Project Dissertation

Adoption Intention of Online Grocery Apps amongst Indian Consumers

Submitted By:

Guneet Singh

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Under the Guidance of:

Dr. Rajan Yadav

Associate Professor

DELHI SCHOOL OF MANAGEMENT
Delhi Technological University
Bawana Road Delhi 110042

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Certificate from the Institute

This is to certify that the Project Report titled **Adoption Intention of Online Grocery Apps amongst Indian Consumers** is a bonafide work carried out by Mr. Guneet Singh of MBA 2014-16 and submitted to Delhi School of Management, Delhi Technological University, Bawana Road, Delhi-42, in partial fulfilment of the requirement for the award of the Degree of Masters of Business Administration.

Signature of Guide - Dr. Rajan Yadav Signature of Head (DSM)

Signature of Guide - Anurag Tiruwa Seal of Head

Place:

Date:

Declaration

I, Guneet Singh, student of MBA 2014-16 of Delhi School of Management, Delhi Technological University, Bawana Road, Delhi-42, declare that Project Dissertation Report on **Adoption Intention of Online Grocery Apps amongst Indian Consumers** submitted in partial fulfillment of Degree of Masters of Business Administration is the original work conducted by me.

The information and data given in the report is authentic to the best of my knowledge.

This Report is not being submitted to any other University for award of any other Degree, Diploma and Fellowship.

Guneet Singh

Place:

Date:

Acknowledgement

This is matter of great joy to extend my gratitude to those people who helped me in completion of my dissertation project.

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Guneet Singh

Executive Summary

With India's introduction to e-commerce about a decade ago with websites like eBay and Rediff Shopping, nobody had imagined that India could be one of the fastest growing E-commerce markets in the World. With the introduction as B2C E-commerce websites in India, various other forms of e-commerce have now been introduced in the country, which include B2B, B2G, and C2C. More recently the advent of M-Commerce and Hyperlocal forms of E-commerce have outpaced the growth estimates in India.

This study has been carried out to understand the purchasing behaviour of the customers when they are shopping from the newly introduced concept of shopping for groceries online. The study aims to find out the factors that are most influencing for Indian consumers for their online shopping decisions.

The type of research design used in this study is Exploratory cum Descriptive, in order to signify the most influencing factors affecting people's online shopping behaviour, for which One-Way Anova test was performed to verify the acceptance or rejection of the hypothesis framed, in order to check the impact of different demographic factors on influencing buying behaviour of the people when they are shopping for groceries online.

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CHAPTER - 1

INTRODUCTION

1.1. Introduction to E-commerce in India

Internet has changed the way consumers buy and shop for goods and services. It has rapidly evolved into a worldwide phenomenon. A lot of companies are using the internet to cut marketing costs, hence being able to reduce the prices of their products and services which is enabling them to stay in the highly competitive market.

Some organisations are also using the World Wide Web or the internet technology to communicate internally as well as externally, to sell their product, as a tool to get feedbacks and also to conduct different kinds of surveys amongst their customers. Even the consumers have become internet savvy now a days and are using the technology not just to purchase products, but also to compare and check prices, compare features of similar items and after sale services.

Complementing the huge potential that the e-commerce industry holds, The Internet is an excellent tool for the companies to reach more efficiently to the prospective as well as the existing customers.

A few years ago, most of the revenues of these e-commerce players came from the B2B(Business to Business) commerce, but the B2C(Business to Consumer) commerce companies did not lose hope, took the challenge, and today the number of B2C companies have surpassed those of B2B commerce companies.

With the development in E-Retail in India, a lot of researchers have continuously tried to explain the behaviour of the E-consumers with different views. Many studies brought to the fore some new assumptions and factors which were based on over the older models of customer behaviour, and they were later examined about their validity with the Internet Context.

1.2. Models of E-commerce

E-commerce companies work on one or more of the following models:

1.2.1. B2B (Business-to-Business)

B2B e-commerce is simply defined as e-commerce between different businesses. About 60% of ecommerce is of this type, and many experts predict that B2B e-commerce will keep growing faster than B2C e-commerce. Example: eindiabusiness.com, indiamart.com, tradeindia.com etc.

1.2.2. B2C (Business-to-consumer)

B2C e-commerce is the type of e-commerce where the transactions are between organisations and customers. It requires that the customer gathers information from various sources and then make the purchase of the goods, or information; which is received over an electronic media. It was the first form of e-commerce and now the largest too. The best examples of B2C are Amazon, Flipkart, and Snapdeal etc.

1.2.3. B2G (Business-to-Government)

B2G is the type of e-commerce where the two parties involved in the transaction are – organisation and the government. It requires the need to use the internet for the transactions to complete, which are made for procurement of products and services of public use, procedures for licensing, and other government operations.

1.2.4. C2C (Consumer-to-Consumer)

C2C is the type of e-commerce where two consumers are involved in making and completing the transactions. C2C e-commerce has seen growth over recent years because of the growing use of mobiles for e-commerce transactions. All online auction portals are examples of this type of e-commerce. Sites that are a platform for selling and buying 2nd hand goods online also fall into this category. Example: OLX, Quikr etc. Some online auctions sites are Yahoo Auctions, eBay.

1.3. Hyperlocal Market in India

The hyperlocal business refers to enterprises that are focussed around a small community or geographical area where they operate. Backed by technology, these hyperlocal firms have made it easy for the consumers to connect with several local retailers just over the phone app or a website.

2013 saw the rise of e-commerce in India and 2014 made way for the advent of m-commerce, 2015 was definitely belonged to the hyperlocal marketplace. The industry recorded a massive growth in the year, not only in terms of transactional volume, but

also in terms of consumer adoption. This is very well reflected in the increased interest of the VCs and Angel Investors in the hyperlocal market segment. Hyperlocal start-ups had, by August'15, secured capital funding to the tune of $270 million; the online-only e-commerce players, in comparison, were left far behind.

One of the most prominent factors that led to the evolution of the hyperlocal commerce in India has been the buying behaviour of the Consumers. The rise in the adoption if hyperlocal services has been primarily because of the ease of access and the convenience it provides to the urban consumer, who finds it hard to find time to go to the market and buy products, and hence prefers to buy the usual stuff online which gets delivered to him/her the same day. Still, many Indian shoppers prefer the comfort and familiarity of the neighbourhood stores. In fact, a lot of people especially in tier-2 and tier-3 cities have not really accepted the hyperlocal platforms very well, and still prefer going to the stores themselves and shop for the products that they want.

With the great combination of online channels connecting the offline vendors to consumers, the hyperlocal model has been offering the best of both the worlds to the consumers. Increased customer adoption is not the only factor driving the growth of this hyperlocal model. The efficient and quick delivery of services by these hyperlocal players in the market have given the traditional e-commerce companies a run for money. The scope in this particular industry has attracted continuous interest from investors from around the world to invest in this hyperlocal space in India.

India stands neck to neck with US when the number of smartphone users are considered, when only 30% of the population has embraced the technology of smartphones. This clearly shows that a country of 1.3 billion individuals has an immense growth opportunity, and investors across the world know this and are therefore investing heavily in India. The online shopping boost that the country has seen in the past few years has made the offline small and big retailers to tie up with the hyperlocal start-ups, with a view to increase their sales by the use of technology.

One of the other factors that have worked in favour of the hyperlocal space is that it is a very quick, flexible and an asset light model. Most of the hyperlocal start-ups usually act as a platform and an aggregator that connects the local business to the nearby buyers. Because of this virtual inventory, the costs of setting up and getting to operate a hyperlocal business is quite low as compared to a usual e-commerce venture, which

involves taking care of a lot of aspects such as procurement, logistics, stockpiling, inventory management etc. This also makes it simpler for these businesses to scale up to different geographies across the country as well.

