A PROJECT REPORT TO STUDY HOW E-COMMERCE CHANGED THE CUSTOMER BUYING PATTERN OF ELECTRONICS ITEMS WITH REFERENCE TO AMAZON INDIA

CONFIDENTIAL

ABSTRACT

In this paper an attempt has been made to study the effect of the advent of Online Shopping on the Consumer buying pattern of Electronic Goods in India.

Previously all goods were bought from the physical market – meaning the brick and mortar stores. But with time people got more and more entangled in complex and busy life. To cash on this opportunity came in – Online Shopping. They started providing huge option of goods in their web-sites, which is like an e-market place. It came with a number of advantages – like lots of options, heavy discounts, lesser price, comparison facility, filtering as per the choices, service tracking facilities, return and exchange facilities and so on and so forth.

Some of the most famous online shopping sites are – Amazon, Flipkart, eBay, Nykaa, Zivame, Snap deal, Shop clues etc. Most of these Shopping Sites sells almost all kinds of items, while some amongst them specialize in some category of consumer products. Of these various companies, it has been seen that even though they sell almost all kinds of products, they have become popular over time for one or few category of products. Like Amazon – For Electronic items, books, Flipkart – Clothes, shoes, accessories, E-bay – for online auctioning, Nykaa – For beauty products and so on.

We will however focus our study on how Amazon.in has emerged as one of the most important website for purchasing Electronic items and why. It has been seen that Amazon.in with time has slowly eaten away many small businesses with its vast product ranges and fierce pricing techniques leading to closure of small scale businesses which could not suffer the losses. Hence it becomes increasingly important to study how and why Amazon.in became so popular amongst customers in India (will concentrate our survey on Kolkata, West Bengal), how many people are aware of these facilities of online buying of Electronic items and how many of them use them in regular life. How has their sale increased over the years? This will help us make plans to suggest how the small scale businesses can join hands with Amazon.in and stay afloat in the market.

INDEX

SL No.	TOPIC	Page No.
1	Preface and Acknowledgements	4
2	Introduction	5
3	Problem Statement	
4	Hypothesis	
5	Methodology	
6	Data Representation	
7	Data Analysis	
8	Data Interpretation	
9	Conclusion (Bibliography, Appendix)	
10	Limitation	

PREFACE AND ACKNOWLEDGEMENT

The continuous development of online business and growing rate of internet access and the use of Consumer Electronics in emerging markets have been the main handler for e-commerce industry. Online shopping is a process of purchasing and selling products and services through Internet. It is principally a Web Rooming where customers can buy the products with just a click of mouse, using internet. It is a growing technology and it is changing the Business Model and Business Strategy for online marketer.

Amazon is the largest online retailer company in the recent era that started its business from an online book store and later diversified to too many segments. Now this tech giant through its many advanced technologies like cloud computing has widely diversified too many parts of the world and has become the second largest internet retailer after Alibaba in terms of total sales. In this study, an attempt has been made for suggestion checking among the demographic profiles of Amazon users, considering their perceptions, recognizing the factors which influence Amazon buyer to buy the consumer electronic products and recognize what are the exact factors that influence highly to buy the products.

For this study, I have taken few factors through which is the use of Factor Analysis to examine the impact of purchasing attitude towards online industry: Analysis is used to find out the high and low influencing factors that help the new marketer or entrepreneur to make a new decision strategy for market penetration.

To complete this research, primary data has been collected inform of questionaries' from the customers using ecommerce sites for purchasing Consumer Electronics. For secondary data we have taken from the Companies' annual financial reports, websites, and Statistical websites.

INTRODUCTION

Online Shopping – It is the method of using Internet and entering an Online Shopping site, browsing the list of available products, adding the ones customer wishes to buy in the cart and exit the site by placing order of items in cart mentioning the location of delivery and choosing the method of payment. *Offline Shopping* - On the other hand this is the age old method of shopping, going to the brick-mortar marketplace, choosing the available options by stepping from one store to another and making payment and buying the goods.

Online shopping has revolutionized the business world by making everything anyone could want available by the simple click of a mouse button. Local retailers are attempting to expand their footprints by offering goods for sale via online shopping so as to better compete with the likes of Amazon.

From the definition itself we get to see basic differences between the two. Now let us delve a little more into the differences by studying Advantages of Online Shopping over Offline Shopping and the Disadvantages of the same.

Advantages: (There are many, but let us discuss some of the most important ones)

- **Wide Range of Options:** In offline shopping, people need to go to specific stores for specific products or even if they are available together at one place nowadays like in Supermarkets, there are different sections to visit, not all super markets have all brands of goods, they may go out of stock – Online shopping has an edge for these, they get products from number of storehouses, retailers, wholesalers thus spoiling us with brands and choices together at our fingertips.

- **Payment methods:** Offline stores mostly still accept cash or card, not many of them offer facility of e-Wallets. Considering India after demonetization, e-Wallets and cards are mostly preferred that the online sites provide. They also allow many more payment methods like Gift cards, Points, Bit coins, e-wire of money and etc.

- **24*7:** These online stores are open 24*7 which is the biggest edge over offline stores which opens for stipulated time.

- **Cost Effective:** Offline stores cannot lower prices of products below a certain level as they need to include the cost they bear for store maintenance and staff in price of products, but these online stores again has an edge over them in this regard, they do not need to maintain stores or regular staff to sell, hence capable of giving more discounts which eventually attracts customers more.

- **Filtering and comparison Method:** Offline stores may provide a huge range of products, but to find the type, brand, size one needs, the customer has to spend time and go around and look for them. In online shopping all they need to do is simply use filter options to see only option that suits the needs. Also unlike offline store online stores allow side by comparison facility.

- **Convenience:** One of the most important advantages is the convenience online shopping offers over offline shopping, explained by the advantages discussed above.

- **No pressure shopping**: Generally, in physical stores, the sales representatives try to influence the buyers to buy the product. There can be some kind of pressure compelling customers to buy things which they might not be willing to buy then, whereas the customers are not pressurized in any way in online stores, they can shop at their own freedom.

- **Online shopping saves time**: Customers do not have to stand in queues in cash counters to pay for the products that have been purchased by them. They can shop from their home or work place and do not have to spend time traveling.

Disadvantages: (There are many, but let us discuss some of the most important ones)

- **Fraud:** These online sites mostly require a customer to enter details in for of User Account, or sometimes a customer can bypass this account creation and simply shop as a guest. But eventually during check-out, one has to give card details or payment and delivery details for buying. There is a good chance that due to some virus or unwanted intruder attack in the site's server these data becomes vulnerable.

