in environmental issue will also raise the green purchase behavior similarly as 0.975. Thus, the findings represent the validation to accept H1.

Similarly, for H2 stated the perceived consumer effectiveness have significant relationship with green purchase behavior. Table 5. tells a significant and positive connection among perceived consumer effectiveness and green purchase behavior having the coefficient or T value 5.247 and the significance value is 0.00. Also, H3 stated that environmental advertisement has significant relationship with green purchase behavior in which the coefficient or T value 4.523 and the P Value is 0.00. This means that every 1 unit increase in environmental advertisement will also increase the green purchase behavior in the same way

as 4.523. Thus, the findings represent the confirmation to accept both H2 and H3 respectively.

**Conclusion:**

It is concluded that the studies from last few decades shows that the influence of green purchase behavior on the customer of FMCG market has been essential in research field. However, this form of research nowadays implemented in a less quantity at Pakistan. In this empirical study the analysis performed for identifying the relationship of Independent variables with Dependent variable; Primary type, non-probability data has extracted from the FMCG users of Pakistan Market.

The theoretical implication for this research is that this study provides detailed explanation of the relationship between FMCG market Independent variables Environmental Issues, Perceived Consumer Effectiveness and Environmental Advertisement with Dependent variable i.e. Green Purchase Behavior along with the statistical analysis and testing of developed hypotheses using the proposed conceptual framework which has the limited study in the previous literatures.

From a functional perspective view for regulative bodies and policymakers of FMCG industry, the findings of the study can facilitate green consumers to rise and perceive the psyche of Pakistani FMCG buyers and to attract towards green FMCG product. Consequently, the current model gives significant contributions to policymakers and advertisers to plan from the viewpoint of green promoting arrangements and procedures to adapt the native Pakistani FMCG context.

The outcomes of this research approved hypothetical framework along with point being scrutinized in this topic. In addition, few limitations were also seen, recommending a few remarks in the possible areas for future exploration with regards to green FMCG purchasing behavior. First the investigation is restricted to the specific geographical area of Pakistan (Karachi). The information was gathered from three significant universities in which purposive convenient sampling as well as their subjects were established significantly for youth and people who are educated are consider as target population.

This investigation assesses the develop of FMCG purchase behavior as communicated behavior for green FMCG items which dependent on cross-sectional approach instead of genuine buying for green items. As expressed behavior altered into real behavior is as yet a stuff of additional query. Consequently, for future researchers' longitudinal approach in the investigations along with the variations in customers buying behavior additional time to catch real buying choice for green items.

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