



UV Cut Glass in Cars: An empirical study to analyze the factors influencing Consumer Buying Behavior during the buying decision process of customers in select regions of Delhi-NCR

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Abstract

The main objective of this Research Paper is to study the Dark Green UV Cut Glass distinguishing as product and price from other in order to make product more attractive to a particular target market. As the competition in market is increasing day by day and every company is focusing on their sales, the sales can be increased when the products are displayed and made available to consumers which can be done through the marketing of Dark Green UV Cut Glass. The objectives of this study were to explore the factors and to check which of these explored factors were significant in determining consumer behavior. The study has been conducted in three phases: In phase 1, the task was to establish a relationship between organization and prospective windshield expert centers that should result into new deals and to make aware about the UV Glass. In phase 2, this aim is achieved by various activities like Umbrella Marketing, visiting retailers, doctors, hotels and restaurants to pitch and increase the sale of products etc. covering many areas, societies and cross roads Delhi - NCR. The last phase explored the variables (Social Class, Reference group, Family, Lifestyle, Motivation, Attitude, etc.) of marketing of product and price and check which of these explored variables are significant in determining the purchase decision of UV Glass. A relevant literature review was conducted by reviewing a few relevant articles followed by research gaps. Based on these reviews a questionnaire was formed. 5 point Likert scale was used to measure the response. Simple random sampling method was used for the sampling process. A market survey was taken to know the reach of Delhi region Dark Green UV Cut Glass product through the survey to know the how many consumers are aware of this product and its uses. An exploratory factor analysis was conducted to classify the variables into factors. A multiple regression analysis was conducted to find the significance of all these explored factors. Posts performing the analysis, appropriate conclusions were drawn. The findings revealed that social desire, good value and trust are the factors that have been explored out of which social desire and trust were found to be significant in determining the purchase decision. A conscious attempt has been made to reflect on the activities streamlined and implemented for the purpose of achieving predetermined goals within specific self-mandated time horizons. It can be recommended to the company through this analysis that while designing the marketing strategy for UV Cut glass, these two factors should be given prominence from the prospect of UV Cut Glass.

Keywords: UV Cut Glass, Consumer Buying Behavior, Social desire, Good Value and Trust

1. Introduction

Consumer Behavior Theory (Kotler, 2018)

Consumer behavior is the study of individuals, groups, or organizations and the procedures they use to select, secure, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society. Customer behavior study is based on consumer buying behavior, with the customer playing three distinct roles of user, payer and buyer. Research has shown that consumer behavior is difficult to analyze, even for experts in the field. Consumers make purchase decisions when they buy small items, such as chocolate, and when they buy larger items, such as a house. After

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recognizing a need or a want, consumers begin searching for products or services that fit their needs. They evaluate their options, taking a note of everything from pricing to a brand's reputation, before making a purchase.

2. Literature Review

The literature review aims to examine the important variables which will impact purchase decision of the consumers. The articles reviewed provide a few critical dimensions of the glass product. A few vital facets will be focused.

2.1 Boxer & Boxer, 2018

The costly car would be blocking more UV rays so to check their perception. An experiment was conducted in which UV intensity was being calculated in the various cars of different price range. As a matter of fact, Side Door Glass, most commonly, blocks about 71% UVA rays only whereas the Front Window i.e. most commonly called as windshield blocks about 96% UVA rays.

2.2 Srivastava & Tiwari, 2011

It studied the consumer behavior for A3 segment vehicles such as Honda City and SX4 in a particular region of Jaipur, Rajasthan. Data was collected from 100 respondents 50 each from Honda City and Maruti SX4. Respondents were considered from various backgrounds like Gender, Occupation, Income class. Also, customer purchase parameters considered for study were Price, Safety, Comfort, Power & Pickup, Mileage, Max Speed, Styling, After Sales Service, Brand Name and Spare Parts' Cost.

2.2 Rezvani et. al., 2012

This study reviews the various products originated from country and different variables that influence consumer purchase intention; it also highlighted the relationship between these variables and customer purchase intention. The Study demonstrates that people do care about which country products come from and where they are made and consider these factors when evaluating the quality of product.

2.3 Consolidated Research Gaps

- Lack of awareness – To determine the awareness of the people about the UV Cut Glass used in the cars. Consumers are concerned about their health but when it comes to purchase of UV Glass in cars their behavior is still unknown due to lack of awareness.
- Lack of willingness to pay premium price – Premium price or extra price to buy UV Cut Glass for the car need to analyzed as of now we don't have any idea whether people are willing to pay premium price or not.
- Focus on UV Cut Glass is not there - To determine the consumer buying behavior for the UV Cut Glass.

2.3 Research Objectives: Based on the research gaps explored above in the literature review and based on the recommendation of the Delhi region, the following are the objectives of the Research Paper.

- To explore the factors that influence the consumer buying behavior of UV Cut Glass in a car.
- To check which of the explored factors are significant in determining the success of consumer buying decision process of UV Cut Glass in a car.

3. Research Methodology & Data Analysis

3.1 Survey

The present study involved personal interaction with the respondents mentioned in the above section by asking them to fill a questionnaire based on analyzing consume behavior for UV Cut glass in cars.