- **Lack of touch and feel and close observations:** Unlike the physical market where one can see, touch and feel the good and shop, online shopping is all about seeing, and reading details and trusting the retailer by the rating given.

- **Not an immediate delivery always:** For online shopping a customer can buy and get the goods right away, but in online shopping on an average it takes at least few days for the delivery (delivery time ranging from 1-10 days mostly).

- **Lack of interactivity in online shopping:** Physical stores allow price negotiations between buyers and the seller. The show room sales attendant representatives provide personal attention to customers and help them in purchasing goods.

Thus overall the advantages of Online Shopping seem to weigh more than offline, thus leading customer to use this new mode of shopping more often.

History of Online Shopping and how Amazon played a major role since times immemorial

One of the very 1st Online Transaction dates back to 1960 when using IBM's OLTP, American Airlines computerized the Ticket Booking System, where Agents computers were linked to IBM's mainframe computer. However the online shopping we know today geared up after the emergence of Internet. The very first online shopping was seen for Sting Album "Ten Summoner's Tales" in the year 1994, followed by online purchase of regular items like wine, flowers and chocolates. Later with further Technological Innovations in the year 1994 like online banking, introduction of online pizza shop by Pizza Hut, Netscape's SSL versus v2 encryption standard for secure data transfer the 1st online retail transaction was noted in 1994. Then in 1995 Amazon was introduced in the US. The same year also marked the beginning of eBay.

Amazon.com was founded by Jeff Bezos in Bellevue, Washington, in July 1994. He named it after the Amazon River, and its logo is the name itself with an arrow marked from A → Z showing that they have all kinds of products available. Also the arrow beneath the brand name in their logo looks like a smile that they put on their customers face by satisfying them with good quality service.

Amazon introduced itself in India with Junglee.com in February 2012, a site using which no retail transactions could have been made, but it helped compare prices online. This was an attempt to judge the Indian market and Internet usage capability here before launching itself in June 2013 as "Amazon.in". The organization launched its website Amazon.in, offering

customers a large range of choices in books, movies, and TV shows. Soon after this they added mobile phones, cameras etc. to the list of available products in their site. On the primary day of its operations, Amazon India had received over 10,000 orders. Since then there has been no looking back. Amazon.in even though launched after Flipkart, it could catch up to it soon and soar higher in the market with the money backup from Amazon.com. Amazon knows that cashing on the huge population of India and increasing number of Internet users each year, it will continue increasing its profit here. Initially it was the tech savvy middle and upper class people using Amazon.in, but now with phone and internet and Amazon phone applications available, it can be used by almost every class of people for various demographics in India. Amazon India, a fully-owned subsidiary of US-based e-commerce giant Amazon continues to flourish in here.

Considering the purchase of Electronic items online, it's difficult for anyone to compete with the Retails Giant Amazon.in, including Flipkart. This is because with cash backup, Amazon.in has grabbed hold of a huge number of small business and retailers, thus having huge stock and enabling variety and quick delivery of the orders. Amazon.in delivers almost all kinds of Electronics Items in its online store ranging from small budget products – Tube light, memory card, headphone, fans to Mobile phones, Air conditioners, Fridge, television, washing machine. It also is capable of providing a huge price range of the various item categories thus able to grab on to the various category of customer bases. All this has been possible because of the master business strategy and marketing plans of Amazon.

PROBLEM STATEMENT

Amazon.in has grabbed a huge part of the market in India since its emergence in the Indian Market in 2013. It has, over the years, invested huge amount of money to collaborate with the large number of retailers and create a loyal customer base. Apart from buying stake in various brick and mortar units like Shoppers Stop, More, it has infused about 33000 crore rupees in Amazon.in to grow the business here. As per Forbes Report, as on FY2019, there is not much profit insight for Amazon India so far, but with the huge population and the growing number of internet users in India, it doesn't seem unlikely in the near future either.

"Amazon has customer obsession as its core; we put all our energy behind things that matter the most to customers, which are selection, pricing, and fast and reliable delivery." – quoted by an Amazon India spokesperson to Forbes. Amazon has kept investing in the Indian market and introduced new sideline features to attract and create a loyal custom base here. Some of them being, its payment mode – Amazon Pay and customer subscription system - Amazon Prime.

Amazon Pay – it's the payment arm of Amazon and is briskly growing in India but gives Amazon.in an edge over other Online Shopping websites. Amazon Prime – on the other hand is a customer subscription facility which any customer can grab by paying a yearly fee of Rs. 999. Using Amazon Prime, not only can the customers get a faster and no extra charge delivery option, but also get a vast library of video and music content, which together has been instrumental in cementing Amazon's position in India, says the analysts. Amazon has also provided a Hindi version of the application and website so as to the regional language speaking populace.

Seven years on, Amazon has survived, thrived and earned a loyal customer base while Snapdeal has fallen by the wayside and Flipkart has been acquired by Walmart. The Forbes India-TRA Research study mentions that Amazon.in with its huge retail collaboration, customer service obsession and investment policies has emerged as the most respected brand amongst the working millennial.

Owing to various convenience options that online shopping brings over offline shopping like options, payment modes, filters, 24*7 availability, discounts, the buying pattern in the country has tilted over more towards online buying. Across a vast range of demographics, this trend of shift of buying pattern seems to have taken place, regarding which we shall study in details later in this research paper.

Though online shopping takes place over wide range of products, but probably one of the safest and most popular buy is electronics, as there the size, weight, quality, brand are specific and mentioned in the description well, and products we get has more chances of matching the specifications mentioned. Unlike say garments, where size and quality might vary, same for shoes, for accessories, material and color might vary and so on. But for Electronic items, these chances are less, so it's one of the most popular and trustworthy buy one can make online.

Further online purchase provides more discounts, better services compared to offline thus customers these days seems to prefer buying Electronic items online. Who else has more capability of serving this market more than Amazon.in? As discussed earlier, Amazon.in has the capacity to serve the customers' needs in this regard in the best possible way, and using that it has emerged as one of the most preferred Site when it comes to buying Electronic Items online. But this has in turn reduced sales of Electronic items from offline stores, pushing many small stores and retailers to close down or collaborate or shift to other business.

