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Impact of Green Purchase Intention of Pakistani Millennials on Buying Environmentally Friendly Products

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Abstract

This paper explains the practice of purchasing environmentally friendly products through reasoned action theories (Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)) in a developing country. Owing to the lack of precedents in the study setting, the study first validated the empirical scales for measuring psychosocial drivers of behaviour using exploratory as well as confirmatory factor analyses. Subsequently, the study validated the aforementioned models using structural equation modelling, and also integrated the socio-demographic characteristics as precursor variables in the model with the greatest predictive power. Results of the study depicted that while the TRA and TPB explain the behaviour well, it is the construct of knowledge, consciousness and concern of the consumer that best reflected a consumer's behaviour. The study has numerous implications for vendors operating in developing countries who sell environmentally friendly products, as the validated scales and models can be used to assess the individual perceptions regarding such products and to design effective communication strategies respectively.

Keywords: *Green Purchase Behavior, Green Purchase Intention, Environmental Concern, Environmental Attitude, Structural Equational Modeling.*

Introduction

According to the Pakistan Bureau of Statistics, the population of Pakistan is currently at 207million+ people, with a fairly young population at the median age of 22.7 years. This brings into light the millennials of Pakistan, who are the movers and shakers of the future for the country (IPSOS, 2018). These are the people who have a strong power to purchase and influence the purchase decisions in a household (O'Donnel, 2006). Expectations are that by 2020, collectively the millennials will have a purchasing power of $200 billion annually (IPSOS, 2018). Multiple brands want to connect with them to increase their share of voice over the competition.

Environmental issues have been a matter of intense discussion and interest for organizations, businesses, societies and governments (Afzal, Khan, & Ahmed, 2011). Learning from experiences of the developed world, consumers who are consciously aware of the environment play a more positive role in reducing it's problems (Fattahuddin & Khan, 2018). Compared to the West, consumers in Pakistan, and a broader context of the Arab/Muslim world are just at the stage of the green awakening (Mostafa, 2007).

Globally both companies and consumers are getting more aware with the concepts of environmental hazards and climate change, that has led them to develop a keen interest in activities designed to make the environment better (Chen & Chai, 2010). The end of the 20th century marked the beginning of a green marketing revolution, as several corporations used the public environmental concerns to give their brand a

green positioning, also taking the opportunity to raise awareness on being environmentally conscious (Muralidharan, Guardia, & Xue, 2016).

Despite this, several research studies show that while awareness for environmental problems is on the rise, the concern for the environment has also become a part of the public's agenda, but behavioral change not to the same extent (Afzal, Khan, & Ahmed, 2011; Inglehart, 1995).

For many firms, environmental concern is driving a host of their business practices and operations. Organizations are now widely considering the environment as a focal point when designing their annual plans and strategies. With increasing social and political pressures, many firms are leveraging environment-friendly marketing strategies to gain a competitive advantage (Sarkar, 2013). Additionally, with a large number of consumers' demonstration a high degree of environment-friendly attitude, firms are interested to position their products to appeal to this type of an audience. Therefore, it is necessary to investigate how the organizations' green image, consumers' attitude, concern, consciousness and knowledge towards the environment impacts their purchase intentions, which leads to a positive buying behavior for environmentally friendly products. While there have been a quite a few studies (Chen & Chai, 2010; Afzal, Khan, & Ahmed, 2011; Sarkar, 2013) studying green marketing practices and their advantage to businesses competitively, there has been little local investigation pertaining with green marketing to millennials. In a study by Furlow and Knott (2009), the green marketing movement can be traced back as early as the 1990s; this was when it was considered no more than a fad, expected to die out soon. However, as the socially conscious consumers continued their preference for sustainable products, especially the younger generation, businesses have renewed efforts to produce the same for an increasing demand. Research shows that 47% of millennials would pay a premium for sustainable services, products, or brands. 77% of those willing to pay more, specify that they would do so because they 'care about the environment' (Green Solutions, 2007).

