



# Analyzing the Consumer`s Buying Behavior towards Green Products

Kanwal Bai, Muhammad Saad Memon, Sonia Irshad Mari

Department of Industrial Engineering and Management, Mehran University of Engineering and Technology,  
Jamshoro, Pakistan

Received: 22 February, Revised: 28 February, Accepted: 01 March

**Abstract**—Environment is basic and most important thing we have in our life if it is being ruined then it is our responsibility to prevent it. Since the leftover (wrappers, bottles and plastic packaging etc.) of non-green products cannot be disposed after the products are consumed; in that case they are buried, burnt and thrown into the sea; in all the cases, they pollute the environment, harm earth or poison our water. These three things (water, earth and air) are necessary for healthy life on earth. In order to prevent this the consumers are needed to buy the products which can be easily disposed with any harm. In this regard, this study has been conducted to analyze the buying behavior of consumers towards the green products. Data was collected by the help of questionnaire adopted from the literature. Data was collected online (by sending the link of Google form in email), at superstores, marts, supermarkets and shopping malls of Hyderabad Pakistan. The number of valid responses collected from the respondents was 200. Data analysis was conducted in the statistical package for social sciences (SPSS) version 22. Internal consistency of data was check by using the cronbach`s alpha test. Frequency distribution of demographic characteristics of the respondents was taken out along with descriptive statistics (mean, standard deviation, skewness and kurtosis). Skewness and kurtosis were calculated to indicate the normality and when it was revealed that the data was normal, the developed hypothesis were tested by Analysis of variance (ANOVA) test. Furthermore, the Pearson correlation of demographic characteristics (age, income and qualification) was calculated with Consumer`s interest, will and buying behavior towards the green products. On the same time Pearson correlation between the various constructs was also calculated. In last regression analysis was conducted on the various constructs. It was concluded that demographics were not in any association with the consumer`s interest, will and buying behavior but consumers` will, interest and buying behavior towards green products were weakly correlated with one another..

**Keywords**— Green products, consumer, purchasing.

## I. INTRODUCTION AND LITERATURE

The increase in the population of earth after 1950s has threatened its health in terms of climate change, ozone depletion, depletion of forest cover, pollution in the atmosphere

extensive loss of biodiversity [1]. With the increase in the consumption of consumer goods, there has been quick growth in the economy. On the huge demand of consumers non-green products are supplied which ruin the environment [2]. 44.7 million metric tons (4500 Eiffel towers) of e-waste was produced around the world. From that much e-waste, 0.7 million Mt were produced form oceans; 2.2 million Mt were produced from African countries; total of 11.2 and 12.3 million metric tons were produced from American and European countries respectively. Moreover, in 2017, Asian countries hold first position among all the continents [3]. While shopping, the consumer don`t think very much about the environment [4]. As per the researchers, politics and government are on the center to understand, analyze and shape the sustainability transformations [5]. It has become necessary to protect the environment by the help of green innovation [3]. The behavior of consumers towards the environment can be determined through the awareness about the environmental problems [2]. The more the individuals have knowledge about the environmental issues, their behavior can be favorable towards environment. Problems of environment and its deterioration have been the point of debate for researchers and practitioners and the solution they suggest is green products [3]. Businessman and consumer together confront the biggest challenge of protecting the resources and the environment of this planet [6]. On the same time the concept of eco innovation refers to the products` and processes` development through environmentally sustainable practices at the every point of production [7]. Similarly, it is the responsibility of the consumers to buy those products which are environment friendly or easily disposable. Some consumers are willing to pay more for the green products and on the same time some of the consumers don`t take this point of sustainability into consideration while purchasing. Purchasing decision is may be dependent on the background and experience of the consumers [7]. The greater number of companies has designed such process and products to save the environment because of understanding the impact of green consumption on the consumption behavior and the environment [8]. The companies have become conscious about the natural environment because they have realized that their production and consumption have direct impact on the natural environment [6]. With the increase in the environmental knowledge, consumers are willing to pay more for their safety, personal care the products having the

characteristics of environmental benefits [9]. Those consumers who considers the environmental deterioration because of their consumption pattern and tend to change their buying behavior are known as the green consumers [10]. Transformation towards sustainability has been at the central position in the research regarding global sustainability and the policy making in these years [5].