Despite having a lot of things in favour of the hyperlocal space, the industry does have a fair bit of challenges as well. The hyperlocal model, may be simple enough in theory, but is a lot more difficult to implement effectively. One of the challenges that a hyperlocal company may face is to keep track of the inventory with the local merchant. This would require a dedicated and an open 2-way communication channel between the merchant and the marketplace. Effective and adequate training also has to be given to the local delivery boys who act as the face of the company and are at the end of the supply chain. They have to be very pleasing in their behaviour to ensure quality of service to the consumer and thus protect and increase brand value.

All of these factors brings the discussion to an important question of how this hyperlocal industry is going to perform in the coming years. Although 2016 was being expected to give a good aggressive start to the hyperlocal space, but the start of 2016 saw a couple of hyperlocal grocery apps pull its plugs from around 10 tier 2 cities. After this one of the leading grocery hyperlocal companies shut down its operations completely, putting the onus of the decision on lack of number of orders and difficulties in communicating and keeping track of inventory status with the offline vendors. Despite these shut downs the hyperlocal marketplace still holds attractiveness and is a very booming industry. The players who fight the competitive battle well enough are going to stay, others might have to see the exit doors.

CHAPTER – 2

ONLINE SHOPPING SCENARIO IN INDIA

2.1. Online Shopping In India

It is touted that a lot of the growth of the economy would be backed by the domestic consumption of products and services. E-commerce is going to make a huge impact in the retail market. Currently just about 10 % of the retail market in India is organised. A huge pie of the retail sector is still unorganised which is causing huge losses of taxes to the government. Hence, this transition of the unorganised retail to the organised retail because of the e-commerce companies is being backed by the government also.

With increasing access to internet, people in tier-2 and tier-3 towns, and even villages, are now getting more and more access to the internet, enabling them to get products from across the country, like the people in urban areas. Recent studies have highlighted an important statistic that 50-60% of the online shoppers in India are coming from tier-2 and tier-3 cities.

Increasing penetration of Internet through broadband and mobile data has helped the companies to expand their potential consumer base. In India, the penetration of the internet is just around 35% which calculates to somewhere around 402 million people, as compared to the US with 88% and 51% in China. But these numbers are expected to increase for India, because of the increasing affordability as well as decreasing prices. With the launch of 4G high speed internet at affordable costs, it is expected to have even more people online. More importantly, recent revelations by e-commerce companies have said that more than 60% of orders for the companies are being placed from its mobile apps.

Technology and innovation is helping these e-retailers push online shopping even further by offering benefits to consumers. These offers and discounts are not usually available at the offline, brick and mortar stores. Indian customers are very price sensitive and will thus move to wherever they find the best deal. Benefits including free shipping, No-Questions-Asked Return Policy ranging from 7-30 days, Cash on Delivery, are very tempting for the consumers, which has led to the movement of consumers from offline to the online stores.

This movement from offline to online shopping is considered to be a big success for the e-commerce industry, considering the fact that Indians are very reluctant to sharing

their Card details for online transactions. To counter that, there are Multinational companies like Uber, who introduced Cash as a payment option for the first time when they entered India about three years ago. Apart from Cash on Delivery, companies are starting to offer options of Card on delivery also. Although this payment option is not very popular among consumers as well as the companies, it is touted to grow in popularity in the coming years.

Out of the 520 million Debit/Credit Card users only about 50-60 million use their cards for online transactions. The forerunner in the very impressive growth ride of the Indian e-commerce, Flipkart has been the poster child of the E-Retail sector in India, with a valuation touching $15 billion a few months ago. Although the valuation has been de-valued by its investors, it still remains the most valued start up in India. Amazon that came into India only 2-3 years ago, has now overtaken Flipkart in terms of number of monthly visits.

2.2. Online Grocery Shopping

Now the humble local hometown grocery shops are becoming digitized and are available on your smartphones, computers and tablets. Just to imagine the future, no ling checkout lines, no forgetting the grocery list at home, no carrying heavy bags to your homes. Online grocery has and will continue to drastically change the customer's relationship with not just the grocery shops, but also food outlets and electronics shops. Hyperlocal market space is bringing, what was once considered luxurious, into our daily lives as an everyday convenience for the consumers.

2.3. General Procedure of Order Processing at an Online Grocery Delivery App/Website

Following are the steps that are involved in the processing of an order for an online grocery Delivery App/Website

2.3.1. Placing the order on the Smartphone/Computer

The first step is taken by the consumer, who on the app enters his/her location, or lets the GPS of his smartphone pick up the location.

2.3.2. Selecting the items

The next step involves the customer to select the items that he/she wants to be delivered to his/her address, and add them to the cart, and checkout by making the payment using one of the many payment options available in the app. The payment options generally available are Credit/Debit Cards, Net Banking, Mobile Wallets, and Cash on Delivery.

2.3.3. Order Fulfilment

Once the order is received by the company, the details of the order, i.e. the items in the order, are forwarded to the delivery person, who is nearest to that location. When he receives the order details, he goes to the nearby shops that are registered with the company to collect the items in the order. Once the items are collected, the delivery person goes to the address entered by the customer, and delivers the items, and collects the payment if the order is Cash on Delivery.

Below is the Flow chart of the Order placing and fulfilment process that is generally followed by the online grocery hyperlocal marketplaces.