If Millennials care for products because they are environmentally friendly, this may be a significant characteristic on which to build consumer loyalty. Brands that were popular with their parents are no longer holding the same significance for millennials, in fact most of them are opting for brands that which have a positive effect on the environment (Gunelius, 2008). For the Pakistani market, such brands include a number of clothing brands, including Sapphire and Generations which have struck a very strong chord with the millennials and contributed to their strong resonance among the target audience. (Tajik, 2018).

It is still uncertain whether millennial consumers' green purchase intentions are consistent with their purchasing behavior and the factors that drive their decision-making process. This study seeks to understand the gap identified, which is whether consumers, specifically millennials, who are aware, conscious, and concerned for the environmental problems end up buying products conforming to green standards.

Literature Review

Climate Change and Consumer Behavior

Responsibility is defined as "an intention to act based on the acknowledgement of one's duties toward self or others", where researchers view the consumers' philanthropic and ethical concerns as the factor that motivates responsibility (Hosta and Zakbar, 2016). On the other hand, sustainability is defined as the awareness of the long-term environmental and social impact of one's actions (Epstein, 2008)). Hosta and Zakbar (2016), state that people who feel responsible for the environment's sustainability are the ones working for its betterment, while the rest are indifferent about it.

Within the context of purchasing environmentally friendly products, a consumers' positive environmentally responsible behavior will make them act accordingly, i.e. to purchase products that are verified by third-

party companies which hold credibility in the market, even if they have to pay extra money for that (Yahya, Hashim, & Musa, 2015). In the Asian perspective, public awareness has the highest positive significant relationship to influence environmentally friendly consumer behavior when compared to government regulations. Furthermore, such regulations only support public awareness, where age is the factor that mediates the relationship between the two factors (Yahya, Hashim, & Musa, 2015).

This leads us to the safe conclusion that in order to gauge the behavior of people, it is necessary to explore further the other factors that make them responsible without the intervention of stringent government regulations, and the extent to which people believe that their one drop of a good deed towards the environment will have a global impact collectively, as countries and nations move towards a sustainable and prosperous future for their off-springs.

Importance of Responsible Consumer Behavior in Pakistan

People living in the urban areas of the country are more inclined towards a healthy environment. This notion can also be supported by the findings from Ali, Khan, and Ahmed (2011), where they have advised corporations and governments to devise strategies that are targeted towards the more educated and wealthy populace of the country.

According to Dimock (2018) from the Pew Research Center, millennials are defined as the people born between the years 1981 – 1996, ages 22 to 37. Like the millennials of the world, Pakistani millennials are not that different either. They are the people who went through disruptive changes in the way of living and are under the pressure of making a sustainable living possible. Millennials are thought to possess positive attitudes towards environmentally friendly products and are even willing to pay more for them, where the challenge is faced by the retailers in communicating a successful green message to them (Lu, Bock, & Joseph, 2013). Even the results shared by Ali, Khan, & Ahmed (2011) suggest the same; millennials in Pakistan are highly inclined towards a sustainable and green future, with the condition that they are enabled to do so and they might not have to spend extra money for that, while the quality of the environmentally friendly products is not compromised.

Theorizing

The underpinning theories for this research were the Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB). The TPB is an extension of the TRA, coined by Ajzen (1991). The theory has been widely used as the most suitable predictor of people's behavioral intention which leads to a behavioral action being taken. The TRA comprises of three main variables - the attitudes towards the behavior, the subjective norms around that behavior and the perceived behavioral control.

In light of environmentally friendly behaviors, the theory has been tested along with many other predictors like price, perceived quality, and so on (Chin, 2018). It is evident from the literature that if people have a positive attitude towards the behavior, then their intentions are also strong, leading to a higher probability of moving ahead with the action. But the gap in the literature is present regarding the role that knowledge about the environment plays in building up consumers' concerns and consciousness, making their intentions strong and consequently resulting in a positive act towards purchasing environmentally friendly products.