According to consumer behavior report, majority (58 percent) indicated that they have used the mobile Internet to purchase digital content for their phone. Although some consumers have not moved beyond basic mobile personalization and casual gaming, some online consumers have made substantial purchases from their mobile phones, such as: consumer electronics - Mobiles, computer, items complementary to the these two. Consumer behavior in electronics environment is critical as compared to physical world and crucial understanding can be examined if the factors that affect the purchase decisions are ignored and unambiguous. Online consumers fear the opportunity to physically examine the product which is specifically regarded as influential factor in purchase decision. Therefore, consumer behavioral pattern in online shopping can be fundamentally different from traditional environment.

Three most important ways online shopping impacts offline retail corporations: Let us see some ways in which online shopping is adversely affecting offline retail store

- **Decrease in customer Loyalty**: When you were growing up, your elders, mostly parents, were content to shop for constant brands from the shop. It had been acquainted and something they could rely on. Now, customers visit a store trying to find a selected brand of a pre-decided price supported by online reviews

- **Online Reviews Impacts Retail corporations:** Before online shopping arrived, you regularly asked your friends or family a couple of product you were considering to buy. Now, customers search on company websites, blogs, and social media for product reviews and suggestions. On the basis of these researches online do they see the products in the store, instead of listening and believing the salesmen in the retail stores.

- **Smartphone Impacts Retail stores**: Smartphones influence a customer even once they're doing in-store shopping. Often, customers can walk around within the store with their phones. They're reviewing and compare merchandise within the store to online options and alternative retailer's deals. All of those factors persuade a consumer to make a purchase in-store or online.

With time thus, Online shopping and Internet have largely influenced the Offline shopping and the retails stores. People seem to have trusted Online reviews and options far more than offline retailers. In this regard too Electronic Items and their shopping carry a major role. For any Electronic Items, what consumes now mostly even if they bug online are – they visit the retail store and see the offer in the phone from say Amazon.in and see the delivery time and offers and place the order wherever they get the best deal. So it's like the retailers not only have to face peer competition but also compete with these online market giants like – Amazon.in.

HYPOTHESIS

For this Project we would be making some analysis on the basis of the data collected using questionnaire for testing the following Hypothesis →

- H01: Male and female use online shopping equally
  H1: Male and female do not use online shopping equally.

- H02: Age Groups (25-32) cumulatively sum up to 70% or more of the population using online shopping
  H2: Age Groups (25-32) cumulatively sum up to less than 70% of the population using online shopping

- H03: "Discount, Variety, Comparison option" together form more than or equal to 85% of the reason why people opt for online shopping.
  H3: Discount, Variety, Comparison option together form less than 85% of the reason why people opt for online shopping.

- H04: In Indian Market, the online shopping dominates (sums up to more than 90% of the purchase) the purchase of Electronic Items

H4: In Indian Market, the online shopping does not dominate the purchase of Electronic Items (sums up to less than 90% of the purchase)

- H05: Majority of online buyers(More than 90%) buy Electronic Items from Amazon.in
  H5: Less than 90% of the online buyers buy Electronic Items from Amazon.in

- H06: Customer buying experience from Amazon.in is rated on an average >= 4 .
  H6: Customer buying experience from Amazon.in is rated on an average below 4

METHODOLOGY

For this research study, I have used Primary data collected by Questionnaire. I have collected the data from a group of 70 respondents who are mostly using Amazon.in to buy Electronic Items online. For convenience of testing purpose I have done convenience sampling – a non-probabilistic sampling. I have used the Questionnaire method of Primary data collection as it has a good response rate. I have created the questions in a Google form and circulated that amongst sample members by whatsapp and email. Contacting respondents through these medium gives a higher chance of getting response and follow up is easier too. The outputs were then taken from Google drive and the results are further analyzed using Descriptive Statistical analysis method. In following chapters I will present the data, its analysis, interpretation and further study using them.

I have also used the secondary data for Amazon.in, which I have collected from Company brochure and websites and general reports. The secondary data I am using for my analysis is also collection from news channels online and business sites. These all studies helped me get a better and in depth knowledge about topic under concern – How consumer buying pattern has changed from offline to online and why people prefer buying Electronic items online and those who do so, why is Amazon.in their 1st preference.

I have also chosen some relevant Hypothesis which I am testing in the research paper using the Primary data responses I have collected. The Hypothesis testing gives a better insight into the research topic I am studying on. This will further help me get to a better conclusion.

With all data collection, I will be using various excel functions, graphs, charts to make a representation of the data which will be easier for analysis.

DATA REPRESENTATION

On the basis of the data collected from a sample size of 70 respondents based in Kolkata, the following graphs have been created after organizing the data in the required formats. These graphs and the data collected will help us in reaching a proper conclusion with regards to the Hypothesis and objectives related to the Problem Statement being discussed in the paper – "How has the customer buying pattern of Electronics Items changed from Online to Offline – with respect to Amazon.in".

This chapter mainly focuses on the Data display section. After collecting these Primary Data from the sample, the various concerns being queried from them are hereby displayed in an easily understandable format.

- The preference of "Online vs. Offline" shopping has been studied here with respect to two aspects of Demographics. (Here we are studying what is the most preferred mode of shopping for the sample respondents.)