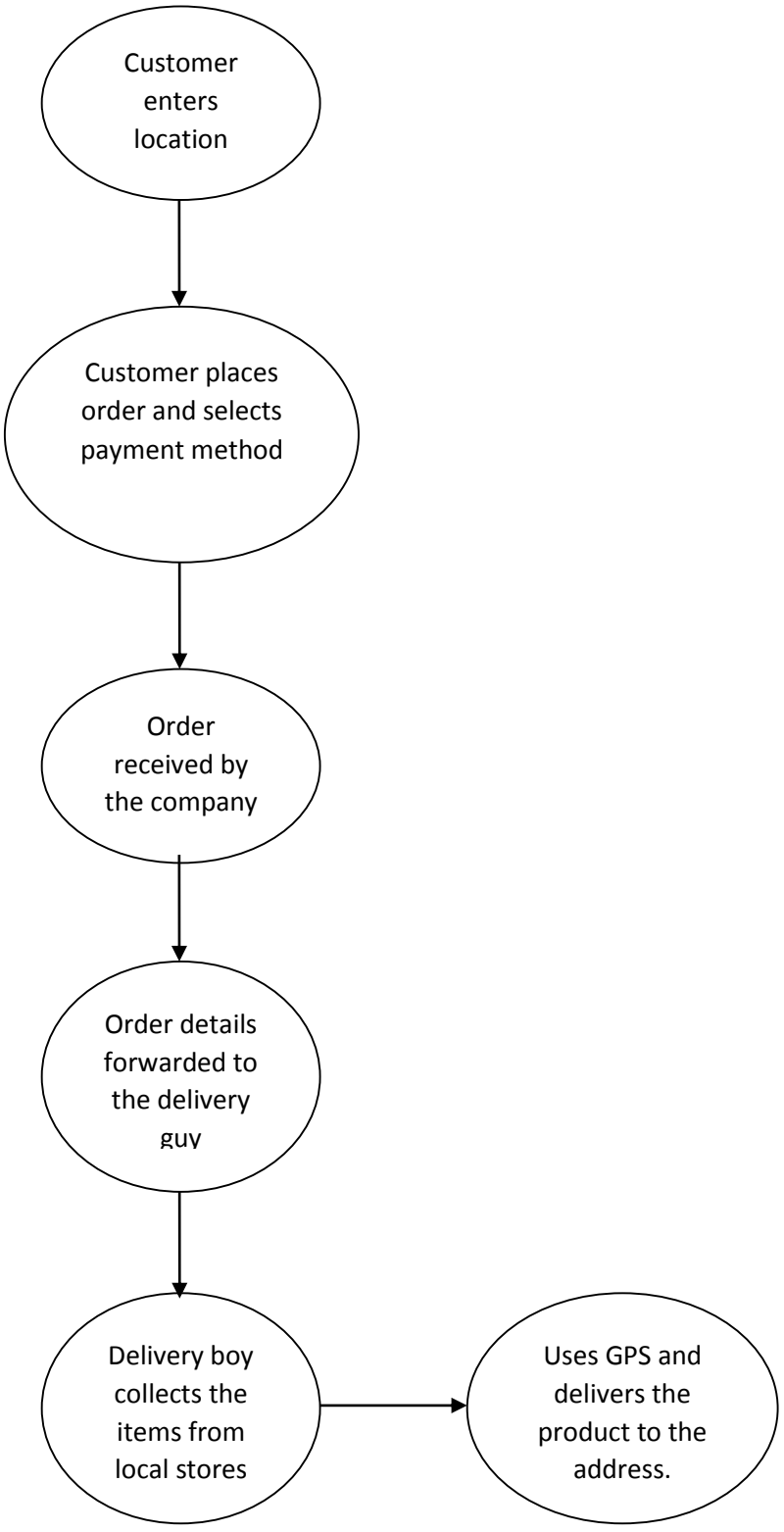

Figure 2.1. General Order Processing flow chart of Online Grocery Apps.

2.4. Major Players in the Online Grocery Delivery Apps/Websites

2.4.1. BigBasket

Bigbasket is the biggest and one of the known faces in the online grocery shopping industry. With more than 16,000 items and more than 1200 brands to choose from, one can find anything that you would find at a local kirana store or a supermarket. Everything from the freshest of vegetables and fruits, pulses, spices, rice, every type of packaged food, all dairy products, meat and chicken and fish, personal care products, they are having everything. For the delivery one can choose from different time slots according to his/her availability at the delivery address. Bigbasket delivers to almost all pin-codes in a selected number of cities including, Bengaluru, Gurgaon, Mumbai, Delhi, Noida, Ghaziabad, Kolkata, Ahmedabad, Mysore, Pune to name a few. They provide a lot of options for making the payments. These would include cash on delivery, credit cards, debit cards, bet banking and e-wallets.

You can choose a convenient delivery time from the available 4 Slots in the day. For orders placed late in the day, the items in the order are delivered on the next day, or the day selected by you and in the time slot selected.

2.4.1.2. Screenshots from the App

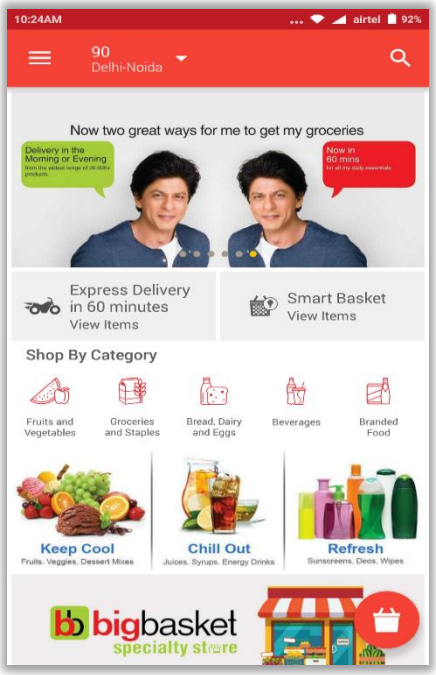

Figure 2.2. Homepage

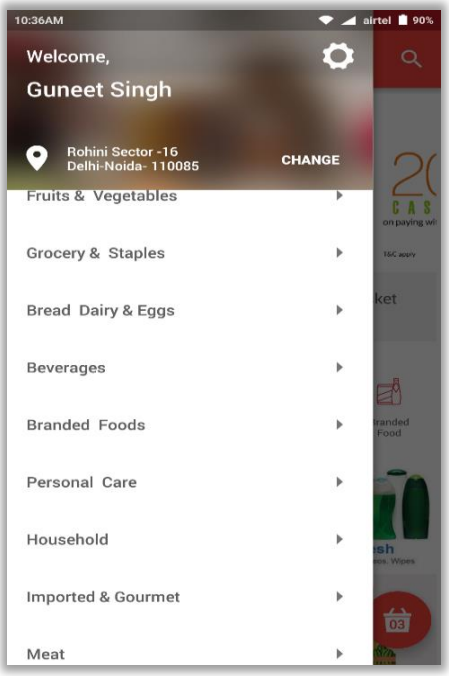

Figure 2.3. Product Categories

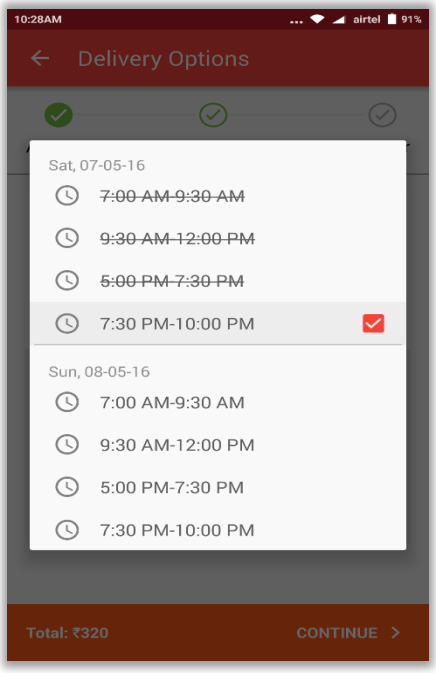

Figure 2.4. Delivery Time Slots

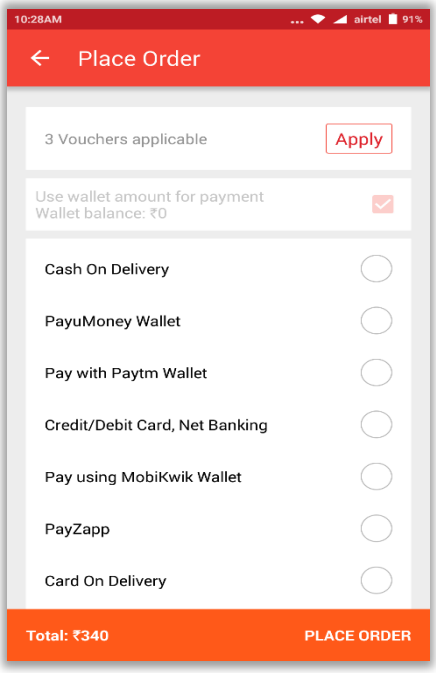

Figure 2.5. Payment Options

2.4.2 Grofers

Grofers is a hyperlocal Mobile E-Commerce Platform that is transforming the shopping experience for people like us, by connecting us to the local store. User can order through the app and get everything delivered to their doorstep quickly. Offers 90 minute delivery which is one of the USPs of Grofers.

Founded by Saurabh Kumar and Albinder Dhindsa in December 2013, the company is headquartered in Gurgaon. It has its operations in 9 cities currently.