Green marketing is the phenomenon by which the products and services (having the features i.e. quality, comfort) are produced which are available at the reasonable price and don't harm the natural environment [8]. It has become an important strategy of the business after the increased environmental awareness. The concept of global warming and climate change has boosted this concept among the public and the purchasing of green products as well [11]. Green purchase behavior is termed as the consumption of (environment friendly, recyclable and conservable) products [12]. Purchasing intention is defined as the willingness of consumer towards buying a product or service. The purchasing intention can be transformed into the green purchasing behavior buy consuming the green products on order to save the environment [9]. Green purchasing behavior is the kind of pro-environmental behavior. The nature if this behavior differs from the general buying behavior. The discussion of environmental issues and the green purchasing behavior has been the point of discussion [4]. The present research has been conducted with the objective of analyzing the consumer's interest, will and buying behavior towards the green products.

A	Envi	Con	Con	Con	Cus	Co	P	Q	Pac	Du
ut	ronm	sum	sum	sum	tom	nsu	ri	ua	kag	rab
ho	ental	er's	er's	er's	er	me	c	lit	ing	ilit
r	awar	Inte	will	Gre	Sati	r	e	y		y
	eness	rest	to	Pur	tion	Ch				
		to	buy	cha		oi				
		buy	Gre	ing		e				
		green	en	Beh						
		product	Pro	avio						
		s	duct	r						
[2	X		X	X	X					
]										
[3		X				X	X	X		
]										
[1				X			X	X	X	X
2]										
[6	X			X			X	X		
]										
[1	X			X						
]										
[5	X		X	X						
]										
[1	X			X						
0]										
[1	X			X						
3]										
[8	X			X			X	X	X	
]										
[1				X				X		
1]										
[9				X				X		
]										

[7								X		
]										
[4	X							X		X
]										

## II. RESEARCH GAP

In order highlight the research gap, literature was reviewed, in relevance with the topic of present research. Tremendous literature is available on the consumer's buying behavior but a little is about the consumer's interest and will towards the green products. In the gravity of consideration to the results of above table, consumer's interest, will have been investigated in very much research papers; thus these both factors are required to be investigated. Therefore, the present study, focus on the consumer's interest to buy green products, consumer's will to buy green products and consumer's buying behavior towards green products.

## III. RESEARCH METHODOLOGY

### A. Data Collection

This cross-sectional and quantitative study was conducted in Hyderabad. Questionnaire was used as the research instrument. Data was collected from respondents at supermarkets, super stores and general stores: some of the samples were collected via email (by sending the link of Google form in email). 250 samples were distributed among the respondents; 230 were collected back and 30 questionnaires were incompletely filled thus excluded from the research.

### B. Questionnaire and Measurement Scale

Questionnaire is consisted on four sections i.e. demographic characteristics, consumer's interest towards the green products, consumer's will to buy the green products and consumer's buying behavior towards the green products. The first section is consisted on five characteristics i.e. gender, age, qualification, income and marital status. Second section is consisted on four items adopted from [14] and modified by the researcher. Third section is consisted of 5 items adopted form [15] and modified by the researcher. Fourth section was consisted on seven item which have been adopted from [16] and modified by the researcher. 7-point likert scale "Strongly Disagree = 1" to "Strongly Agree = 7" was used for the measurement of variables. Likert scales are designed to contain the options in fixed format for the measurement of attitudes and opinions [17].

### C. Data Analysis

Data was analyzed in the statistical package for social sciences (SPSS) version 22. Reliability analysis was conducted by using cronbach's alpha test (see table 1) from which the values of alpha was calculated to be 0.679 which indicated that the data was reliable. Alpha is calculated in order to reveal the internal consistency of data and the acceptable values are suggested ranging from 0.70 to 0.95 [18]. Descriptive Statistics (mean, standard deviation, skewness and kurtosis) of the variables was calculated. Normality (Skewness and kurtosis) of variables were only calculated to meet the assumptions of Analysis of variance (ANOVA) [19][20], Pearson correlation and multi-liner regression [21][22]; since, skewness and kurtosis are used to indicate the data as normal as suggested [23].