Environmental Attitude

According to Bagozzi (2010), attitude is defined as a 'tendency to respond to evaluative to persons, physical objects, ideas or actions in favorable or unfavorable ways.' Environmental attitude is defined as "a person's perception of self and the extent to which a person identifies oneself to be an essential part of the environmental setting" (Chen & Chai, 2010). The level of awareness, beliefs, attitudes, values and

consumer practices are the critical factors that make the environmental quality. According to Ishaswini and Saroj (2011), it is evident that to predict the environmental attitude, one should consider the concern people show towards the hazards of the environment and how their consciousness makes them want to behave in a certain way.

Environmental Concern & Consciousness

According to Fransson and Garling (1999), Environmental Concern (EC) has been treated as an evaluation of the facts; how a person behaves in a certain way, the behavior of people around them and their attitude towards the consequences the environment is facing.

Seemingly, EC then might be referred to as both; a specific attitude directly determining intentions or a more general attitude or value orientation. These value orientations were identified by Stern (1992) and consisted of (1) Environmental concern, which represents a new way of thinking, known as the New Environmental Paradigm (NEP).

The next variable (2) EC is tied to anthropocentric altruism, which means that people only care about the environmental quality because they believe that environmental degradation poses a threat to their health. (3) Concern also expresses self-interest, for example, (Baldassare & Katz, 1992) found out that the most important underlying factor that induces an environmentally friendly behavior is the perceived personal threat caused by the deterioration of the environment. And finally, concern could also be the function of a much deeper cause, like religious beliefs or post-materialistic values.

On the other hand, as an element of individual belief system, environmental consciousness is perceived as a multidimensional concept, including cognitive, attitudinal, and behavioral components. (Sharma and Bansal, 2013). This means it should have an impact on the consumer's purchase behavior.

Environmental Knowledge

The cognitive dimension of the environmentally consciousness variable leads us to the last variable for this study, which is the possession of the objective and subjective knowledge about the environment, EK, by the consumer regarding the consequences of their actions on the environment. Subjective knowledge refers to the general knowledge of facts, concepts and relationships concerning the natural environment, measuring the level of information possessed by an individual about environmental problems, and acting as a key factor in activating the personal norms that guide the behaviors and the processes to internalize environmentally friendly values and beliefs.

Conversely, abstract or concrete knowledge refers to the knowledge concerning environmental problems, solutions, causes and so forth, whereas objective or concrete knowledge relates to that behavioral knowledge which is utilized and acted upon. Between the two, objective knowledge is a more significant predictor for environmental action that will be further elaborated in our research through the instrument used by Sharma and Bansal (2013).

Conceptual Framework

Based on the literature, we propose a model where the variables of EA, EK and EC are positively and directly impacting the variable of green purchase intention. That, in turn, will finally direct us towards a credible probability of consumers actually buying environmentally friendly products. Through this, we aim to find which variables and what constructs of those variables, in fact, lead to the above said credible probability.

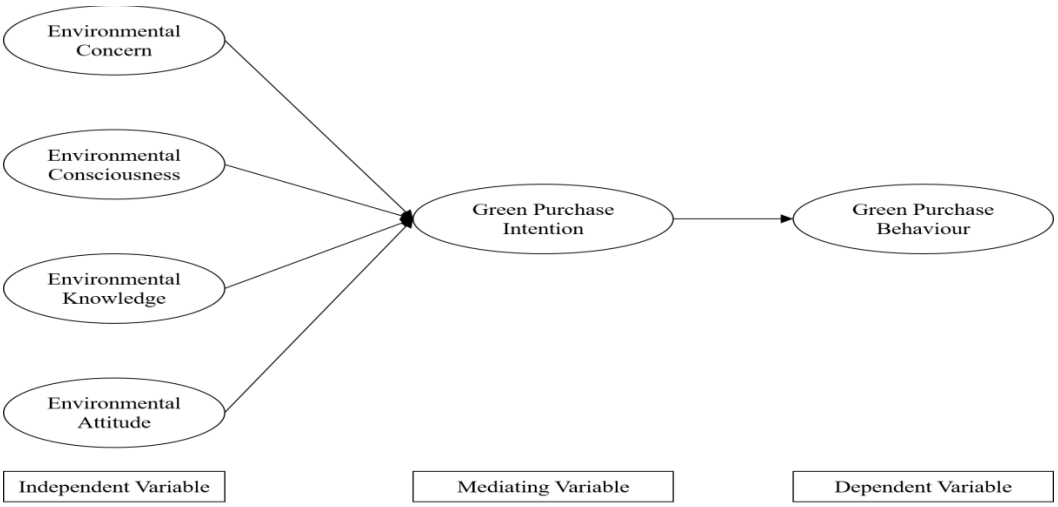

Fig. 1: Conceptual Framework

Variables and Hypotheses

H_1: Organization's green image has a positive impact on the green purchase intention of Pakistani millennials to purchase environmentally friendly products