Screenshots from the App

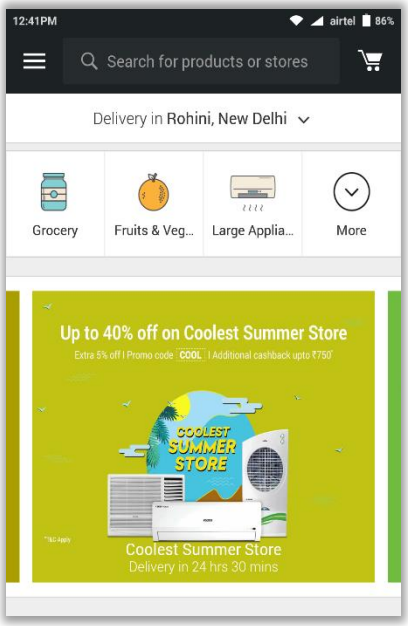

Figure 2.6. Homepage

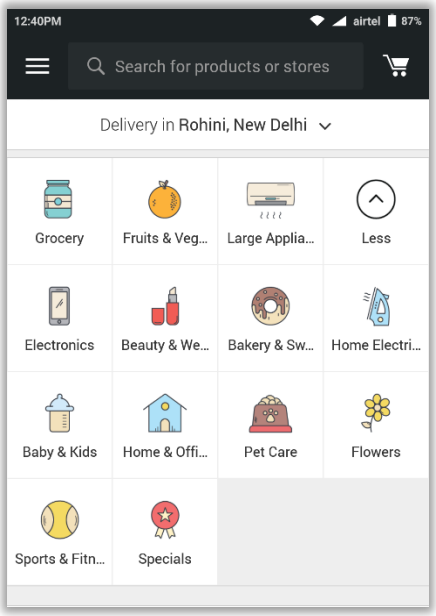

Figure 2.7. Product Categories

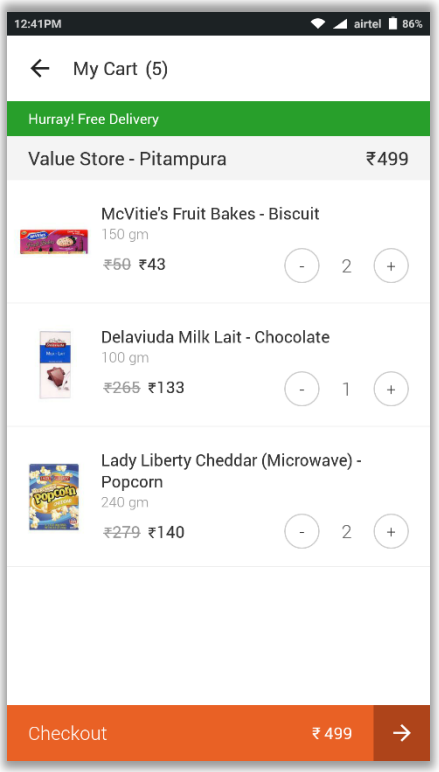

Figure 2.8. Shopping Cart

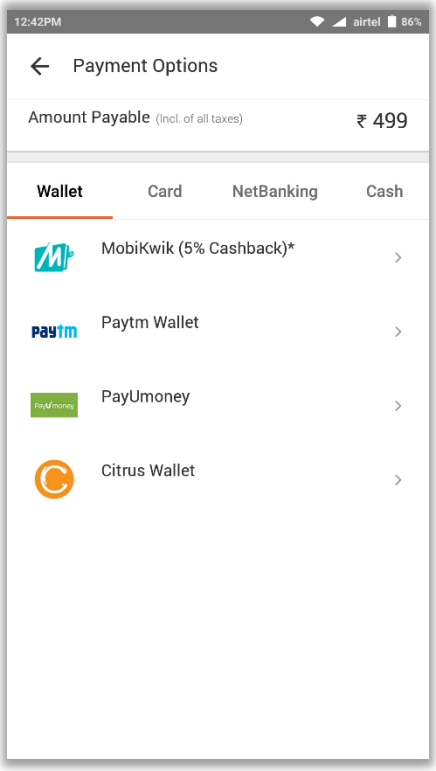

Figure 2.9. Payment Options

2.4.3. Peppertap

PepperTap was an on-demand grocery delivery service company based in Gurgaon, India, which started operating in November 2014. The company provided an option to shop grocery and household items online through the website and mobile app. Navneet Singh and Milind Sharma are the co-founders of the company.

Started with one service location, Gurgaon, in November 2014, PepperTap had become one of the major players in the online grocery store in India by Q3 2015; by expanding into as many as 31 cities. Unfortunately, by the end of 2015, the company decided to scale back operations from 9 tier 2 cities and some tier 3 cities as well- and by Jan 2016 - the company operations were limited again to 7 cities.

The PepperTap app, used to allow users to look into more than 5000 unique products across categories including grocery & staples, fruits & vegetables, and household goods. As of February this year, it was delivering over 20K orders a day.

Gurgaon-based on-demand grocery delivery start-up PepperTap has shut down its customer centric grocery delivery app in all the cities that it was operating in. Earlier in February, the company had shut down business in larger cities such as Ahmedabad, Chandigarh, Mumbai, Kolkata, Chennai, and Jaipur. Before that, in September 2015, it had rolled back operations in Agra and Meerut due to non-acceptance of the concept in the markets. The Gurgaon based e-commerce grocery supplier has cited high customer acquisition and lack of integration with stores for the decision of shutting down.