TABLE I. TABLE I. RELIABILITY ANALYSIS OF THE DATA

<i>N of Items</i>	<i>Cronbach's Alpha</i>	<i>Remarks</i>
21	.70	Reliable

**D. Developed Hypothesis**

Fifteen hypothesis were developed in order to demonstrate the difference in the consumer's interest, will and buying behavior towards the green products: the statements of null hypothesis are given as under.

1. There is no significant difference in the consumers' level of interest for green products across both genders.
2. There is no significant difference in the consumer's will to buy green products across both genders.
3. There is no significant difference in the consumer's buying behavior towards green products across both genders.
4. There is no significant difference in the consumers' level of interest for green products across all the age groups.
5. There is no significant difference in the consumer's will to buy green products across all the age groups.
6. There is no significant difference in the consumer's buying behavior towards green products across all the age groups.
7. There is no significant difference in the consumers' level of interest for green products across the different qualifications groups.
8. There is no significant difference in the consumer's will to buy green products across the different qualifications groups.
9. There is no significant difference in the consumer's buying behavior towards green products across the different qualifications groups.
10. There is no significant difference in the consumers' level of interest for green products across the different income groups.
11. There is no significant difference in the consumer's will to buy green products across the different income groups.
12. There is no significant difference in the consumer's buying behavior towards green products across the different income groups.
13. There is no significant difference in the consumers' level of interest for green products across the marital status.
14. There is no significant difference in the consumer's will to buy green products across the marital status.
15. There is no significant difference in the consumer's buying behavior towards green products across the marital status.

**IV. RESULTS**

The result is divided into four section: in first section, frequency distribution of respondents was conducted; in second section, descriptive statistics (mean, standard deviation, skewness and kurtosis) was conducted; in third section,

correlation analysis was conducted and last section is contained of the regression analysis.

**A. Frequency Distribution of Demographic Characteristics**

The table of frequency distribution shows the different categories and the number of observations for each category [24]. The present research included only five demographic characteristics i.e. gender, age, monthly income, marital status and qualification. Among the total 200 respondents 100 were males and 100 were females. Age distribution of the respondents (table 2) shows that 100 (50%) patients belonged to the 18-26 years age group; the age group of 26-35 years was consisted of 61 (30.5%) respondents: 27 (13.5%) respondents belonged to the age group of 35-40 years: the last age group i.e. 40 years to onwards was consisted of 12 (6%) respondents.

TABLE II. FREQUENCY DISTRIBUTION OF DEMOGRAPHIC CHARACTERISTICS

<i>Characteristic</i>		<i>Frequency</i>	<i>Percent</i>
Gender	Male	100	50.0%
	Female	100	50.0%
Age	18-25	100	50.0%
	26-35	61	30.5%
	35-40	27	13.5%
	40 to onward	12	6.0%
Qualification	Intermediate	61	30.5%
	Bachelors	48	24.0%
	Masters	29	14.5%
	PhD	62	31.0%
Marital Status	Single	115	57.5%
	Married	71	35.5%
	Divorced	14	7.0%
Income	20000-50000	89	44.5%
	50000-80000	33	16.5%
	80000-110000	17	8.5%
	110000-above	61	30.5%

Qualification distribution of the respondents showed that 61 (30.50%) respondents were intermediate; 48 (24%) were graduates; 29 (14.5%) had the master degree and remaining 62 (31%) respondents had the PhD degree. From the distribution of marital status it was shown that 115 (57.5%) respondents were single; 71 (35.5%) respondents were married and remaining 14 (7%) respondents were divorced. Income distribution of the respondents indicated that 89 (44.5%) respondents had the income of 20000-50000; 33 (16.5%) respondents had the income of 50000-80000; 17 (8.5%) respondents had the income of 80000-110000 and remaining 61 (30.5%) respondents had the income greater than 110000.