H_2: EC has a positive impact on the green purchase intention of Pakistani millennials to purchase environmentally friendly products

H_3: EK has a positive impact on the green purchase intention of Pakistani millennials to purchase environmentally friendly products

H_4: EA has a positive impact on the green purchase intention of Pakistani millennials to purchase environmentally friendly products

H_5: Environmental Consciousness has a positive impact on the green purchase intention of Pakistani millennials to purchase environmentally friendly products

H_6: The green purchase intention has a positive impact on Pakistani millennials to purchase environmentally friendly products

Methodology

Research Design

This is a quantitative research, where respondents falling in the millennial age range (22 – 37 years) in Karachi were asked to fill out close-ended questionnaires. Responses were measured on the five-point Likert scale. Structural Equation Modelling was used to test the hypotheses and explore the factors affecting green purchase intention and its impact on the purchase of environmentally friendly products. For secondary data, books, magazines, journals, and internet sources were utilized.

Sample and Sampling Method

Convenience sampling was used to gather the data since the population had an audience of more than 100,000 (Parker and Rea, 1997); the sample should have 383 respondents to maintain the 95% level of confidence under the 5% confidence interval (Rea & Parker, 2012). The final number of variables in the data set was 29 and the final sample achieved was 270. According to Grimm and Yarnold (1995), a subject to variable ratio of greater than 5 establishes the sample size adequacy. With 29 latent variables and 270 subjects, we obtain a subject to variable ratio of 9.31.

Results and Findings

Reliability

Looking at the Cronbach's Alpha value for each variable (Table 1), it can safely be said that they are all in the acceptable range and valid. All the values are above .5, indicating that the overall instrument is valid and can be further run for statistics. Initially, the data was refined using screening and cleaning data methodologies. It allowed us to identify a few questions that had an adverse impact on the validity of the questionnaire, which were then removed or tweaked after the pilot test run to check the validity of the instrument that we created.

Table 1: *Reliability and Validity of Constructs*

S.#	Variable	No. Of Items	Cronbach Value
1	Environmental Attitude	5	.859
2	Environmental Consciousness	5	.790
3	Environmental Concern	4	.666
4	Environmental Knowledge	6	.776
5	Green Purchase Intention	3	.824
6	Green Purchase Behavior	4	.861

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) using Diagonally Weighted Least Squares (DWLS) estimation fitted to polychoric correlations and asymptotic covariance was used to run the measurement model of 29 items on AMOS. With 29 items and 270 cases, STV of 10.5 was obtained which is adequate for conducting CFA. Goodness of fit statistics (Satorra-Bentler Chi-square, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Standardized Root Mean Square Residual (SRMR)) were obtained for the models. The Goodness of fit for the model (Table 2) was assessed based on the following cut-off values for goodness of fit statistics: Chi-square significance, RMSEA≤.05, CFI≥.95, SRMR≤.08 (Noar, 2003). The five-factor measurement model with the 29 items yielded an adequate fit [SB X^2 (N=270)=1134.66 (p <.001), CFI=.95, SRMR=.16, RMSEA=.089, RMSEA 95% Confidence Interval (.03; .06)]. Despite the model fitting well, there were some items that performed poorly. The reliability of CONS and CONC was observed to identify the items which could be dropped. The reliability of the indicator is calculated by squaring the standardized factor loading. This assesses the reliability of each individual item. If the reliability of any indicator was below .5, it was considered inadequate, and dropped from its respective scale. This reduced the total number of items from 38 to 29 and the final scales for attitude, consciousness, concern, knowledge, intention, and behavior had five, six, five, six, three and four items respectively. The final measurement model with 29 items yielded an adequate fit as well [SB X^2 (N=200)=1134.66 (p<.001), CFI=.95, SRMR=.16, RMSEA=.089, RMSEA 95% Confidence Interval (.04; .07)].

