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Understanding Correlation between Psychogenic Determinants and Environmental Concern about Buying of Green Products

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Abstract:

Environmental concern and expansion of consumers purchasing power has drawn attention of consumer towards the buying of green products.This provides new opportunities for business firms towards the green market. This study aims to understand the correlation between psychogenic determinants and environmental concern that are responsible for purchasing of green products among the people of Lucknow, Uttar Pradesh (India).The data was collected from 405 respondents using non-probability sampling (convenience sampling technique). Inferential statistics such as hypothesis testing, regression analysis was opted to draw inference for the larger population. Parametric tests were used for the comparison of mean among the different level of variables. Data analysis was done using SPSS 16.0 software. The results revealed that psychogenic determinants significantly influence the environmental concern of consumers about the purchasing of green products. This research provides a preliminary idea about the consumersattention towards the environment friendly and sustainability issues.

Keywords: Green Products, Consumers, Environmental Concern, Psychogenic Determinants, Environment friendly

Introduction

Now a days, environmentally related challenges are taking up more and more area in business and academics.The rapid expansion of the international economy is usually associated with an increase in global consumer purchasing power. Consumers' concern with environment issues is a global concern that is outcome of excessive utilization of natural resources and continuous changes in their lifestyle that is becoming more associated with environment. Thereby, the business ecosystem is witnessing a dramatic increase in environmental consciousness and sustainability, because of continuous degradation of the natural environment. This has emerged as a matter of concern not only for the people of developed nations, but has also recently ignited the green movement in developing nations to protect and conserve the environment, leading to an increase in environmental awareness for better health, in turn, leading to demand for green products.

Green product is generallyknown as the product that do not degrade the environment or put negative impact on natural resources and can be restored (Shamdasami et al.,1993). Roberts (1996) opined aboutgreen products that these have steadily expanded from small niche sectors to huge markets of consumer goods and services.

The consumer is the one who is the end-user of any goods or services. So,marketers must find market niches where buyers are having more concerned about the ecosystem and more inclined towards purchasing of green products (Laroche, *et al.,* 2001). Customers' decision to buy eco-friendly products are affected by severalelementsi.e., values, beliefs, knowledge, needs, motives, attitudes, and demography (Bui 2005).

In order to compress the broad domaininfluencing buyingbehaviour correlation between psychogenic determinants and environmental concern, which drives consumer buying of green products were selected for investigation. Keeping in mind this fact, present investigation on "understand correlation between psychogenic determinants and environmental concern about buying of green products" was undertaken in the Lucknow district of Uttar Pradesh (India).

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Literature Review:

Psychogenic determinants stand for internal factors influencing purchasing behaviour. These can be divided into learning,perception,motivation, attitudes and beliefs. However, according to Maslow's Hierarchy of need, motivation of consumer needs is the driving factor that greatly affects people's behaviour, including their purchase decisions (Solomon, Bamossy and Askegaard, 1999).When it comes to decision making, the mind takes over everything. "Consumer motivation" is an underlying condition that drives individuals to identify and buy products that satisfy their both conscious, and unconscious desires. "Perception" is the process by which an individual chooses, organize, and interpret information to make a substantive image of the world. Changes occurring in an individual due to the experiences in his/her life can be termed as "learning". Learning helps an individual in acquiring beliefs and attitudes. A "belief" could be a descriptive thought that someone has regarding one thing. Beliefs framed about a product/ service by a customer helps in building the brand image, which eventually affects the purchase decision. "Attitude", on the other hand is the customer's relative consistent evaluation, feelings, and tendencies towards a product/service.

Environmental concern is the insightregarding the natural condition of the ecosystemthat is impactedby pollution and excessive use of natural resources(Franzen and Meyer, 2010). Sánchez and Lafuente, (2010) revealed that environmental concern is considered as a terms of new environmental (or ecological) paradigm (NEP), that in a way, expresses as orientationof pro-environmentof people. Chan and Lau (2004) opined those different definitions of environmental concern exist depending on the viewpoint and the complex and unstable nature of the issue. For instance, Crosby et al. (1981) said that environmental concern as a common attitude that has an collateral impact on attitude as a means of behavioural intent after initially defining it as a strongly protective attitude towards the environment. However, various studies assume that environmental concern and attitude are synonymous terms(Chan and Lau, 2004).