Screenshots from the App

Figure 2.10. Homepage

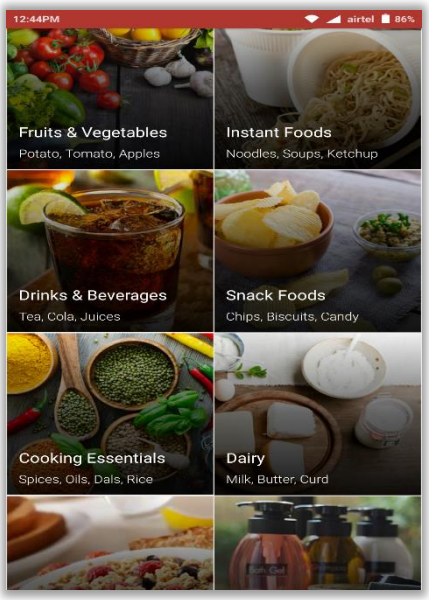

Figure 2.11. Product

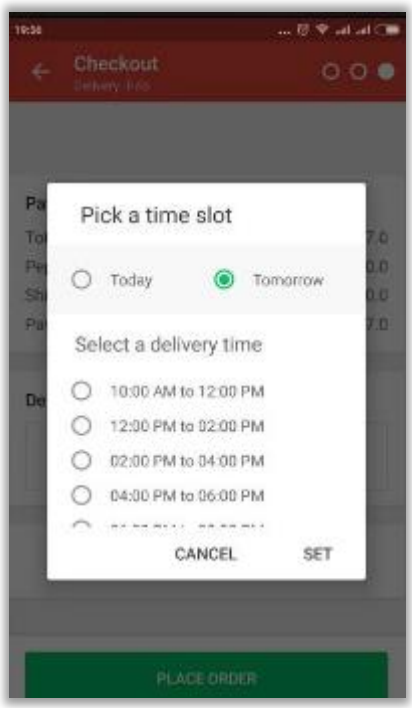

Figure 2.12. Delivery Time

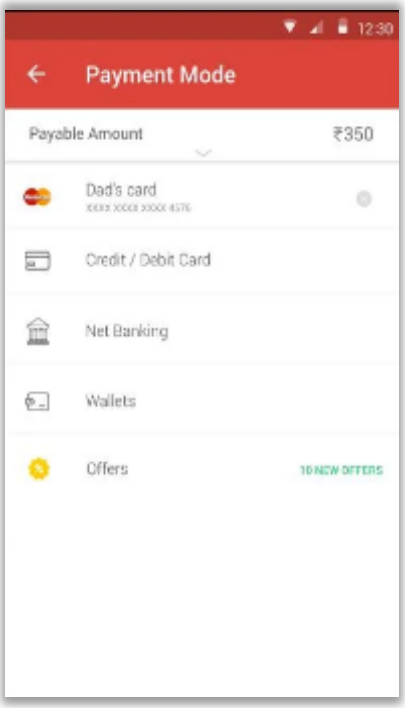

Figure 2.13. Payment

2.5. What Experts Say about the Online Grocery Market

Muralikrishnan B., country manager at eBay India says that India is among the fastest-growing markets and has been placed among the important potential markets for eBay. He explains that the Indian consumer is more inclined towards buying lower priced but high margin products like clothes and shoes just like it is in the West amongst eBay shoppers rather than buying highly priced, low margin products like electronics, gadgets etc., which are picking up in the online sales as people are becoming more comfortable with the companies and are trusting them more.

He exclaims that the Indian e-commerce market is still at a nascent stage but is growing at an extremely fast pace. The Indian e-commerce market, about five years back, was more limited to people doing train and flight ticket bookings. The trend has changed as the gen-Y, the tech-savvy people in the country with its increasing income levels, tends to find online shopping more convenient than the traditional in-store shopping.

Technopak, a Consulting firm, says that the Indian E-commerce Industry is expected to grow from the current $20 billion to more than $70 billion by 2020. Total sales in e-commerce just around 0.8% of India's total retail sales.

E-commerce has come out as a boon for the current economic growth story. Although less than 50 million internet users are actually engaged in e-commerce activities, there are around 300-350 million internet users in India that are ready for e-commerce activities.

Since entry costs and operational costs are less in India as compared to other countries like the United States of America, the country has seen an increasing number of e-commerce start-ups coming up every year in the last few years. These start-ups have been in all the verticals of business like fashion, accessories, groceries, sports, furniture etc.

Aaramshop.com's CEO and MD, Vijay Singh exclaims that the hyperlocal grocery companies, in order to decrease the cost associated in carrying out their business operations, they had to apply the concept of Virtual Inventory, using cloud computing, where it connects the local kirana stores to the online buyers. This Virtual Inventory, where the online grocer does not have to setup an actual inventory helps save lots of costs, decreasing it by almost.

He also says that the concept of shopping for groceries online has reportedly been creating a work-life balance in urban cities where working couples are quite busy with their professional lives, and find it difficult to devote time to their daily needs in life.

Robertson in 1967 classified innovation in three categories: continuous, dynamically continuous and discontinuous. In critical view, discontinuous innovation not just involves the innovation of a new product, but it also triggers an important change in consumers' buying behaviour. Online grocery buying is quite a discontinuous innovation, as it does involve a big change in the behaviour: the online shoppers give up social interactions involved in buying at supermarkets, and doing away with the ability to check the quality of products before making the purchase. For growing beyond the existing niche size of the online grocers, the retailers not just need to understand the reasons that make the customers change their behaviour, but they also need to be aware of the degree to which their online shopping experience is strengthening the adoption process. Hence, it can be inferred that there is a direct relationship between the consumers' perception of innovations and the rate of its adoption. As an example: The convenience perceived by the customers that is brought by online grocery shopping has brought about a positive impact on the adoption by the time-pressed customers.

Despite the fact that consumers regularly shop at more outlets, they say that because of them being time-pressed, they want more convenience-oriented and value adding services that save them time. In reference to the mentioned need of convenience and rapidly increasing internet penetration levels, it is believed that consumers are welcoming the benefits offered by online grocery apps/websites. However, there are some who are still negative about the success of online grocery buying in the online space, especially in the Indian market.

It is a well-known fact that costs of shopping include both fixed and variable costs. The travelling distance of the shops from the consumers' residences, customers' loyalty and his/her preferences towards a specific store constitutes fixed costs of shopping. Although the variable costs, depend on the customers' list of items they want to shop, travelling costs and time have been discouraging customers to go and purchase from a supermarket and encourage them to shop for groceries online. Most of the consumers just hate paying a premium, which is usually charged in the form of shipping charges.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Significance of the Research

The purpose of this research is to determine the consumer behaviour of people towards the adoption of online grocery Apps/Websites that are increasing in popularity now a days. Online Grocery Shopping Portals like Bigbasket, Grofers, Peppertap, Godrej Nature's Basket, LocalBanya etc. are some of the examples in this category. This research attempts to determine the factors which are kept in mind by the people who are buying or not buying from online grocery portals. The research will also attempt to assess whether any relationship exists between the factors brought out from the study and demographic factors like age and monthly income.

3.2. Scope of the Study

The focus of the study is confined to analyse the factors influencing the buying behaviour of people towards online grocery stores, amongst people living in cities where these online grocery portals are operational. The respondents are from Delhi-NCR and Bangalore. The respondents are almost equally divided amongst students and salaried individuals.

3.3. Research Approach

After an extensive Introduction to the Groceries and hyperlocal space in the Indian e-commerce market, a set of variable were found that influence the buying behaviour of people towards online grocery portals. Using those variables, a questionnaire was formed and was filled by the people living in a couple of tier-1 cities, Delhi-NCR, and Bangalore. After the data was collected, analysis was done in SPSS. Factor analysis was done on the variables to assess the relationship between them and reduce the number of factors. After the factors were formed, One-Way Anova was done to assess whether any relationship exists between the factors brought out from the study and demographic factors like age and monthly income.

3.4. Research Design

The research design refers to the overall strategy chosen to integrate the different components of the study in a coherent and logical way, thereby, ensuring that the

research problem is effectively addressed; it constitutes the blueprint for the collection, measurement, and analysis of data.

Broadly there are three categories of research design:

1. Exploratory research
2. Descriptive research
3. Causal research

The type of research design used in this study is Exploratory cum Descriptive research design.

3.5. Research Instrument & Data Collection

For data collection, a questionnaire was formed by using the factors in the previous studies that have taken place in this field to supply the data needed to test the hypothesis.

The data in the study was analysed by using IBM SPSS and basic Microsoft Excel functionality. Analysis has been done using multivariate techniques. Factor Analysis was performed to find out the prominent factors determining the consumer behaviour and further one way Anova, and post hoc tests were performed for Hypothesis testing for the study.

3.6. Population & Sample Size

A population is the total of all the individuals who have certain characteristics and are of interest to a researcher, Hence for this study the people living in the cities where these online grocery portals are available were the target audience.

A sample is a subset of the population, which represents the size of population on which the study is being performed. In this study the sample size taken was 108.

3.7. Sampling Technique

Convenience Sampling was used in this study. A convenience sample is one of the main types of non-probability sampling methods. A convenience sample is made up of people who are easy to reach.

4.1. Data Analysis

4.1.1 Details of the Respondents

Number of Respondents: 108

Source of Data Collection: Questionnaire

4.1.2. Demographic Information of the Respondents

The percentage of respondents have been shown below in the lights of Age, Occupation, Gender and Annual Income.