Table 2: Goodness of Fit Statistics

Models	n	SB Chi-Sq. (C3)	p-value	Df	AIC	RMSEA	*Upper bound*	*Lower Bound*	CFI	SRMR	ATT R-Square	INTENT R-Square	GPB R-Square
Measurement Model	270	948.02	.000	362	1094.02	.080	.080	.070	*.950*	*.080*			
Model 1	270	1003.47	.000	366	1141.47	.080	.090	.070	.950	.090		65%	33%
Model 2	270	1060.61	.000	369	1192.61	.080	.090	.080	.940	.100	76%	65%	31%

Three models were run. The first was the measurement model (Fig. 2). The second model was derived based on the theoretical model in the literature review, after which it was identified that the two latent variables i.e. consciousness and concern path towards intention was insignificant. The path to intention was

mediated through attitude which was correlated to and positively regressed by concern, consciousness, and knowledge. The first model (Fig. 3) tested was based on the proposed conceptual framework where the variables EA, ECONS, ECONC and EK had a path towards intention; this mediated the impact of the independent variables on the dependent variable, GPB. Although the model yielded a good fit [SB X^2 (N=270) = 1003.47 (p <.001), CFI=.95, SRMR=.09, RMSEA=.08, RMSEA 95% Confidence Interval (.04; .06)]. According to the correlations and regressions for this model, the ECONS and ECONC variable were not significantly correlated to the INTENT variable. This is additionally evident from the R^2 value of 1.17 and 1.49 respectively. Hence, our hypothesis that Green purchase intention has a high impact on the purchase behavior of the sample for environmentally friendly products is insignificant. That was going against the literature and the underlying theory that is TRA and TPB. This led us to our final attempt at understanding and carrying out a more pertinent test for the proposed conceptual framework that was backed by the true essence of the literature. As mentioned in the literature review, EK is the variable that makes up the ECONS and ECONC variables; this further impacts the EA which goes on to mediate the impact INTENT on the PB of environmentally friendly products.