3.2 Sampling

A sampling process where each element in the target population has an equal probability of inclusion in the sample is known as Simple Random Sampling which has been carried in the following manner:

- Find out the total number of car owners in Delhi-NCR.
- After the selection of car owners from the list, prospective customers of UV glass were chosen as

a respondent randomly and included in the sample on the basis of simple random sampling.

3.3 Independent Variables

The independent variables used in this study are upper class, aspiration, elite life style, motivation, attitude, family and innovation.

3.4 Dependent Measures

Mean purchase decision including travel time, evaluation of alternatives, willingness to pay premium, time of purchase, and recommendation. In 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used.

The sample questions from the questionnaire are –

- 1) Putting UV Glass in car will make people look like upper class.
- 2) Putting UV Glass in Car may make you look like a personality you aspire to become like.
- 3) Your family members suggest UV Glass in car.

3.5 Reliability Analysis

The survey questionnaire had to be tested for its reliability. An analysis was conducted for checking the reliability of the questionnaire and the results were obtained. The Cronbach's alpha (a measure of reliability) score has been calculated for all the analyses for the sectors. The results have been summarized in Table 2 as mentioned below. The values of Cronbach's alpha above 0.6 indicate that there is internal consistency in the data.

3.6 Factor Analysis

According to the questionnaire, the following are the variables used in this analysis: Social Class, Reference Group, Lifestyle, Family, Motivation, Attitude, Evaluation of alternatives, Willingness to pay, etc. The independent variables were grouped into factors namely social desire, good value and trust.

H1: Variables are uncorrelated in the population (The population correlation matrix is an identity matrix).

The Approx. Chi Square value is 267.929 and it has found to be significant which indicates that the null hypothesis can be rejected and it may be concluded that variables are correlated in the population. The chi-square statistic is used only for Bartlett's test of sphericity and its value will help in concluding whether the variables are correlated or not. It indicates that the factor analysis is appropriate. The Kaiser-Meyer-Olkin (KMO) measure of Sampling Adequacy is found out to be 0.725 which indicates that factor analysis is adequate.

The summary of rotated component matrix indicated the following:

Factor 1: The following are the variables (Upper Class, Aspire, Lifestyle and Elite) that have the highest loading on factor 1 after rotation: The above factor has been named as Social Desire as all the variables indicate the social desire in purchasing decision of potential consumers of Dark Green UV Cut Glass.

Factor 2: The following are the variables (Motivation, Attitude) that have the highest loading on factor 2 after rotation: The above variables indicate Good value done by company on marketing of Dark Green UV Cut Glass. It can be named as Good value as both the variables give benefit to consumers while purchasing UV Glass.

Factor 3: The following are the variables (Family, Innovation) that have the highest loading on factor 3 after rotation: The above factor has been named as Trust as all the variables indicate the trust of consumers in purchasing decision of Dark Green UV Cut Glass.

3.7 Multiple Regression

A multiple regression analysis was used to obtain the results. The results of the factor analysis (F1, F2 and F3) were carried forward by which all the independent variables (F1, F2 and F3) were used to predict the dependent variable by multiple regression. The regression equation (Levin & Rubin, 2002) is as follows:

$$Y = \alpha + \beta_1 F_1 + \beta_2 F_2 + \beta_3 F_3$$

Where Y= Mean Purchase Decision (Mean of the six purchase decision variables namely travel time, evaluation of alternatives, willingness to pay premium, time of purchase, recommendation)

α = Intercept.

F1 = Social Desire

F2 = Good value

F3 = Trust

$\beta_1, \beta_2, \beta_3$ = Slopes associated with F1, F2, F3 22 Inference about the Regression as a whole using an F-test

Null Hypothesis: Y does not depend upon the Fi's i.e $H_0: \beta_1 = \beta_2 = \beta_3 = \dots = \beta_k = 0$

H2: Y depends on at least one of the Fi's i.e. H_1 : at least one $\beta_i \neq 0$

The coefficient of (multiple) determination (R-Square) is 0.346 and the F-ratio is found to be 20.338, which is significant. Thus, one can conclude that regression model is significant to explain the purchase decision of the Dark Green Ultra cut UV rays.

The reasons for low value of R square i.e. 0.346 are:

- 1) Since UV Cut glass is a relatively new product, the level of awareness among the customers of Delhi-NCR might not be comparatively strong.
- 2) There might be a few more additional decision-making variables that might influence the customer purchase decision of UV Cut glass, that might possibly strengthen the value of R-square further.

The regression equation is found out to be: $Y = 3.310 + 0.248 F1 + 0.326 F3$.

Null hypothesis can be rejected and F1, F3 are significant explanatory variables. Thus, purchase decision depends on the variables (F1) & (F3) as mentioned above. The variables namely Social Desire and Trust are found to be significant because the car owners think that the glass may be a symbol of style and showoff and categorizes them as elite citizen. Additionally, family members also support them in thinking like that. The coefficient of (multiple) determination (R-Square) is 0.346 and the F-ratio is found to be 20.338, which is significant. Thus, one can conclude that regression model is significant to explain the purchase decision of the Dark Green Ultra Cut UV Glass.

4. Conclusion

The factors extracted in this analysis are Social Desire & Trust. The purchase decision of UV Cut Glass depends on both the factors i.e., Social Desire & Trust. It indicates that the consumers believe that the Social Desire & Trust expected from the company may impact the purchase decision of UV Glass.

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