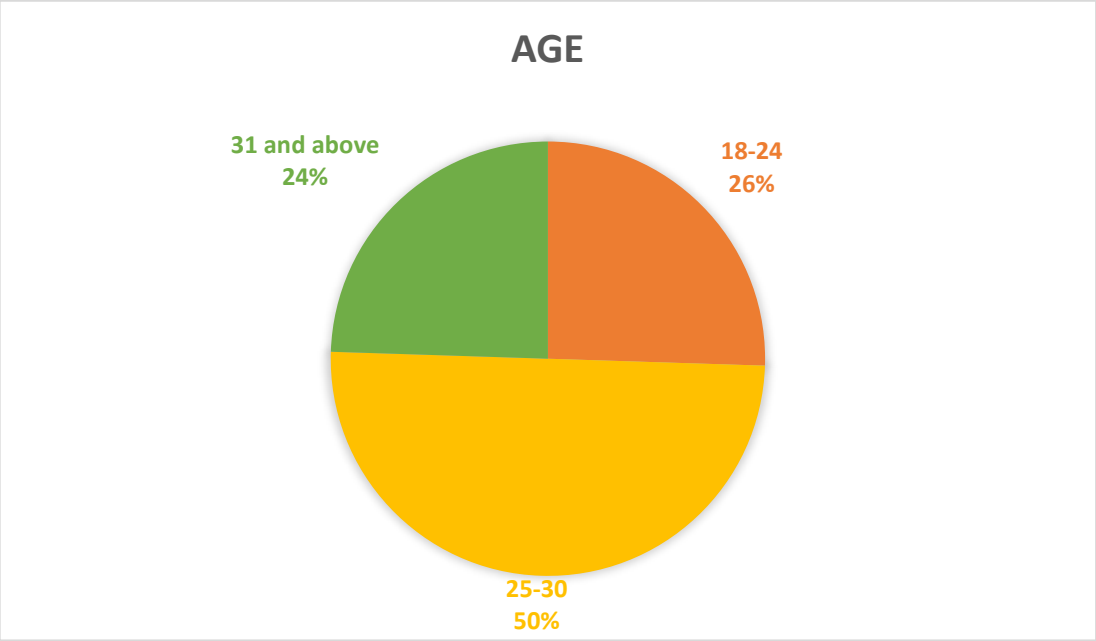

Figure 4.1. Age distribution of the Sample

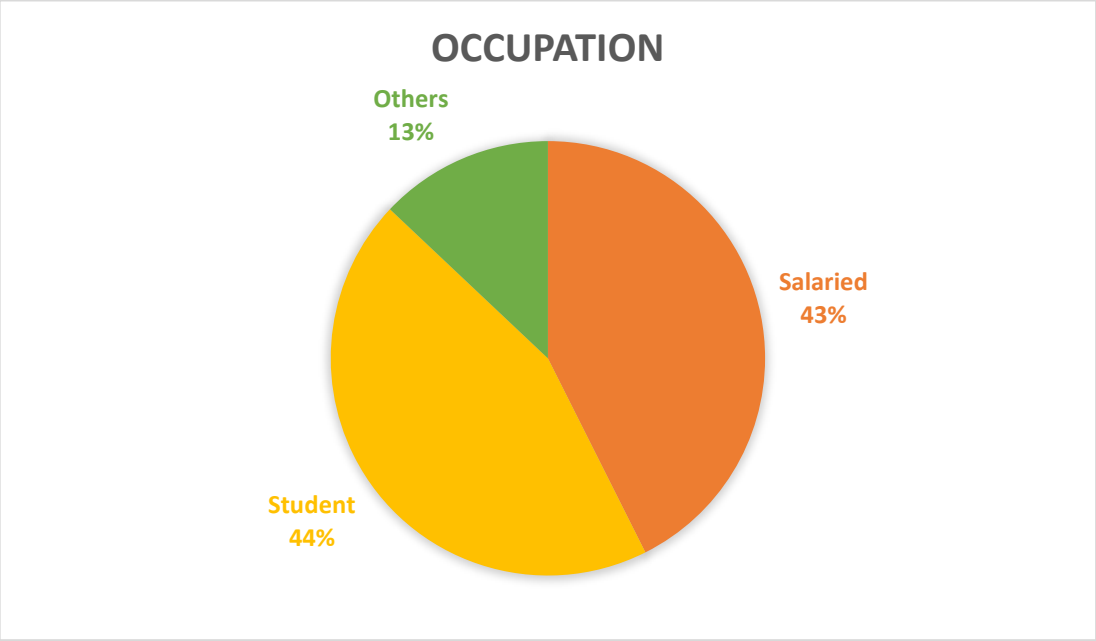

Figure 4.2. Occupation distribution of the Sample

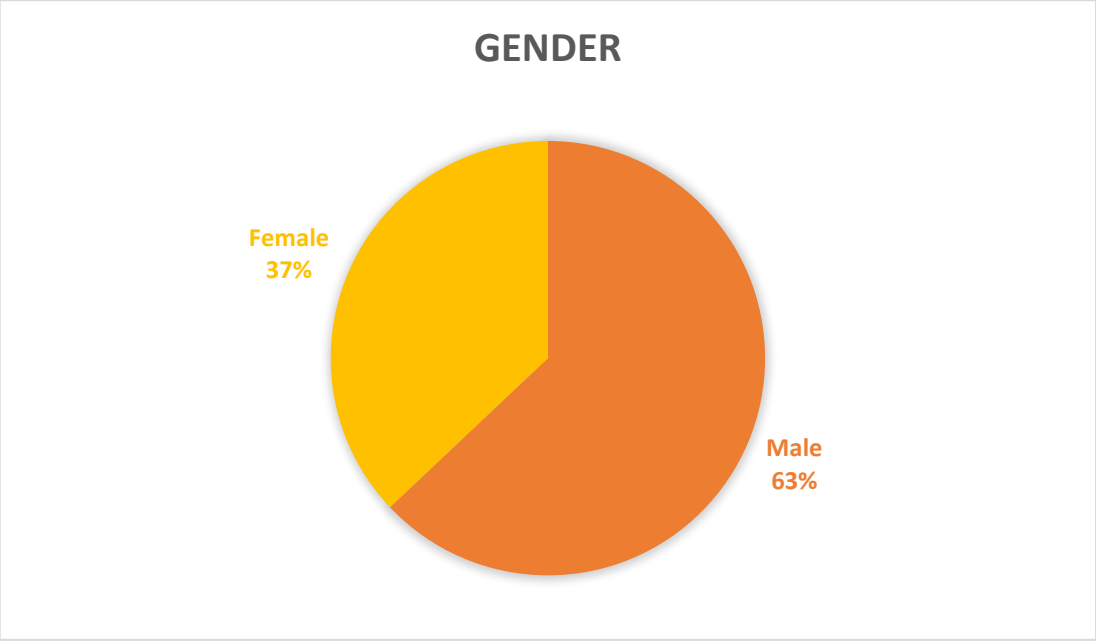

Figure 4.3. Gender distribution of the Sample

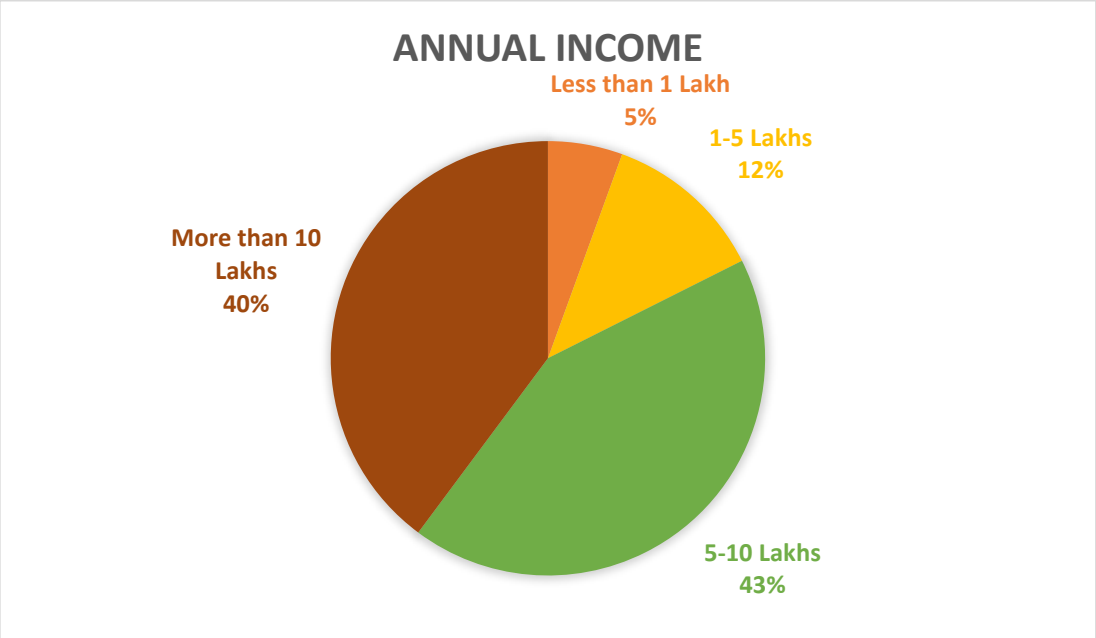

Figure 4.4. Annual Income-wise distribution of the Sample

4.2. Factor Analysis

Factor analysis is used to find factors among observed variables. If data contains many variables, you can use factor analysis to reduce the number of variables. Factor analysis groups variables with similar characteristics together. With factor analysis you can produce a small number of factors from a large number of variables which is capable of explaining the observed variance in the larger number of variables. The reduced factors can also be used for further analysis.

After extensive literature review, a questionnaire was formed using the 29 items/objects that might influence the consumer behaviour or buying decision of people from online grocery stores. After the Factor analysis, 8 groups of variables with similar characteristics is formed.

Now, one by one, the output and the interpretation of the factor analysis in the SPSS will be discussed. We will discuss each factor, the variables it contains and will give a name to that factor.

Factor 1 consists of the following variables and is labelled as 'Major Features':

- I would like all kinds of products to be available on the App/Website (i.e. Wide variety of Products)
- The results should be accurate when I search for a product

- Free Shipping
- Cash On Delivery
- The App/Website should be easy to use
- Delivery Tracking of orders placed
- I need home delivery of the products

Factor 2 consists of the following variables and is labelled as '**Customer Value**'

- Behaviour of the delivery boys is not very pleasing
- The app/website interface are not easy to use
- The Customer Support of these Companies is not very good for post purchase issues
- I don't think that online payments are safe
- My friends/family influence me to shop for groceries online

Factor 3 consists of the following variables and is labelled as '**Areas of Improvement**'

- They increase their variety of products available
- Their delivery time is improved
- Discounts are offered
- They provide more offers and discounts
- If they improve their return policy

Factor 4 consists of the following variables and is labelled as '**Comparison with Local Kirana shops**'

- I cannot feel the product in hand
- I am not sure about the quality of the product
- I find the products to be priced more than the nearby kirana shops

Factor 5 consists of the following variables and is labelled as '**Payment Options Available**'

- Credit Cards
- Debit Cards
- Mobile Wallets

- Cash on Delivery

4.3. KMO & Bartlett's test

KMO & Bartlett's Test of Sphericity is a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted. In most academic and business studies, KMO & Bartlett's test play an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0.6. In our case, the KMO comes out to be 0.589,which is quite nearly the expected index of 0.6.

For Factor Analysis to be recommended suitable, the Bartlett's Test of Sphericity must be less than 0.05,In our case the, significance of Bartlett's test of sphericity came out to be .000, which is less than 0.05, Hence we could say that the sample is adequate and the responses collected to the problem are valid and suitable.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.589
Bartlett's Test of Sphericity	Approx. Chi-Square	1842.502
	df	378
	Sig.	.000

Table 4.1. KMO and Bartlett's Test

4.4. One – Way Anova

Now after we have reduced the number of variables from 29 to 8 factors, now we will try to assess any significant relationship between these factors and the demographics such as age and monthly income, for which we would be doing One-way ANOVA (Analysis of Variance) to test the following hypotheses. Data is normally distributed and homogeneity of variance has also been checked using Levene's Statistic.

4.4.1. Hypothesis – 1