  ➕ Gender

	Online	Offline
Male	32	2
Female	30	6

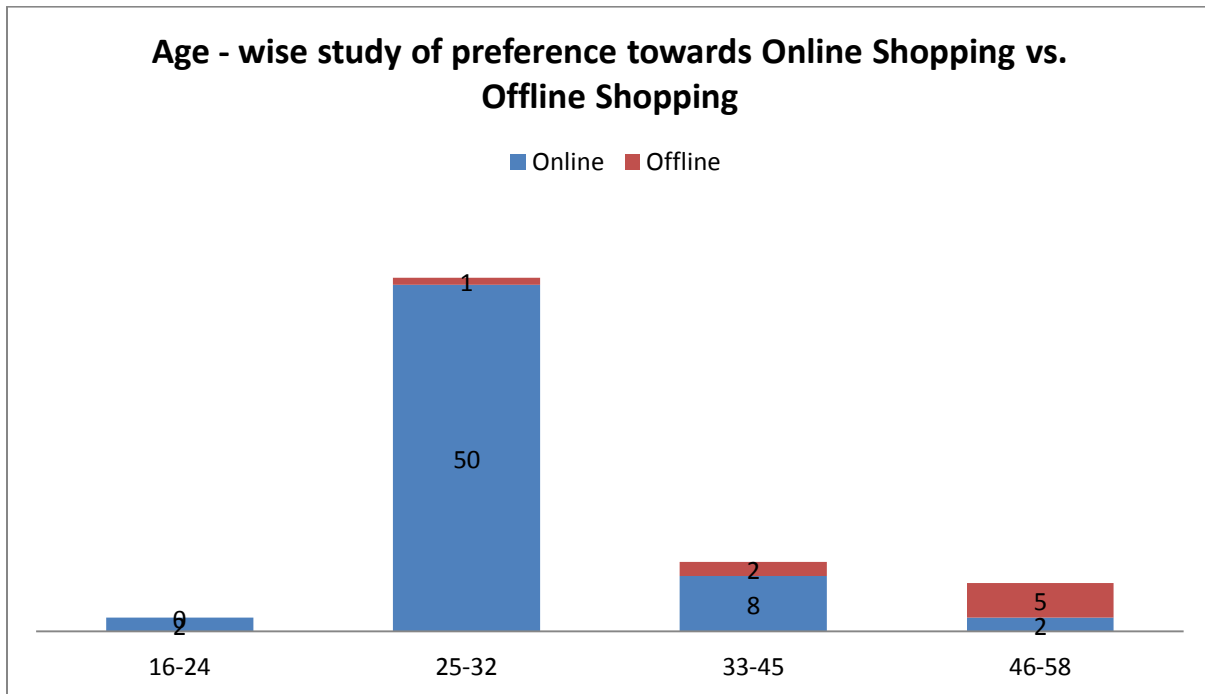**Preference of Online vs. Offline shopping - w.r.t Gender**
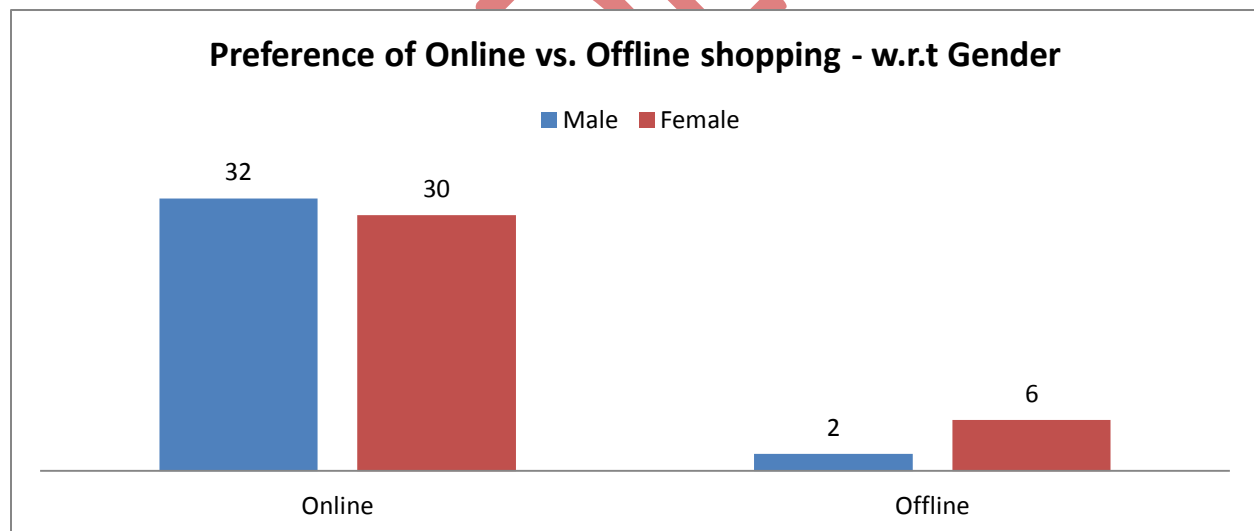
From the above graph it is pretty much clear that majority of the sample prefers to shop online rather than offline. Though a few people maybe out of their conservative thoughts or bad experience or less exposure still prefer to shop majority of their stuff from offline retail stores.

Further considering the gender based analysis of the above data, we see that more of less the "Male : Female" ratio of respondents who prefer Online shopping is almost the same. Considering today's world where mostly both Males and Females are equal contributors to the family expenses, this is an expected outcome. Apart from this, if we consider the busy lifestyle, which has been part of the day to day life for everyone, the above result is pretty much expected.

🞣 Age

	16-24	25-32	33-45	46-58
Online	2	50	8	2
Offline	0	1	2	5

Age - wise study of preference towards Online Shopping vs. Offline Shopping

■ Online ■ Offline

|	16-24	25-32	33-45	46-58
Online	2	50	8	2
Offline	0	1	2	5

From the above data we can understand that the number of people who trust and prefer online shopping fall more in the under 45 age group. For people in an age group 46 and beyond, it is seen that they prefer Offline shopping more, though few still prefer online shopping. This maybe because of the long term practice of people at an age group of 46 and above, that they trust offline shopping, like visiting the stores and seeing and touching before buying. Also with age, people tend to take lesser risk by trying something new and hence they refuse to switch to a newer method of shopping that they have not been using so long in their life.

- Driving reason for buying Electronics Item online

	Discounts	Variety	Ease of Payment Methods	24*7 Store	Comparison Options
Frequency	34	12	4	9	11

Driving reason for buying Electronics Items Online

- 48% Discounts
- 17% Variety
- 6% Ease of Payment Methods
- 13% 24*7 Store
- 16% Comparison Options
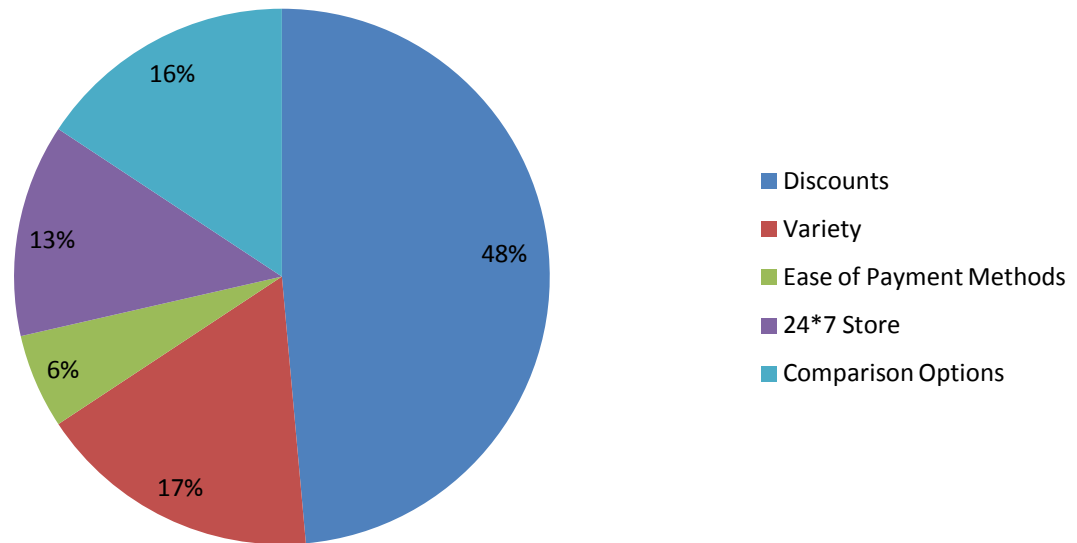
This study is to find out what is the main reason for an individual to choose Online Shopping over Offline Shopping. From the above data, it is well understood that the 3 most contributing factors for online shopping are – Discounts, Variety and Comparison Options. Also these are the 3 most important advantages of Online Shopping over Offline Shopping.