Environmental concern is seen to have several sub-dimensions by several scholars (Stern&Dietz, 1994; Roberts&Bacon, 1997; Schultz, 2000).According to Schultz (2000), there are three correlated factors of environmental concern as: self-concern (egoistic), other people concern (altruistic), and biosphere concern (biospheric).In fact, consumers who are more worried about environmental indicate a greater readiness to buy and pay higher costs for green products than consumers who are least concerned (Bang et al., 2000). It indicates a direct relationship between environmental awareness and green productbuying behaviors. Kim and Choi, (2005) studied that person who are very worried about environmental concerns are considerably more likely to buy ecologically friendly items than people who are not as concerned.

Seguin et al. (1998) also reported that environmental concerns can have a major influence on how motivated people are to alter their behaviour in an effort to solve the issue. Hines et al., (1987) examined several research findings that have direct empirical association between behaviour and environmental concern, all revealed the same result and indicates the relationship low to moderate.

Mostafa (2007) studied that significant gender disparities in green buying behaviour are influenced by customer ecological concern. High environmental concern is a major factor in consumers' frequent selection of green brands while making purchases, thereby, supporting green items (Lin, *et.al*. 2012). Choi and Kim, (2012) revealed that when compared to customers with less concern, those with better environmental awareness were found to be more likely to buy green products.

According to a study of the literature, it was shown that developed countries have conducted a number of researches on the aforementioned variables.However, when compared to customers in developed countries, Indian consumers in general and Lucknow (Uttar Pradesh) consumers in particular are different.Therefore, considering this view in mind, the present investigation was conducted with an aim to get an in-depth understanding of the correlation between psychogenic determinants and environmental concern for buying of green products,hence the study proposes the following hypotheses:

H0: Psychogenic determinants does not significantly influence the environmental concern of consumers about purchasing of green products.

H1: Psychogenic determinants significantly influence the environmental concern of consumers about the purchasing of green products.

Research Methodology

The present research aimed to quantify the correlation between psychogenic determinants and environmental concern about buying of green products. Extant research is exploratory cum descriptive in nature. The target population included all those individuals who buy green products.Primary data used to test hypothesis and the hypothesis was developed using secondary data, and online journals/articles were gathered to support the study.Primary data was collected based on survey methodusing structured questionnairewhile collection of secondary data was done from sources such as books, periodicals, journals, research papers, magazines, along with searching web sources.

The population frame proposed for the study was the Lucknow district. Cochran's formula at 95% confidence level with 5% margin of error was used for the determination of sample size. Cochran's formula: ($n_0 = (Z^2pq) / e^2$) where, "n" is sample size, "Z" is score value1.96 at 95% CI, e is the margin of error, "p" represents the estimated proportion of the population while "q" = 1 – p. Thus, applying the formula, the sample size obtained is as follows: $n_0 = ((1.96)^2 (0.5) (0.5)) / (0.05)^2 = 385$.The sample size determined was 385, but the chosen sample for this study was 400 respondents. Total 450 questionnaires were distributed through Google docs, out of which and 405 valid responses were reverted, giving the response rate of 90.00 per cent.

Non-probability sampling (convenience sampling technique) was appliedin a manner so that the sample truly represented the entire population Lucknow to select consumers who were ready to give information. The collection of primary data for the study was done for a period of 06 months, from October 2020 to March 2021. Collected data were rated by consumers on 5-point Likert scales.

Data Analysis Techniques

Reliability of the scale was measured with the help of Cronbach's alpha (Table-1). A value of 0.7 or higher is considered to be acceptable (Cronbach, 1951; Nunnally, 1978).

Table-1

Cronbach's alpha	Cronbach's alpha based on standardized items	No. of items
0.859	0.862	7

A Cronbach alpha value of 0.859 indicates the internal consistency of the items.

