

## **A study of the study of the factors that influence the buying behaviour of consumers who buy groceries using online applications and websites in Pune City**

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### **Abstract**

This is a study of the factors that influence the buying behaviour of consumers who buy groceries using online applications and websites in Pune City. The study involved a survey of 126 consumers who buy grocery items online in Pune City. The study was an attempt to find the factors that affect consumers' buying decisions when shopping for grocery products online. The results obtained in the previous section show that the hypothesis that Impact of persuasive techniques, Website Design, Ease of Use, User friendliness of the application/ web site, Brand Trustworthiness, Special Offers and Discounts all affect the buying behaviour of the consumers who buy grocery online.

**Keywords: Online Retailer; Product Information; Persuasion Techniques; Pune City**

### **1. Introduction**

The internet has changed the way we do everything, and we are now notorious for shopping everything from groceries to clothes, food and other products online, be it from a local store or an online retailer. There are many benefits of shopping online; one of the major ones being that we do not have to go through the long lines of a traditional store just to get what we want or want to buy. Here, we can even shop online as late as midnight in our favorite stores and get our desired items delivered at home. But it does not end here; we can also compare prices of a product or browse online for the best deals. The online market for grocery products is no different. In fact, it is growing so much that it is estimated to be worth about US\$21 billion in 2018 and reach US\$48 billion by 2025 (Golden shore, 2015). More than 90% of the households buy their grocery products through an online retailer in India, where more than 50% of these homes are first time buyers (Impress online, 2017).

The current study is an attempt to study how online retailers in Pune City persuade their consumers to purchase grocery products online through the persuasive techniques used. The study involved a survey of 126 consumers who buy grocery items online in Pune City. This paper is an attempt to learn about the factors that affect consumers' buying decisions when shopping for grocery products online by studying what strategies do these savvy shoppers select when purchasing their groceries from an online store and what are the benefits of shopping for groceries online.

Grocery retailing has traditionally been a high volume, low margin industry with very small profit margins – between 1-3% (Burd, 2005). But over the last few years, online grocery retailing has emerged as a new business model that is expected to change this traditional business and disrupt the current structure of the grocery market. One of the primary reasons for this change is that an online retailer can reduce its costs by 10-40% by using automation and a lean supply chain (Jayant, 2005). The main advantage to being a big player in this market sector is that it can also benefit from economies of scale by achieving price reductions for larger volumes. But one has to ensure that they are able to differentiate their product range from other players.

## **2. Literature review**

It is imperative that the online retailer provides the consumer with enough information about the product, its features and its pricing. In order to effectively advise customers about the product and convince them to settle for it, online retailers should consider conducting surveys of their consumers (Nygaard, 2005). To be able to send them relevant information instead of trying to convince them that they need this or that product, online retailers should also provide e-mail updates and fact sheets on products. It is important that these facts are updated based on the price changes or promotions in place. For example, if they offer a discount of 10% on a particular type of cereal, then an e-mail with this information should be sent to consumers after a month's time.

Mishra (2019) conducted a study, which tested the effectiveness of online retailer's persuasive techniques in shoppers' decision-making, and found that product information, user reviews and

photo of product packaging are some of the most common persuasive techniques used by online retailers to persuade consumers to buy goods online. Online retailing is evolving at a rapid pace, and this study aimed at exploring what tactics do consumers use when choosing food products from different retailers. The study also aimed at identifying which factors are important in influencing consumers' buying decisions from an online grocery store. The main objective is to find out why consumers choose one vendor over another for purchasing groceries.

Kumar et.al. (2016) conducted a study to identify behavioural factors which influence online grocery shopping and found that price is the biggest factor affecting consumers' purchase decisions. The study was conducted to determine the factors that influence online grocery shopping, and an online survey was used to measure these factors. The study found that price was the main influencing factor in the decision to buy an item, followed by convenience and discount offers. The findings suggest a strong price sensitivity of consumers towards buying groceries online, but also indicate that convenience is equally important in generating a larger market share for online grocery shopping.

The key finding of the empirical study reported in (Dustin & McCarthy, 2010) was that personalisation should be a key focus area for e-tailers wishing to create a competitive advantage. The study also proves that consumers are more likely to buy more than just a few products when they have a personalised shopping experience.

The study conducted by (McCarthy & Dustin, 2005) aimed at analysing how a typical customer shop for groceries from an online retailer and also analysed how the consumers' decision-making process works. The study concluded that the customer was often influenced towards making a purchase because of an attractive price offer and were satisfied with the convenience aspect of shopping online.