As we all know variety of goods available online are way more than that available offline, as Online Websites collaborates with a number of retailers and gets their product together at one place. Also Online Stores can provide more discounts as the cost for Store and Electricity which applies for Retailers are not present anymore for online Website Giants, hence the huge amount of Discounts are feasible more. Also, "Comparison of options" is feature which makes it very easy to compare similar products online, this is a difficult option for Offline shopping as not all kinds of products are available in same place, or even if available as in Super markets, they are not visible together, making comparisons difficult.

Other two contributing factors are also there though in lesser percentage – 24*7 Store open availability and Ease of payment methods.

- Has sale/after sale service of buying Electronics Items been better for Online Shopping over existing Offline Shopping?

|	Yes	No (Degraded)	Same
After sale service of buying Electronic Items Online compared to that of buying Offline	36	7	27

After sale service of buying Electronic Items Online compred to that of buying Offline
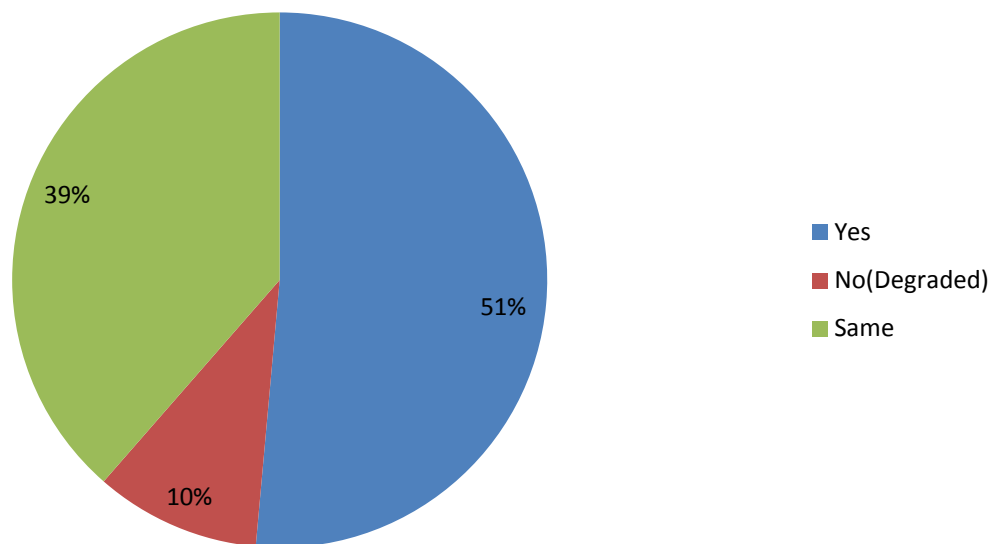
As we see here, majority of our respondents from the sample are of the opinion that their experience of Sale and after sale Service/Maintenance and Installation of Electronics Items has been a better experience since they switched to the Online Shopping method. While 39% of the respondents feel their experience of service post buying of Electronics Items online has not changed much since they shifted to online shopping. But 10% of the sample meaning, 7 out of 70 respondents are of the group who have had bad Sale and After Sale Experience and hence voted for a Degraded experience compared to After Sale Service of Offline Shopping.

- Satisfaction level of Online Shopping compared to offline shopping of Electronics Items

	Very Good	Good	No change	Bad	Worse
Satisfaction Level of buying Electronics Items Online in terms of Quality	25	37	7	1	0

Satisfaction Level of buying Electronics Items Online in terms of Quality
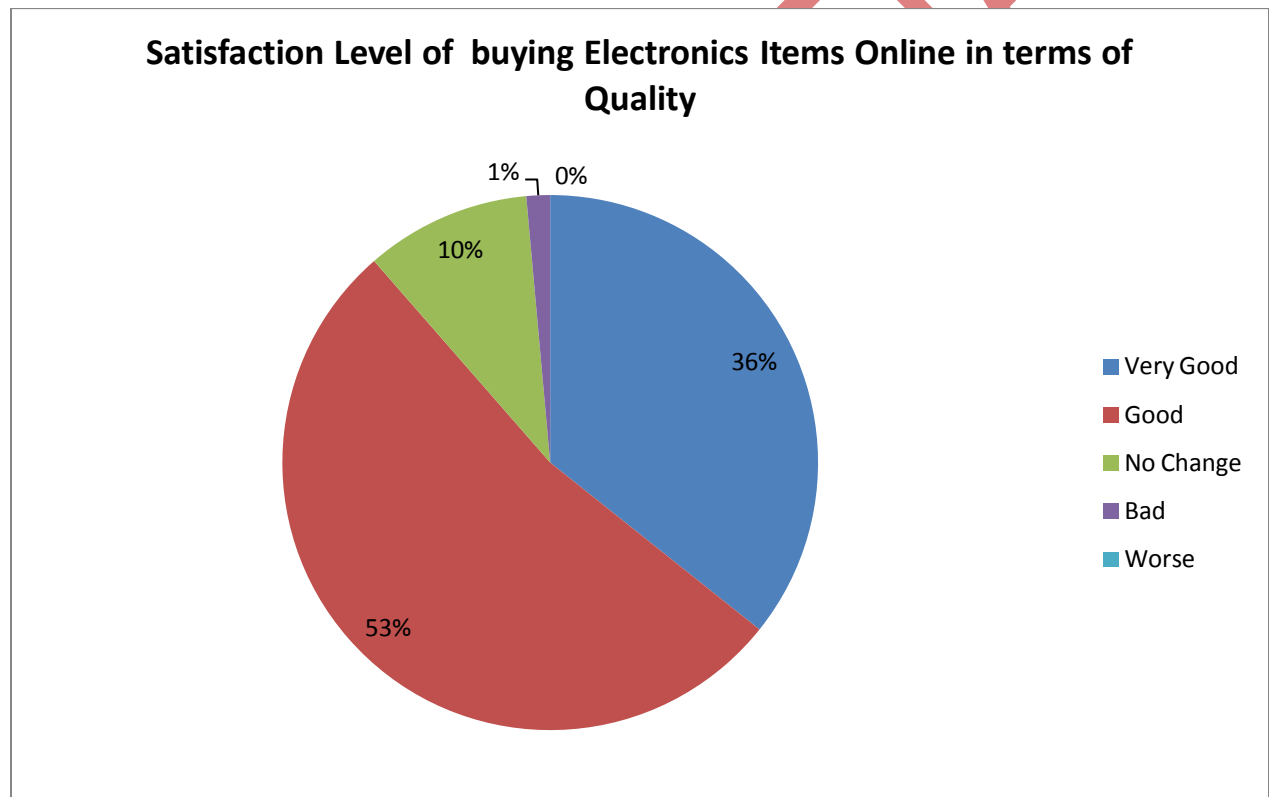
As we can see in the above pie chart, the Satisfaction level of buying Electronics Items has mostly been "Good" for our respondents as it sums up to almost 53% of the poll. While 36 % of the sample are of the opinion that their satisfaction level of buying Electronics Items online has been "Very Good". A mere 1% however is of the idea that their Satisfaction level is bad, which signifies that the person belongs to the group of people who prefer shopping from Brick and Motor stored when products can be touched and seen. Another 10% opine that there has been no change in the satisfaction level of buying Electronics Items Online.