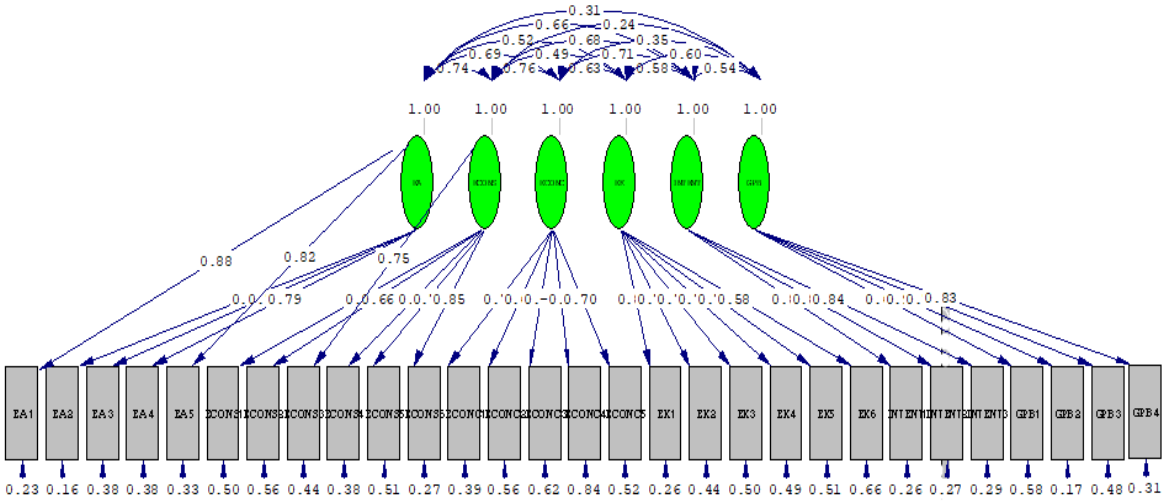

Fig. 2: Measurement Model

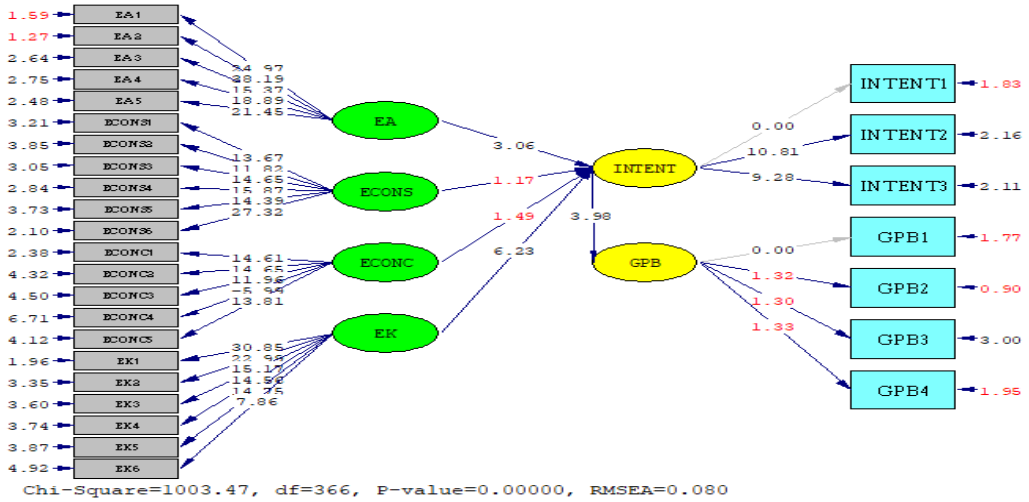

Fig. 3: Model Based on Conceptual Framework

The second model tested was based on the findings from the first model, which signified that ECONS and ECONC do not have a significant impact on INTENT. This resulted in the low significance of INTENT over GPB, which is also not evident in the review of past literature. To understand further, we took reference from the TPB that attitude is the variable that mediates the role of intention towards behavior and is impacted by the person's perceived norms and social behavior. The model yielded the best fit [SB X^2 (N=270) = 1060.61 (p<.001), CFI=.94, SRMR=.10, RMSEA=.08, RMSEA 95% Confidence Interval (.04; .06)].

The significance of the values attained from the data below in the path diagram illustrates that ECONS and ECONC, along with EK, have a significant relationship with EA, denoted by the following R^2 values for ECONS=5.19, ECONC=2.84 and EK=5.32. These show a positive relationship with EA. It is followed by a positive relationship, shown by the R^2 value of 5.80, which denotes a highly positive mediating role of EA on the mediating variable, i.e. INTENT, thereby accepting our hypothesis H_4. This is followed by a positive impact on the purchase behavior of the subject, which is denoted by the R^2 value of 3.28 which proves our hypothesis H_6.