H_0: There is no significant relationship between the factors influencing the purchase of grocery items online and age.

H_1: There is a significant relationship between the factors influencing the purchase of grocery items online and age.

The table for one way Anova (as age being the independent variable) has been shown below and it is evident that only one factor have p value of less than 0.05 and hence the null hypothesis can be rejected for **Customer satisfaction** and **physical check of products.**

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Major_Features	Between Groups	1.155	2	.577	.430	.652
	Within Groups	141.068	105	1.344		
	Total	142.223	107			
Customer_Satisfaction	Between Groups	9.073	2	4.537	4.436	.014
	Within Groups	107.375	105	1.023		
	Total	116.449	107			
Variety_and_Discounts	Between Groups	5.038	2	2.519	2.688	.073
	Within Groups	98.406	105	.937		
	Total	103.444	107			
Payment_Options	Between Groups	5.577	2	2.788	1.718	.184
	Within Groups	170.393	105	1.623		
	Total	175.970	107			
Physical_check_of_products	Between Groups	23.254	2	11.627	7.456	.001
	Within Groups	163.736	105	1.559		
	Total	186.991	107			

Table 4.2. One-way Anova table (age as Independent Variable)

Customer Satisfaction: There is a statistically significant difference between groups as determined by one-way ANOVA (F (2,107) = 4.436, p = 0.014). A Tuckey post-hoc test reveals that customer satisfaction is statistically higher for age group 18-24 years (2.832 plus minus 0.44840) than for age group 30 years and above (1.360 plus minus 0.379). It can be inferred that consumers between the age group of 18-24 years give more emphasis to customer satisfaction, in comparison to those above 31 years, in purchase of grocery online.

Physical Check of Products: There is a statistically significant difference between groups as determined by one-way ANOVA (F (2,107) = 7.456, p = 0.001). A Tuckey post-hoc test reveals that physical check of products is statistically higher for age group 18-30 years (1.067 plus minus 0.468). than for age group 30 years and above(3.258 plus minus 0.44840) It can be inferred that consumers between the age group of 18-30 years give less emphasis to physical check of products, in comparison to those above 31 years, in purchase of grocery online.

4.4.2. Hypothesis – 2

H_0: There is no significant relationship between the factors influencing the purchase of grocery online and annual income.

H_1: There is a significant relationship between the factors influencing the purchase of packaged food items and annual income.

The table for one way Anova (as annual income being the independent variable) has been shown below and it is evident that only one factor have p value of less than 0.05 and hence the null hypothesis can be rejected for **Major features, variety and discount, and payment options.**

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Major_Features	Between Groups	14.203	3	4.734	5.017	.003
	Within Groups	96.252	102	.944		
	Total	110.455	105			
Customer_Satisfation	Between Groups	3.557	3	1.186	1.214	.308

	Within Groups	99.603	102	.976		
	Total	103.160	105			
Variety_and_Discounts	Between Groups	10.571	3	3.524	4.635	.004
	Within Groups	77.545	102	.760		
	Total	88.117	105			
Payment_Options	Between Groups	14.201	3	4.734	3.168	.028
	Within Groups	152.415	102	1.494		
	Total	166.616	105			
Physical_check_of_products	Between Groups	8.851	3	2.950	1.907	.133
	Within Groups	157.825	102	1.547		
	Total	166.676	105			

Table 4.3. One-way Anova table (monthly income as Independent Variable)

Major Features: There is a statistically significant difference between groups as determined by one-way ANOVA (F (3,105) = 5.122, p = 0.03). A Tukey post-hoc test reveals that major features is statistically higher for people with annual income above 10 lakhs (mean 4.3136) than for people with annual income between 1 lakh-5 lakhs(mean 3.1978) . It can be inferred that consumers above the annual income of 10 lakh rupees give more emphasis to major features, in comparison to those who have annual income between 1lakh – 5lakh rupees, in purchase of grocery online.