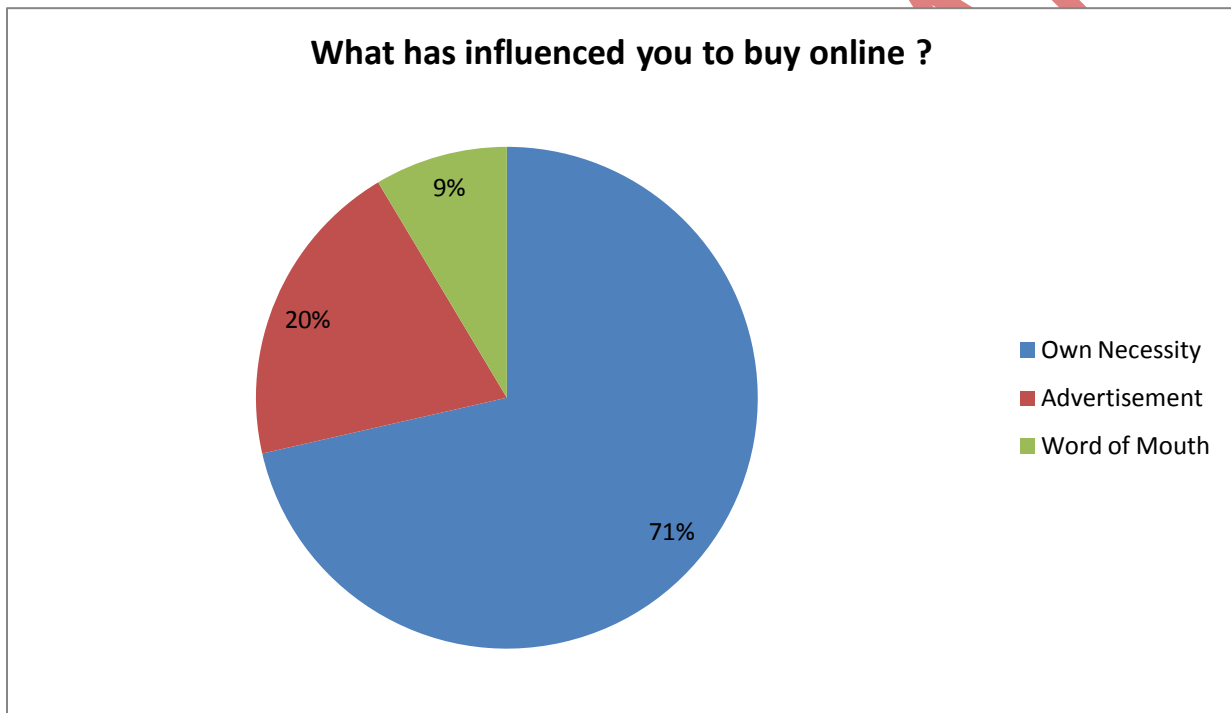- Has online shopping of Electronic Items changed your brand preferences?

	Yes	No
Has Online shopping of Electronic Items changed your brand preferences?		
	47	23

Has Online shopping of Electronic Items changed your brand preferences ?

33%

67%

■ Yes
■ No
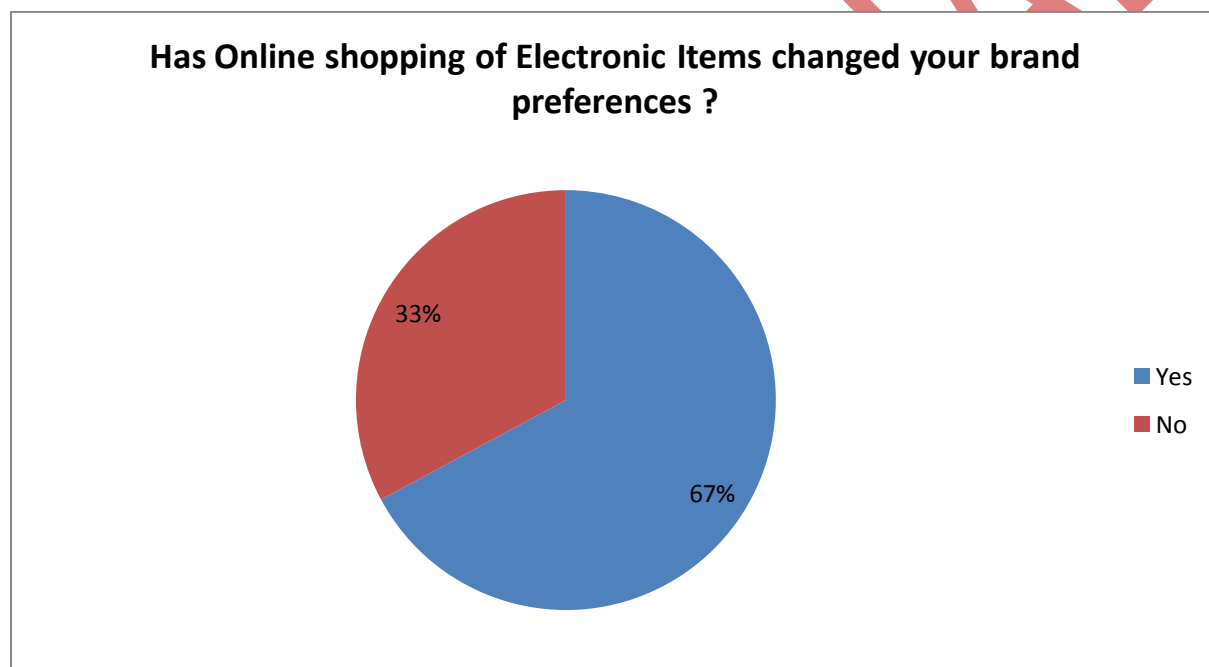
Online Stores introduces a number of brands to users/ customers which are otherwise not present in Stores, maybe because not all stores keep all brands with them or maybe some brands stick to Online selling only. So this study was to see how many respondents were exposed to a new brand of Electronics Item when they went ahead to buy online. The results of the test reveal that about 67% or 47 out of 70 respondents opine that they have not only been exposed to new brands of Electronics Items online but also changed their brand preference to a new one to which they might not have been exposed before. While 33% of them feel that even if they have been exposed to new brands of Electronics Items when switched to Online shopping, their brand preference has remained the same.