Item Statistics

Table-2

Environmental concern(EC)	Mean	Std. Deviation	N
EC1	4.23	0.988	405
EC2	3.85	0.944	405
EC3	4.12	0.927	405
EC4	4.02	0.883	405
EC5	4.38	0.819	405
EC6	3.84	1.029	405
EC7	4.11	0.850	405
EC8	4.18	0.860	405
EC9	4.13	0.904	405
EC10	4.01	0.884	405

Data analysis for the obtained data was done using Statistical Package for Social Science (SPSS 16.0). Descriptive statistics was used to characterize and summarize the data obtained. Inferential statistics such as

hypothesis testing, regression analysis was opted to draw inference for the larger population. Parametric tests were used for the comparison of mean among the different level of variables.

Data Analysis and Interpretation:

Table 3

Psychogenic determinants (PD)		**EC-1**	**EC-2**	**EC-3**	**EC-4**	**EC-5**	**EC-6**	**EC-7**	**EC-8**	**EC-9**	**EC-10**
Strongly disagree	Mean	3.40	3.00	2.40	3.20	3.40	3.40	3.40	3.20	3.20	3.40
	N	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
	Std. Deviation	2.191	2.000	1.949	2.049	2.191	2.191	2.191	2.049	2.049	2.191
Disagree	Mean	3.44	2.78	2.56	3.11	3.56	3.33	3.00	3.67	3.33	3.33
	N	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	Std. Deviation	1.878	1.093	1.333	1.269	1.590	1.500	1.225	1.225	1.581	1.414
Neutral	Mean	3.63	3.31	3.52	3.68	3.86	3.37	3.42	3.45	3.32	3.35
	N	71.00	71.00	71.00	71.00	71.00	71.00	71.00	71.00	71.00	71.00
	Std. Deviation	1.085	0.935	0.892	0.968	0.990	0.975	0.966	0.997	0.938	0.830
Agree	Mean	4.33	3.95	4.21	4.02	4.43	3.85	4.20	4.26	4.24	4.06
	N	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
	Std. Deviation	0.863	0.806	0.766	0.745	0.657	0.936	0.579	0.623	0.665	0.674
Strongly Agree	Mean	4.59	4.19	4.67	4.49	4.81	4.32	4.63	4.67	4.67	4.54
	N	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00
	Std. Deviation	0.703	0.950	0.652	0.793	0.422	0.985	0.749	0.725	0.742	0.895
Total	Mean	4.23	3.85	4.12	4.02	4.38	3.84	4.11	4.18	4.13	4.01
	N	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0	405.0
	Std. Deviation	0.988	0.944	0.927	0.883	0.819	1.029	0.850	0.860	0.904	0.884

ANOVA Table

			Sum of Squares (ss)	**df**	**Mean Square (ms)**	**F**	**Sig.**
EC-1 * PD	Between Groups	(Combined)	47.504	4	11.876	13.703	0.000
		Linearity	41.738	1	41.738	48.157	0.000
		Deviation from linearity	5.766	3	1.922	2.218	0.086
	Within Groups		346.678	400	0.867		
	Total		394.183	404			
EC-2 * PD	Between Groups	(Combined)	46.358	4	11.589	14.789	0.000
		Linearity	41.060	1	41.060	52.396	0.000
		Deviation from linearity	5.298	3	1.766	2.254	0.082
	Within Groups		313.455	400	0.784		
	Total		359.812	404			