Variety & Discounts: There is a statistically significant difference between groups as determined by one-way ANOVA (F (3,105) = 4.635, p = 0.04). A Tukey post-hoc test reveals that variety and discounts is statistically higher for people with annual income above 10 lakhs (mean 4.063) and with annual income 5lakhs – 10 lakhs (mean 4.100) than for people with annual income between 1 lakh-5 lakhs (mean 3.1846). It can be inferred that consumers above the annual income of 5 lakh rupees give more emphasis to variety and discounts, in comparison to those who have annual income between 1lakh – 5lakh rupees, in purchase of grocery online.

Payment Options: There is a statistically significant difference between groups as determined by one-way ANOVA (F (3,105) = 3.168, p = 0.28). A Tukey post-hoc test reveals that Payment Options is statistically more important for people with annual income below 1 lakh (mean 4.667), than for people with annual income between 1 lakh-5 lakhs (mean 2.). It can be inferred that consumers below the annual income of 1 lakh rupees give more emphasis to Payment Options, in comparison to those who have annual income between 1lakh – 5lakh rupees, in purchase of grocery online.

CHAPTER 5

CONCLUSIONS

Based on this study of buying behaviour of people buying groceries online, we can infer the following few points.

1. The study observes that **major features** that an online grocery portal offers, is given higher importance by people with annual income above 10 lakhs, than for people with annual income between 1 lakh-5 lakhs.
2. The study reveals that consumers above the annual income of 5 lakh rupees give more emphasis to **variety**, in comparison to those who have annual income between 1lakh – 5lakh rupees, in purchase of grocery online.
3. It can be inferred from the study that consumers below the annual income of 1 lakh rupees give more emphasis to **Payment Options**, since a lot of the people earning less than 1 lakh would be usually using cards or online payment options like net banking or mobile wallets. They generally opt Cash on Delivery as the mode of payment when ordering groceries, or anything, for that matter, online. Whereas people with more annual income are more likely to pay using Debit/Credit cards, net banking or mobile wallets, while purchasing grocery online.
4. The study reveals that consumers between the age group of 18-24 years give more emphasis to **customer satisfaction**, in comparison to those above 31 years, in purchase of grocery online. The millennials, i.e. people of the age group 18-25 are quite aware now a days, and are using social media whenever they are dissatisfied with the goods or services they buy. Also they want to get what they are paying for. Whereas it is not so, when it comes to the people aged more than 31 years. They do not give much importance to the after purchase customer service they are receiving. They just seem to be happy with the purchase they have made.
5. The survey reveals that **physical check of products** for consumers between the age group of 18-30 years, who give less emphasis to the ability of checking the products in their hands, in comparison to those above 31 years, in purchase of grocery online. People aged, 31 years and more have the habit of checking the products physically before buying, since they have done it for many years in their lives, because online buying was not a common thing a few years ago.

CHAPTER 6

LIMITATIONS AND RECOMMENDATIONS

6.1. Limitations

1. The key limitation of the study is the sampling frame owing to time and budget constraints
2. We cannot generalise the findings of the study as the sample size is pretty small
3. The respondents belonged to only two geographical locations i.e. Delhi-NCR and Bangalore
4. The sampling technique used was convenience sampling, which might not depict the actual picture of the sample

6.2. Recommendations

1. One of the questions in the questionnaire was regarding the Annual Income, so the respondents might have not answered correctly since a person's income is something not everybody wants to share
2. Although there is not much of literature is available in this field, help can be taken from the literature available in the field of Online Shopping, overall, for which there is loads of literature available.
3. Many more variables could be taken into further consideration for further research
4. Most of the respondents (76%) were below the age of 30, most of them were students, who might not be purchasing groceries very often. It might not depict the actual picture of the buying behaviour of the people who are actually buying groceries online regularly
5. Further study could be taken up, by selecting the sample more precisely, as it is what is required in the study

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CHAPTER 8

ADHERENCE SHEET

S.no	Phases	Expected date to finish the task	Actual date	Signature
I	Proposal Discussion	5th April, 2016		
II	Data Collection and analysis	12th April, 2016		
III	First Draft	19th April, 2016		
IV	Final report submission	26th April, 2016		

9.1. Questionnaire

Gender:-

□ Male □ Female

Age:-

□ 18-24 □ 25-30 □ 30 and above

Occupation:-

□ Student □ Salaried □ Business □ Any other (please mention) _____

Annual Family Income from all sources:-

□ Below 5 lakhs □ 5 lakhs – 10 lakhs □ 10 lakhs and above

Q1. Do you shop online for apparels/electronics/everything other than groceries?

□ Yes □ No

Q2. Do you shop for groceries online?

□ Yes □ No

Q3. Which items do you shop for using online grocery Apps?

- Biscuits/Namkeen
- Daily use items (Salt/Sugar/Pulses/Flour)
- Fruits and Vegetables
- Packed Food(Noodles/Juices/Ready to eat)
- Milk and other Dairy Products
- Personal Care Products
- Baby Care
- Others (Please specify)

Q4. How often do you shop for groceries online?

- More than once a week
- Once a week
- Once a fortnight
- Once a Month
- Once in 2-3 months
- Very Rare

Q5. How much do you usually spend per order? (Rupees)

- Below 500
- 500 – 1000
- 1000 – 5000
- 5000 & above

Q6.Where do you shop for grocery items?

- Big Basket
- Grofers
- LocalBanya
- Nature's Basket
- PepperTap
- Nearby Kirana shop
- Hypermarket Stores (Big Bazaar/More/Reliance Fresh etc.)

Rate the following statements on a scale of 1 to 5 (1: Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree)

Q1. I buy groceries online because:-

- I need home delivery of the products
- Deliveries are done within 2-3 hours
- I need something that is not easily available in shops
- I don't have time to go to the market
- Discounts are offered
- My friends/family influence me
- Any other _____

Q2. I find these factors important for me to accept an online grocery shopping App/Website:

- Features and options that the App provides (e.g. wish list, Add to cart, save for later, Price alerts etc.)
- The App/Website should be easy to use
- The results should be accurate when I search for a product
- I would like all kinds of products to be available on the App/Website (i.e. Wide variety of Products)
- These Payment Options are a must:
    - Cash On Delivery
    - Net Banking
    - Debit Cards
    - Credit Cards
    - Mobile Wallets (PayTM, Mobikwik, Freecharge etc.)
- Free Shipping
- Security of Personal Information
- Delivery Tracking of orders placed

Q3. I don't shop for groceries online because

- I am not sure about the quality of the product
- I cannot feel the product in hand
- I find the products to be priced more than offline kirana shops
- The app/website interface are not easy to use
- Security issues in the Payment Systems
- Behaviour of the delivery boys

Q4. I will buy more from online grocery stores:

- If they keep offering discounts
- If they improve their delivery time
- If they increase their variety of products available
- If they improve their return policy