**B. Descriptive Statistics**

The central tendencies i.e. mean and standard deviation, skewness and kurtosis were calculated in descriptive statistics. Skewness and kurtosis were calculated in order to check the assumption of normality.

TABLE III. DESCRIPTIVE STATISTICS OF THE VARIABLES

<i>Variables</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Skewness</i>	<i>Kurtosis</i>
I cares about choosing green product	3.51	.880	-1.000	1.410

I Perceive variation in type of product.	2.98	1.309	-.266	-1.302
I understand the importance of right choice between green and non-green products.	3.51	1.288	-.536	-.873
I am willing to go out of my way to obtain green products.	3.78	1.208	-.848	-.291
I intend to go out for purchasing green products.	3.81	1.123	-.910	.120
My personal goal is to consume as much green products as possible.	3.84	1.172	-.922	.027
I will make every effort to purchase green products	3.85	1.257	-.763	-.643
I have seriously thought of buying more green products	3.75	1.147	-.817	-.190
I have a firm intention to buy green products in the future	3.73	1.207	-.738	-.558
I often buy green products.	3.4800	1.27188	-.547	-.809
I often buy products that are labeled as environmentally safe	3.6850	1.27826	-.820	-.415
I often buy products that are against animal-testing.	3.8050	1.12842	-.965	.141
I often buy products that are harmless.	3.7800	1.16118	-.768	-.268
When I consider buying a product, I will look for a certified environmentally-safe or organic stamp.	3.7600	1.13527	-.890	.111
I often buy products that support fair community trades	3.6700	1.32661	-.718	-.629
I often buy products that use recycled/ recyclable packaging	3.7650	1.15605	-.929	.174

Since, the normal values of skewness and kurtosis lie between +1 [23]; and a look at table 3 indicate that all the values of skewness and kurtosis lie in the normal range which mean the data is normally distributed.

### C. Hypothesis Testing

After the data was indicated to be normally distributed the hypothesis can be tested by ANOVA. The confidence interval for ANOVA was set to be 95%. If the result of ANOVA test ( $p < \alpha$ ), where  $\alpha$  is called the significance level (0.05), then the null hypothesis will be rejected with probability  $> (1-\alpha)$ .100% probability [20].

TABLE IV. HYPOTHESIS TEST RESULTS BY ANOVA

Type	Hypothesis Statement	Sig.(two-tailed)	Remarks
H <sub>0</sub>	There is no significant difference in the consumers` level of interest for green products across both genders.	0.136	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s will to buy green products across both genders.	0.794	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s buying behavior towards green products across both genders.	0.806	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumers` level of interest for green products across all the age groups.	0.974	Failed to reject

Type	Hypothesis Statement	Sig.(two-tailed)	Remarks
H <sub>0</sub>	There is no significant difference in the consumer`s will to buy green products across all the age groups.	0.947	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s buying behavior towards green products across all the age groups.	0.568	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumers` level of interest for green products across the different qualifications groups.	0.373	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s will to buy green products across the different qualifications groups.	0.411	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s buying behavior towards green products across the different qualifications groups.	0.837	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumers` level of interest for green products across the different income groups.	0.769	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s will to buy green products across the different income groups.	0.287	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s buying behavior towards green products across the different income groups.	0.855	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumers` level of interest for green products across the marital status.	0.346	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s will to buy green products across the marital status.	0.968	Failed to reject
H <sub>0</sub>	There is no significant difference in the consumer`s buying behavior towards green products across the marital status.	0.270	Failed to reject

A look at the table 4 indicate that all the hypothesis were accepted/failed to reject because the p-value of ANOVA for all the enlisted hypothesis was  $> 0.05$ . All the hypothesis were developed in the consideration demographic characteristics (i.e. age, gender, qualification, income and marital status) and their rejection indicates that there is no difference in the consumer`s interest, will and buying behavior towards the green products. It can also be concluded from the results of ANOVA test that there is no impact of demographic characteristics on the consumer`s interest, will and the buying behavior towards the green products.