EC-3 * PD	Between Groups	(Combined)	88.391	4	22.098	34.170	0.000
		Linearity	85.543	1	85.543	132.276	0.000
		Deviation from linearity	2.848	3	0.949	1.468	0.223
	Within Groups		258.680	400	0.647		
	Total		347.072	404			
EC-4 * PD	Between Groups	(Combined)	37.382	4	9.345	13.475	0.000
		Linearity	36.144	1	36.144	52.114	0.000
		Deviation from linearity	1.238	3	0.413	0.595	0.619
	Within Groups		277.418	400	0.694		
	Total		314.800	404			
EC-5 * PD	Between Groups	(Combined)	46.106	4	11.527	20.506	0.000
		Linearity	44.581	1	44.581	79.309	0.000
		Deviation from linearity	1.525	3	0.508	0.905	0.439
	Within Groups		224.847	400	0.562		
	Total		270.953	404			
EC-6 * PD	Between Groups	(Combined)	37.976	4	9.494	9.740	0.000
		Linearity	33.702	1	33.702	34.574	0.000
		Deviation from linearity	4.274	3	1.425	1.462	0.225
	Within Groups		389.911	400	0.975		
	Total		427.886	404			
EC-7 * PD	Between Groups	(Combined)	70.830	4	17.707	32.025	0.000
		Linearity	63.773	1	63.773	115.337	0.000
		Deviation from linearity	7.057	3	2.352	4.254	0.006
	Within Groups		221.170	400	0.553		
	Total		292.000	404			
EC-8 * PD	Between Groups	(Combined)	65.782	4	16.446	28.261	0.000
		Linearity	57.112	1	57.112	98.142	0.000
		Deviation from linearity	8.671	3	2.890	4.967	0.002
	Within Groups		232.771	400	0.582		
	Total		298.553	404			
EC-9 * PD	Between Groups	(Combined)	82.309	4	20.577	33.222	0.000
		Linearity	71.834	1	71.834	115.976	0.000
		Deviation from linearity	10.475	3	3.492	5.637	0.001

	Within Groups		247.755	400	0.619		
	Total		330.064	404			
EC-10 * PD	Between Groups	(Combined)	60.406	4	15.101	23.637	0.000
		Linearity	53.396	1	53.396	83.576	0.000
		Deviation from linearity	7.010	3	2.337	3.657	0.013
	Within Groups		255.555	400	0.639		
	Total		315.960	404			

Table4: **Measures of Association**

	R	**R Squared**	**Eta**	**Eta Squared**
EC-1 * PD	0.325	0.106	0.347	0.121
EC-2 * PD	0.338	0.114	0.359	0.129
EC-3 * PD	0.496	0.246	0.505	0.255
EC-4 * PD	0.339	0.115	0.345	0.119
EC-5 * PD	0.406	0.165	0.413	0.170
EC-6 * PD	0.281	0.079	0.298	0.089
EC-7 * PD	0.467	0.218	0.493	0.243
EC-8 * PD	0.437	0.191	0.469	0.220
EC-9 * PD	0.467	0.218	0.499	0.249
EC-10 * PD	0.411	0.169	0.437	0.191

Source: Author's own calculation

The ANOVA table 3&4 shows there is correlation between Psychogenic determinants and consumers'environmental concern about the purchasing of green products. This shows that Psychogenic determinants significantly influence the consumers' environmental concern about the purchasing of green products. The table Measures of Association measure the influencing impact which shows due to change in psychogenic determinate there is significant impact as R square value shows the higher impacting values.

Hence it can be concluded that anyone who have strong Psychogenic determinants can be derived to consider about the green product and motivated to buy the green product. So we fail to accept the null hypothesis.

Conclusions

Thus, we can conclude that psychogenic determinants significantly influence the environmental concern of Consumers about the purchasing of green products. Therefore, thepsychogenic determinants significantly influence the environmental concern and motivate to consumers about the purchasing of green products.

Limitations of the Study

The study has got limitation due to "error of recall" on part of the respondents. It is possible that when answering to the questionnaire, they overstated their opinions. Resources were not employed to trace the respondents during the data gathering procedure because the research was self-funded. The study is limited to a single region of Uttar Pradesh; as a result, it does not concentrate on other regions. Therefore, research studies offer a suitable space for subsequent research that may be done in other areas as well.

Scope of the Further Research

The research paper has a significant scope for business firms and consumers as it ushers in current business scenario of greenmarket in U.P. It provides good insight into the correlation between psychogenicdeterminants and consumers' concern for the environment for buying of green products. This research study has been conducted in smaller geographical area i.e. only Lucknow. The findings may be less conclusive if this type of investigation is carried out over a wider geographic area. However, the study's goal of getting consumers to pay attention to the sustainability issue has been accomplished.

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