- Driving factor for switching to Online Shopping for Electronics Items

	Own Necessity	Advertisement	Word of Mouth
What has influenced you to buy online?	50	14	6

What has influenced you to buy online ?

- Own Necessity
- Advertisement
- Word of Mouth

Various kinds of people have switched from Offline Shopping to Online Shopping for Electronics Items for various reasons. Some might have switched due to the change in one's lifestyle causing lack of time/opportunity or for better offers and brand variety, while some simply wanted to try something new hearing others experience, while some others tried new ways of Online Shopping seeing the Advertisements of the Online Shopping Websites.

My survey here reveals that the reason that contributes most towards the factor that influenced one to start shopping Electronics Items Online is "Own Necessity", it sums up to 71% of the responses. While following it up is the reason → "Advertisement" – which influenced 20% of the sample people to start shopping online. A few people also started shopping Electronics Items Online listening about it from peers, contributing to a total of 9% of the poll in the related Survey.

- Most preferred site for shopping Electronics Items Online

	Amazon	Flipkart	Other
For Electronics Item which Site do you prefer the most?	61	8	1

**For Electronics Item which Site do you prefer the most ?**
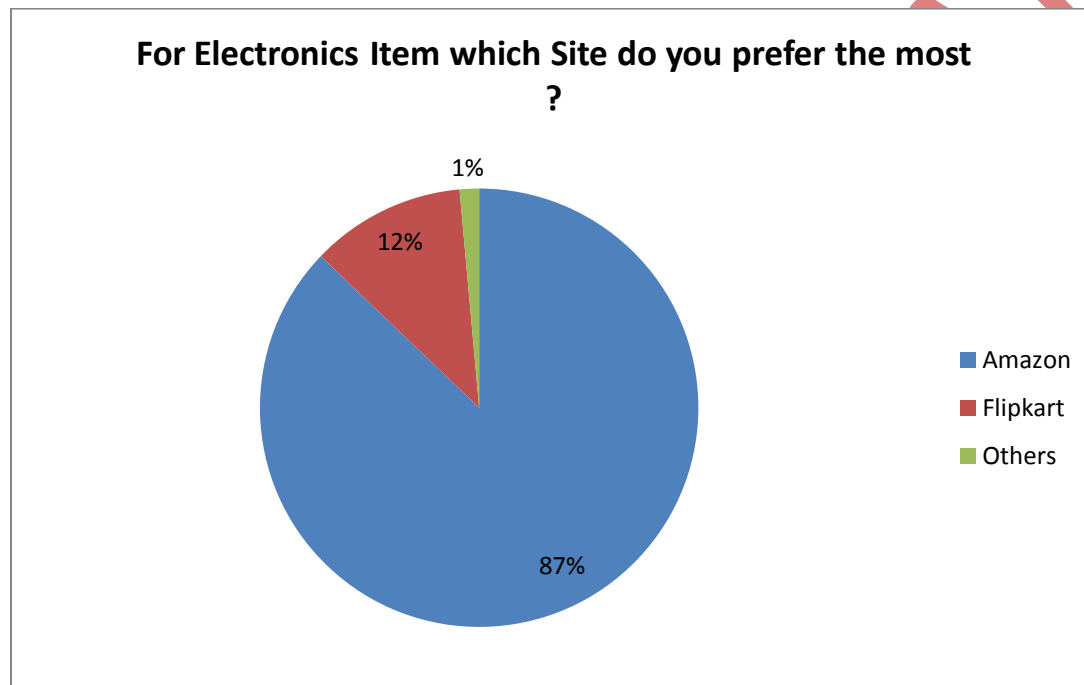
It is a general notion that people prefer shopping Electronics Items from Amazon rather than other online shopping sites due to their vast range, reliability and fast delivery option. Also the Amazon Prime membership is a marketing technique used by Amazon to attract more customers, it's a loyalty membership which enables one not only to avail good discounts and a faster delivery option on buying products from their Site but also provides a separate collection of videos, movies and songs to watch and hear from their very own Amazon Prime application.

Survey from our sample reveals no new results. It simply verifies that people prefer shopping Electronics Items online from Amazon.in as we can see that 87% voted for it. While a smaller ratio of 12% prefers shopping from India's very own Flipkart while a minor 1% prefers shopping Electronics Items from other Sites.