The demographic characteristics i.e. age, qualification and income were correlated with the consumer`s interest and the buying behavior towards the green products as shown in the table 5. During the analysis, confidence interval was set to be 95%. The value of coefficient of correlation (r) always lies between -1 and +1. The closer the value of r to +1 the stronger the direct relationship between variables; if value of coefficient of correlation is closer to -1 indicates the stronger negative relationship of variables. Value of r closer to 0 demonstrates no linear relationship, there could be a nonlinear relationship between the variables though [21]. In table 5 none of the values of r is significant ( $<0.05$ ) which clearly indicates no significant relationship between demographic characteristics and the

consumer`s interest, will and the buying behavior towards the green products.

TABLE V. RESULTS OF CORRELATION ANALYSIS AMONG CONSTRUCTS AND DEMOGRAPHIC CHARACTERISTICS

Demographic Variable	Description of Values	Consumers` Level of Interest For Green Products	Consumer`s Will To Buy Green Products	Consumer`s Buying Behavior towards Green Products
Age	Pearson Correlation	.078	.047	.064
	Sig. (2-tailed)	.274	.510	.366
Qualification	Pearson Correlation	.049	.018	.089
	Sig. (2-tailed)	.489	.797	.213
Income	Pearson Correlation	.009	.025	.088
	Sig. (2-tailed)	.896	.725	.216

Correlation analysis was also conducted among the consumer`s interest, will and buying behavior towards the green products in table 6. In contrast to the table 5, all the relationships in the table 6 are significant since, the significance values of all the relationship is < 0.05.

TABLE VI. RESULTS OF CORRELATION ANALYSIS OF VARIOUS CONSTRUCTS WITH ONE ANOTHER

Construct	Description of Values	CLIFGP	CWTBGP	CBBTGP
Consumers` Level of Interest For Green Products	Pearson Correlation	1		
	Sig. (2-tailed)			
Consumer`s Will To Buy Green Products	Pearson Correlation	.146*	1	
	Sig. (2-tailed)	.038		
Consumer`s Buying Behavior towards Green Products	Pearson Correlation	.145*	.339**	1
	Sig. (2-tailed)	.040	.000	

The results of analysis indicates the weak significant and positive relationship among the consumer`s interest and will (r = 0.146) towards the green products with the statistical significance of the 0.038. The coefficient of correlation was calculated to be 0.145 (sig. 0.040) for consumers` level of interest towards the green products and consumers` buying behavior towards the green products. The value of r for the relationship of consumers` will toward buying the green products and consumers` buying behavior towards the green products was calculated to be 0.339 with the statistical significance of 0.000.

#### D. Regression Analysis

Multi-linear regression analysis was conducted with two independent variables (i.e. Consumers` level of interest towards the green products and consumers` will for buying the green products) and one dependent variable (i.e. Consumers` buying

behavior towards the green products). The coefficient of Regression 'R' = .353 or 35.3% which indicates that relationship between dependent and independent variables is positive. The coefficient of determination 'R<sup>2</sup>' = .124 indicates that independent variables explain 12.4% of the variation in dependent variable (see table 7).

TABLE VII. MODEL SUMMARY OF THE REGRESSION ANALYSIS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353 <sup>a</sup>	.124	.116	.68851

The value of F-test 14.001 is counted as significant because the significance level is = .000 (< 0.05). The significant values indicates the regression model as valid and relationship between dependent and independent variable is statistically significant (see table 8).

TABLE VIII. RESULTS OF ANOVA TEST FROM REGRESSION ANALYSIS

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	13.274	2	6.637	14.001	.000 <sup>b</sup>
	Residual	93.387	197	.474		
	Total	106.661	199			

The coefficients are also counted as significant (see table 9) because the level of significance for them is <0.05 which can be seen in the table 9.