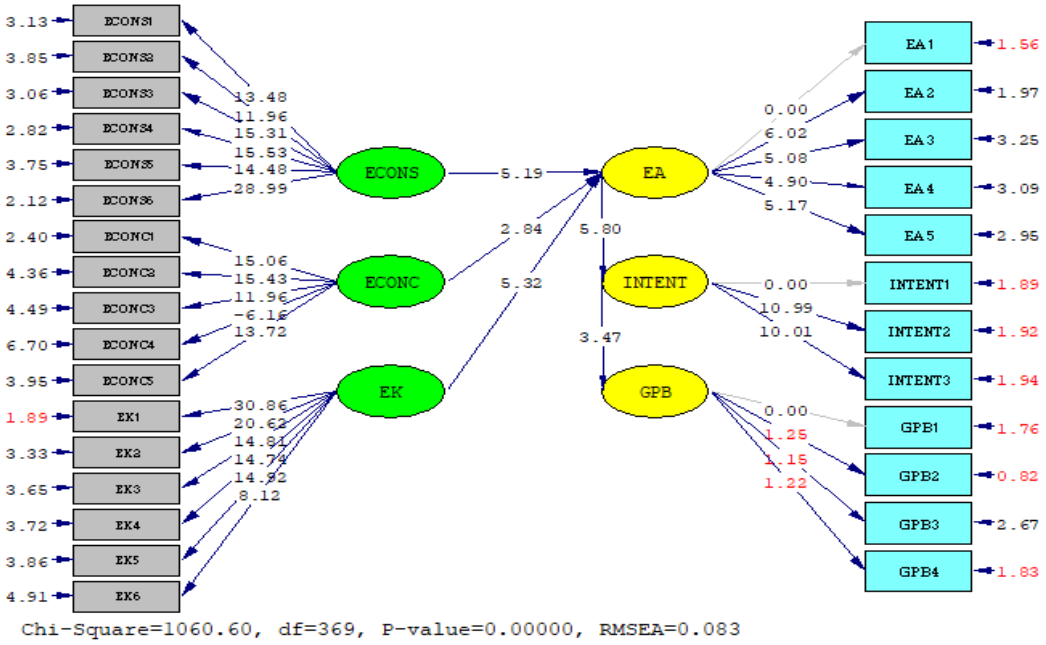

Fig. 4: Based on Analysis from Figure 3

Findings and Discussion

Based on the tests which were run on the data collected, all models were a good fit for the proposed conceptual framework. The regressed value for EA was 76%, which denotes that it had a 76% impact on the subject's intention to purchase environmentally friendly products, while a 65% regression of the Intention variable denotes that it had a 65% impact on the subject's purchase behavior for environmentally friendly products. Finally, looking on to the regression value of 31% from the second model run, it is evident that due to the impact of EA on Intent, and subsequently its impact on GPB, people tended to buy environmentally friendly products where 31% of the times intention was converted into the actual sale of the environmentally friendly products.

The research can be used in real-time by brands as it discusses the factors that make up the intention and the purchase behavior of the millennials in Pakistan. These factors can be used for directing the marketing campaigns and designing the communications specifically for ethically conscious products. Apart from this, agencies can use this research to create the communication design of their brands in such a way that they can induce in the millennials the habit of taking steps towards a sustainable future. Moreover, as far as the government institutions of Pakistan are concerned, after the arrival of the new government, factors pertaining to environment and sustainability have gathered enormous attention. Hence, this research can enable government institutions to know the key drivers pertaining to the purchase of environmentally friendly products in an important demographic. Apart from the advertising world, educational institutes and NGOs can also benefit from the findings of the research as they are the incubators for fresh ideas aimed at making the environment a more sustainable place to live.

Limitations and Recommendations for Future Research

Since the study only looked at the constructs purported by the TRA and TPB, it did not account for the numerous other factors that could affect the green purchase behavior, such as consumer trust. Many contemporary studies have developed integrated models that account consumer trust and other factors within the reasoned action frameworks. Hence future researches in similar settings can use the validated scales and frameworks and integrate other variables within them to increase the explanation of the behavior. One of the major limitations of the study was that the behavior was the self-reported usage of environmentally friendly products in the last six months. Since behavior was retrospective and monolithic, it restricted the predictive power of the models. However, the expectancy scores (evaluation of the outcome, motivation to comply, and perceived power) were not included in the analysis for two reasons. Firstly, there was little variation in the expectancy scores across the sample, hence they were excluded (Ajzen, 2002). Secondly, the SEM program in AMOS currently does not provide an estimation methodology that can be used with both continuous and ordinal measures. Since the majority of the data was ordinal, we preserved the ordinal nature of the specific beliefs by not multiplying their scores and transforming them into continuous measures. This allowed us to use the robust DWLS estimation. Furthermore, the study was unable to elicit some key specific measures in the frameworks (self-efficacy, perceived control, experiential attitude, and descriptive norms). Items had been formed to capture these constructs (except for experiential attitude), however, they did not emerge as good items during the factor analysis. Future studies can use our validated scales, and refine them to capture these constructs as well.