A different study (Ahamed, 2004) looked into the effect of pricing on purchasing habits and found that highest discount offer around Christmas caused an increase in customers' purchase frequency. The study was conducted in the UK, where there are a number of retailers to purchase items online. The field experiment was conducted in the United Kingdom, where an Amazon-style website was used to conduct this study as a comparison site.

Consumer behaviour involves complex processes that change over time (Kumar et.al., 2016). The present research aims to study this process in order to understand how consumers' decision is made when choosing stores for shopping for grocery products online. This information may help retailers use their good strategies and understand their weaknesses by studying these results so that they can make changes in their marketing strategies and improve consumer behaviour (Kumar et.al., 2016).

Shubhada & Anila (2018) conducted a study to find out the factors that influence consumer's perception towards online grocery shopping, finding out key decision makers who influence consumers with respect to their buying behaviors of grocery products, and also analyzed patterns of consumer behaviour with respect to different store types. The study also found that the majority of consumers in the United States, Germany and Australia prefer to buy grocery products online rather than in-store. The study was conducted using a questionnaire to collect data, and it also found that almost all the respondents indicated their willingness to respond to survey questions.

The research conducted by (Ezelsiep, 2015) aimed at finding out what motivates the consumer to use an online store rather than a physical store when purchasing grocery products. It also not only wanted to find out what motivates the consumer, but also how they use different channels such as online stores and physical stores for purchasing groceries.

Rathod & Desai (2014) conducted a study which investigated factors influencing consumer behavior in online buying of groceries in India. They found that convenience and brand trust are the two dominant factors influencing consumer behavior in online buying of groceries in India. The study further found that a consumer is more likely to purchase in an online grocery store when they are provided with a discount voucher.

Ariel & Imani (2013) conducted a study to understand the factors which influence consumer's buying decisions for groceries online and found that price was the most influencing factor, followed by detailed product information. The study was conducted using quantitative method using a questionnaire and an online survey in order to analyse the effects of behavioural beliefs on consumers' perception of online grocery shopping. It also found that male respondents were more likely to be influenced towards making a purchase because of price offers, while female

respondents were more influenced towards making a purchase because of detailed product information.

The objective of this research work is to study the factors that influence consumers' buying decisions for groceries online. In order to understand how consumers make their decision, it is important to study the factors that influence them in their daily life. The focus will be on comparing four major factors which are price, convenience, security and social media activity/reciprocity (Fan & Chen, 2009).

Overall, there is paucity of research on the subject of how consumers make decisions on buying groceries online, and the choice of products when they are shopping online. The study will be based on a case study and qualitative research, using both questionnaire and interviews in order to gather data. The researcher will also collect data from a database which has been created from previous legitimate research (Fan & Chen, 2009).

### **3. Objectives of the Study**

1. To understand what factors consumers take into consideration when deciding whether or not to trust an online retailer for their grocery shopping needs.
2. To study and identify the factors that affect the buying behaviour of the consumers who buy groceries online.

### **4. Hypothesis:**

H1: Impact of persuasive techniques, Website Design, Ease of Use, User friendliness of the application/ web site, Brand Trustworthiness, Special Offers and Discounts all affect the buying behaviour of the consumers who buy grocery online.

### **5. Methodology**

This part of the study is about the research methodology used to arrive at the findings. The study was conducted in Pune City, where it was limited to 126 consumers between the age of 20-45 years old. These grocery products were then purchased and a close ended questionnaire was designed based on four topics; (1) Demographics, (2) Factors that influence people's decision to buy grocery from a particular website/ application; (3) Purchasing Behaviors. The survey was distributed via e-mail and social networking websites to a set of potential respondents in Pune City. The questionnaire was designed to be a short form, and as simple

and non-threatening as possible. Respondents were asked to answer the questions based on their personal experiences. A total of 126 respondents were asked questions about their purchasing behaviours in online grocery shopping.

All participants were given a unique identifier of their e-mail address for the survey and were advised to complete the questionnaire quickly. Those who did not complete the questionnaire within three months would be marked as ineligible for further participation in the survey. The researcher wrote down all the details from their responses and made a careful check to ensure that they met the criteria of inclusion in the research study (Fan & Chen, 2009).

A total of 126 participants of 169 completed both parts of questionnaire and responded to three additional questions using social networking sites, with 126 respondents giving valid answers, which was deemed a sufficient response rate.

The questionnaire contained closed ended questions which used a likert scale of 5 to decide the various factors that influence the purchasing behaviour. The following section deals with the results and findings of the study.

## **6. Results and Findings:**

To test the internal validity of the questionnaire, the Cronbach Alpha value was calculated. The following were the results of the validity tests.