TABLE IX. COEFFICIENTS FROM THE REGRESSION ANALYSIS

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		(Constant)	1.879	.368		
1	Consumer`s Level of Interest For Green Products	.106	.073	.427	4.446	.000
	Consumer`s Will To Buy Green Products	.386	.080	.325	4.823	.000

## V. DISCUSSION

In Pakistan, many factors have been report to have an impact on the consumers` buying behavior i.e. place, discounts, and cash rebates [3]. Another researcher indicated no relationship of demographic factors purchasing behavior of consumers towards green products [2]. Correlation analysis of the present research also indicates the same results that the demographic characteristics (age, qualification and income) have no statistically significant relationship with the consumers` level of interest, will and buying behavior towards the green product. One of the researcher reported that consumers` level of satisfaction towards the products affects the consumers` buying behavior [2]. While purchasing, the consumers` buying behavior have notable influence on the consumers` purchasing decision towards the green products [12][6]. Similarly in the present research, consumers` will to

buy the green products have a significant positive correlation ( $r = 0.339$  with sig. 0.000) with the consumers' buying behavior towards the green products. It has been reported that the consumers between the age of 18-45 years who were postgraduates had the green attitude towards the environment [6]. The results of present study contradict with the reported results because the across all the age groups no difference was found in consumers' level of interest, consumers' will and consumers' behavior towards the green products. One of researchers reported that due to a little or no awareness regarding the green products and their benefits, consumers don't know that they should buy the green products in order to save the environment; thus the companies should organize the seminars and workshop to provide the awareness to the consumers [4]. It has also been reported that one's knowledge about the problem affects his/her decision making process [13]. The green products are not being consumed at the greater level because of higher prices as compared to non-green products [7]. In this regard government should decrease the tax and subsidies especially for green business so that the investors can be encouraged to invest in the ecological products; this is an effective way to promote the green marking the large scale to protect the natural environment [7]. In order to encourage the companies for green production, the government can also start training and organize workshops for them [3].

#### CONCLUSION AND SUGGESTIONS

It was indicated that consumers' buying behavior towards the green products was found to be the same across age, qualification and income; which indicates that there is little or no awareness among the consumers regarding the green products. Positive association between the consumer's level of interest, consumers' will and the consumers' buying behavior towards the green products was found. Which explains that if the consumers are provided the knowledge about the green products, their benefits to humans and the environment; their level of interest can be attracted and if the interest is attracted then they can be influenced by their interest towards the purchasing of green products. This can be a good suggestion for the green marketers to provide the awareness regarding the green attitude, green products (about their features i.e. energy saving) and green purchasing so that the planet can be save with mutual efforts and benefits [13].

#### LIMITAIONS AND FUTURE WORK

The major and first limitation of this research is its sample size (i.e. 200) and it was only conducted Hyderabad. Few factors were included in this research; the boundaries of this research can be widened by considering factors i.e. price, durability, environmental awareness etc. The contribution of this research cannot be ignored since it has highlighted the relationship among the consumers' level of interest, consumers' will and consumers buying behavior towards the green products.

#### CONFLICT OF INTEREST

There is no conflict of interests among the authors of this research work.