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Annexure – Questionnaire

Impact of Green Purchase Intention of Pakistani Millennials on Purchase of Environmentally Friendly Products

Psychographic Variables

Q.1 Develop age ranges here. (18 – 24, 24 – 30, 30 – 36)
Q.2 what is your current occupation?

1. Student
2. Employed (including Self-employed)

3. Both
4. Neither

Q.3 if you are a student, what level of education are you currently at?

1. School
2. College
3. Undergraduate (bachelor)
4. Graduate (master's)
5. Post-graduate (doctoral)

Q.4 if you are employed, what is the nature of your employment?

1. Self-employed
2. Employed at a corporation
3. Employed at an educational institution
4. Employed at an NGO/hospital

Q.6 what is the range in which your household income lies?

1. 10,000 – 50,000
2. 50,001 - 100,000
3. 100,001 – 200,000
4. 200,001 – 500,000
5. 500,000+

Q.7 what is your type of household setup?

1. Joint
2. Nuclear

Q.8 what is your marital status?

1. Single
2. In a relationship
3. Engaged
4. Married
5. Widowed
6. Divorced

Independent Variables

Environmental Attitude (Gender differences in Egyptian consumers' green purchase behaviour: the effects of environmental knowledge, concern and attitude Mohamed M. Mostafa)

1. I (1=dislike; 5=like) the idea of purchasing green products.
2. Purchasing green products is a (1=bad; 5=good) idea.
3. I think purchasing green products is a/an (1=unwise, 5=wise) idea.
4. Purchasing green products is a (1=unsustainable, 5=sustainable) idea for the future.
5. I have a/an (1=unfavourable; 5=favourable) attitude towards purchasing a green version of a product.

Environmental Consciousness (Green Marketing and the Concern over the Environment: Measuring Environmental Consciousness of Jordanian Consumers) (Sami Alsmadi, 2008)

1. I always advise others to keep the environment clean.
2. I respect all efforts to maintain and preserve the environment.
3. I understand that the environment is for us and future generations, thus must be well maintained and preserved.
4. We all should care about the health of the coral reefs or the deforestation of the rainforest even though they are not within our geographical region.
5. I am aware of the impact of population explosion on the environment.
6. I realize that natural resources are scarce, thus must be used wisely.

Environmental Concern

(Gender differences in Egyptian consumers' green purchase behaviour: the effects of environmental knowledge, concern and attitude Mohamed M. Mostafa)

1. I believe that there should be stronger laws to control transportation and dumping hazardous waste
2. We are approaching the limit of the number of people the earth can support.
3. When humans interfere with nature it often produces disastrous consequences.
4. The balance of nature is strong enough to cope with the impacts of modern industrial nations.
5. Humans are severely abusing the environment.

Environmental Knowledge:

Green Advertising and Environmentally Responsible Consumer Behaviors: Linkages Examined DL Haytko, E Matulich 2008

1. I am very knowledgeable about environmental issues
2. I always have up-to-date knowledge about environmentally friendly products
3. I understand the symbols used on packages of environmentally friendly products
4. Non-renewable resources should not be used faster than the rate at which we find substitutes that are renewable
5. We can slow the rate of climate change
6. most of the energy that people use worldwide come from Fossil fuels

Mediating Variable

Green Purchase Intention

(Antecedents of Egyptian Consumers' Green Purchase Intentions Mohamed M. Mostafa)

1. I intend to purchase environmentally-friendly products.
2. I want to purchase environmentally-friendly products.
3. I expect to purchase environmentally-friendly products.

Dependent Variable

Green Purchase Behavior

(The Green Purchase Behavior of Hong Kong Young Consumers: The Role of Peer Influence, Local Environmental Involvement, and Concrete Environmental Knowledge)(LEE 2010)

1. When shopping, I deliberately check products for environmentally harmful ingredients.
2. When shopping, I deliberately choose products with environmentally friendly packaging.
3. I'll choose to buy environmentally friendly products even if they are more expensive than other products.
4. When shopping, when I consider buying a product, I will look for a certified environmentally safe or organic stamp.