Table 1. Validity of the questionnaire

| Sr. No | Scale  | Items | Cronbach's Alpha Value |
|--------|--|-------|------------------------|
| 1      | User friendliness of the application/ web site | 8     | 0.788                  |
| 2      | Website Design                                 | 6     | 0.733                  |
| 3      | Special Offers and Discounts                   | 7     | 0.812                  |
| 4      | Brand Trustworthiness                          | 6     | 0.882                  |
| 5      | Ease of Use                                    | 8     | 0.778                  |
| 6      | Impact of persuasive techniques                | 9     | 0.754                  |
| 7      | Buying behaviour                               | 6     | 0.771                  |

The above table shows that all the values of the Cronbach alpha were higher than 0.7. This shows that there was a good deal of internal validity of the scales that have been used for the purpose of the study.

Table 2. Regression Analysis

| <b>Table 2.1. Variables Entered/Removed<sup>a</sup></b> |  |                   |        |
|---|--|-------------------|--------|
| Model   | Variables Entered  | Variables Removed | Method |
| 1   | Impact of persuasive techniques, Website Design, Ease of Use, User friendliness of the application/ web site, Brand Trustworthiness, Special Offers and Discounts <sup>b</sup> | .                 | Enter  |
| a. Dependent Variable: Buying behaviour                 |  |                   |        |
| b. All requested variables entered.                     |  |                   |        |

| <b>Table 2.2. Model Summary</b>  |                   |          |                   |                            |
|--|-------------------|----------|-------------------|----------------------------|
| Model  | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1  | .802 <sup>a</sup> | .643     | .625              | .87190                     |
| a. Predictors: (Constant), Impact of persuasive techniques, Website Design, Ease of Use, User friendliness of the application/ web site, Brand Trustworthiness, Special Offers and Discounts |                   |          |                   |                            |

| <b>Table 2.3. ANOVA<sup>a</sup></b>  |            |                |     |             |        |                   |
|--|------------|----------------|-----|-------------|--------|-------------------|
| Model  |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
| 1  | Regression | 162.741        | 6   | 27.124      | 35.679 | .000 <sup>b</sup> |
|  | Residual   | 90.465         | 119 | .760        |        |                   |
|  | Total      | 253.206        | 125 |             |        |                   |
| a. Dependent Variable: Buying behaviour  |            |                |     |             |        |                   |
| b. Predictors: (Constant), Impact of persuasive techniques, Website Design, Ease of Use, User friendliness of the application/ web site, Brand Trustworthiness, Special Offers and Discounts |            |                |     |             |        |                   |



Table 2.1. shows the variables used in the regression analysis. Table 2.2. Shows that the model is a good fit as the value of  $R^2$  is 0.643. R-square shows the total variation for the dependent variable that could be explained by the independent variables. A value greater than 0.5 shows that the model is effective enough to determine the relationship. In this case, the value is 0.643, which shows that the model has the required potential.

F-ratio: It represents an improvement in the prediction of the variable by fitting the model after considering the inaccuracy present in the model. A value should be greater than 1 for F-ratio in order to yield an efficient model. In the above table, the value is 35.679, which is satisfactory.

These results estimate that as the p-value of the ANOVA table is below the tolerable significance level, thus there is a possibility of rejecting the null hypothesis in further analysis.

The table below shows the strength of the relationship i.e. the significance of the variable in the model and magnitude with which it impacts the dependent variable. This analysis helps in performing the hypothesis testing for a study.

## **7. Conclusion**

The results obtained in the previous section show that the hypothesis that Impact of persuasive techniques, Website Design, Ease of Use, User friendliness of the application/ web site, Brand Trustworthiness, Special Offers and Discounts all affect the buying behaviour of the consumers who buy grocery online. Furthermore, the findings of this study are in line with previous studies conducted by Petrakis (2005), Iskandar & Sulaiman (2003) and Chew et al. (2004).

This study will benefit the firms who operate grocery online by providing them with the knowledge and suggestion on how to increase their customer base and profits through conducting a survey on their customers' buying behaviour. The firms can also identify with this study's findings and use it as a guide in identifying the best shopping channels, website design, promotional techniques, user friendliness of the websites and quality customer relationship management systems.

Understanding consumers' buying patterns is important because it enables enterprises to develop effective marketing strategies that directly influence purchasing decisions. Using this information, firms can create effective marketing strategies that directly influence purchasing decisions.



This study will benefit the public in so much as the findings of this study can be used by local, regional and global agencies when planning programmes to encourage people to use shopping channels such as grocery online. For example, SMEs that cannot afford to advertise their products through traditional media may use the Internet to advertise their products and services. The public will also benefit from this study if it provides guidelines on how to make price comparisons and choice between different shopping channels.

Before the results of this study are used for making changes in practise, further research is needed on other online channels such as book shops, computer hardware and software shops and electronic stores.

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