#### REFERENCES

- [1] H. R. da S. Tamashiro, J. A. G. da Silveira, E. M. Merlo, and C. R. Acevedo, "Structural Equation Modeling Applied to a Study on the Background of Green Buying Behaviors," *PARIPEX - Indian J. Res.*, vol. 3, no. September, pp. 1–8, 2014.
- [2] U. Makhdoomi and U. Nazir, "Consumers Purchase Behavior towards Green Products," in *Marketing in Emerging Economies*, Manakin Press Pvt Ltd, 2016.
- [3] M. Danish, S. Ali, M. A. Ahmad, and H. Zahid, "The influencing factors on choice behavior regarding green electronic products: Based on the green perceived value model," *Economies*, vol. 7, no. 4, 2019, doi: 10.3390/economies7040099.
- [4] R. Risqiani, "Antecedents of Consumer Buying Behavior Towards on Environmentally Friendly Products," *Bus. Entrep. Rev.*, vol. 17, no. 2, pp. 145–164, 2017, doi: 10.25105/ber.v17i1.5196.
- [5] J. Hojnik, M. Ruzzier, and M. K. Ruzzier, "Transition towards sustainability: Adoption of eco-products among consumers," *Sustain.*, vol. 11, no. 16, 2019, doi: 10.3390/su11164308.
- [6] C. Gan, H. Y. Wee, L. Ozanne, and T.-H. Kao, "Consumers' purchasing behavior towards green products in New Zealand," *Innov. Mark.*, vol. 4, no. 1, pp. 93–102, 2008.
- [7] W. Atthirawong and W. Panprung, "A STUDY ON THE CONSUMERS' BUYING BEHAVIOR TOWARDS," no. September, pp. 8–13, 2017.
- [8] Arora and H. S. Chahal, "Exploring factors affecting consumer's behaviour towards green products and green marketing - A study of Punjab," *J. Agroecol. Nat. Resour. Manag.*, vol. 4, no. 4, pp. 356–366, 2017.
- [9] Y. C. Yang, "Consumer Behavior towards Green Products," *J. Econ. Bus. Manag.*, vol. 5, no. 4, pp. 160–167, 2017, doi: 10.18178/joebm.2017.5.4.505.
- [10] M. N. Mohd Noor, M. S. Masuod, A. M. Abu Said, I. F. Kamaruzaman, and M. A. Mustafa, "Understanding consumers and green product purchase decision in Malaysia: A structural equation modeling - partial least square (SEM-PLS) approach," *Asian Soc. Sci.*, vol. 12, no. 9, pp. 51–64, 2016, doi: 10.5539/ass.v12n9p51.
- [11] M. K. Durgamani and K. Abirami, "A study on consumers' buying behaviour towards selected green products in kumbakonam .," vol. 119, no. 18, pp. 3177–3193, 2018.
- [12] M. A. Collins, "Consumer Behavior towards Green Products: An Exploratory Study," *Int. J. Manag. Bus. Strateg.*, vol. 3, no. 1, pp. 160–167, 2014, doi: 10.18178/joebm.2017.5.4.505.
- [13] Y. Hassan, "Understanding Consumer Decision Making Towards Green Electronic Products," *South East Asia J. Contemp. Business, Econ. Law*, vol. 2, no. 1, pp. 27–33, 2013.
- [14] Beharrell and T. J. Denison, "Involvement in a routine food shopping context," *Br. Food J.*, vol. 97, no. 4, pp. 24–29, 1995.
- [15] F. Liñán and Y. Chen, "Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions," *Entrep. theory Pract.*, vol. 33, no. 3, pp. 593–617, 2009.
- [16] K. Lee, "Gender differences in Hong Kong adolescent consumers' green purchasing behavior," *J. Consum. Mark.*, vol. 26, no. 2, pp. 87–96, 2009.
- [17] L. Rensis, "A technique for the measurement of attitudes," *Arch. Psychol.*, vol. 22, no. 140, p. 55, 1932.
- [18] M. Tavakol and R. Dennick, "Making sense of Cronbach's alpha," *Int. J. Med. Educ.* 2011, vol. 2, pp. 53–55, 2011, doi: 10.5116/ijme.4dfb.8dfd.
- [19] M. J. Blanca, R. Alarcón, J. Arnau, R. Bono, and R. Bendayan, "Non-normal data : Is ANOVA still a valid option?," *Psicothema*, vol. 29, no. 4, pp. 552–557, 2017, doi: 10.7334/psicothema2016.383.
- [20] E. Ostertagova and O. Ostertag, "Methodology and Application of One-way ANOVA," *Am. J. Mech. Eng.*, vol. 1, no. 7, pp. 256–261, 2013, doi: 10.12691/ajme-1-7-21.
- [21] V. Bewick, L. Cheek, and J. Ball, "Statistics review 7 : Correlation and regression," *Critical Care* 7, 2003. .
- [22] R. J. Casson and L. Dm, "Review Understanding and checking the assumptions of linear regression : a primer for medical researchers," *Clin.*

Experiment. Ophthalmol., vol. 42, no. 6, pp. 590–596, 2014, doi: 10.1111/ceo.12358.

- [23] H. Kim, “Statistical notes for clinical researchers : assessing normal distribution ( 2 ) using skewness and kurtosis,” 2013.
- [24] S. ManiKandan, “Frequency distribution,” J. Pharmacol. Pharmacother., vol. 2, no. 1, pp. 54–56, 2011.