- Average number of Electronics Items bought by the respondents from Amazon.in vs. Other Websites

	1-10	11-20	21-30	31-40	None
Amazon	38	15	12	4	1
Other Sites	31	2	0	1	36

Electronics Items bought from Amazon vs that bought from other Sites
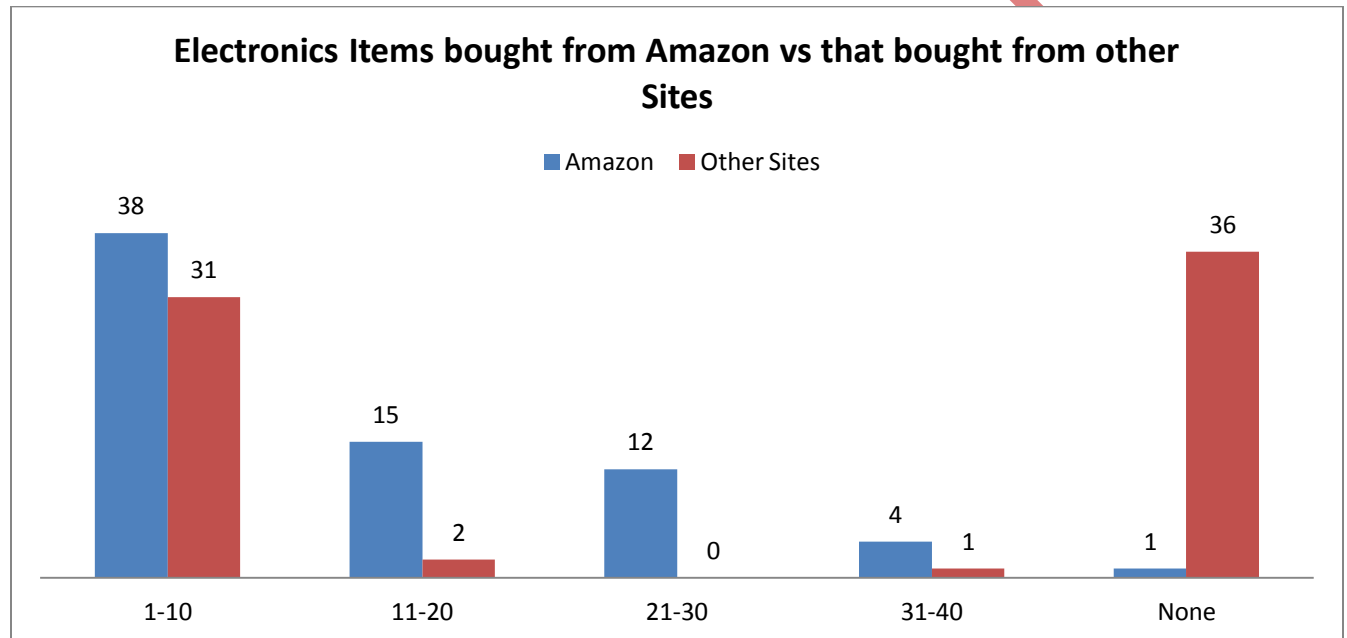
Here we have studied the average number of Electronics Items bought by 70 respondents of our sample from Amazon.in and their average range of Electronics Items bought from other Sites. We can clearly see that more people for each range buy more Electronics Items from Amazon.in than from other Sites.

For Amazon vs. Other Sites →

     38 people buy 1-10 Electronic Items from Amazon.in – 31 people buy 1-10 Electronic Items from Others

     15 people buy 11-20 Electronic Items from Amazon.in – 2 people buy 11-20 Electronic Items from Others

     12 people buy 11-20 Electronic Items from Amazon.in – No one buy 11-20 Electronic Items from Others

     4 people buy 11-20 Electronic Items from Amazon.in – 1 person buys 11-20 Electronic Items from Others

     There is only 1 person who do not buy any Electronics Items Online – 36 people do not buy any Electronics Items from other sites throughout the year

If we <u>study the average number of Electronics Items bought from Amazon.in and Other Sites separately</u> they appear as:

Average number of Electronics Items bought from Amazon per year

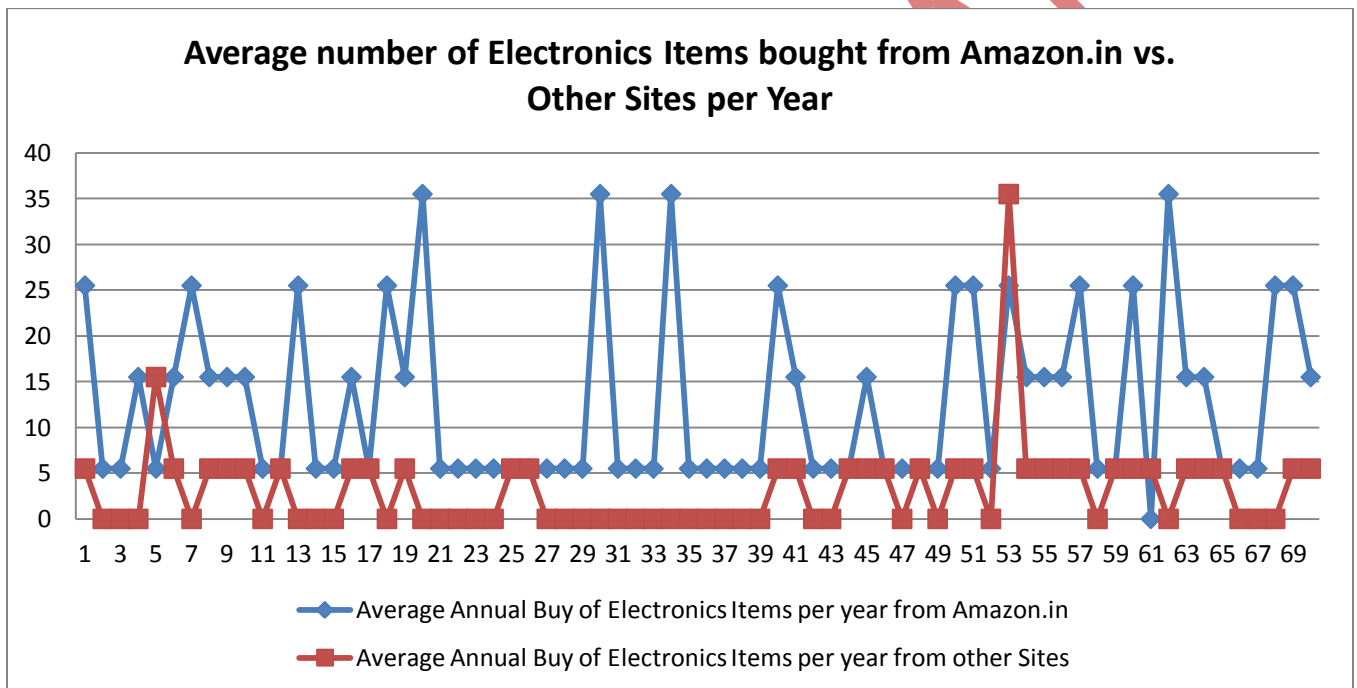|	
■	1-10
■	11-20
■	21-30
■	31-40
■	None

2%
6%
17%
54%
21%
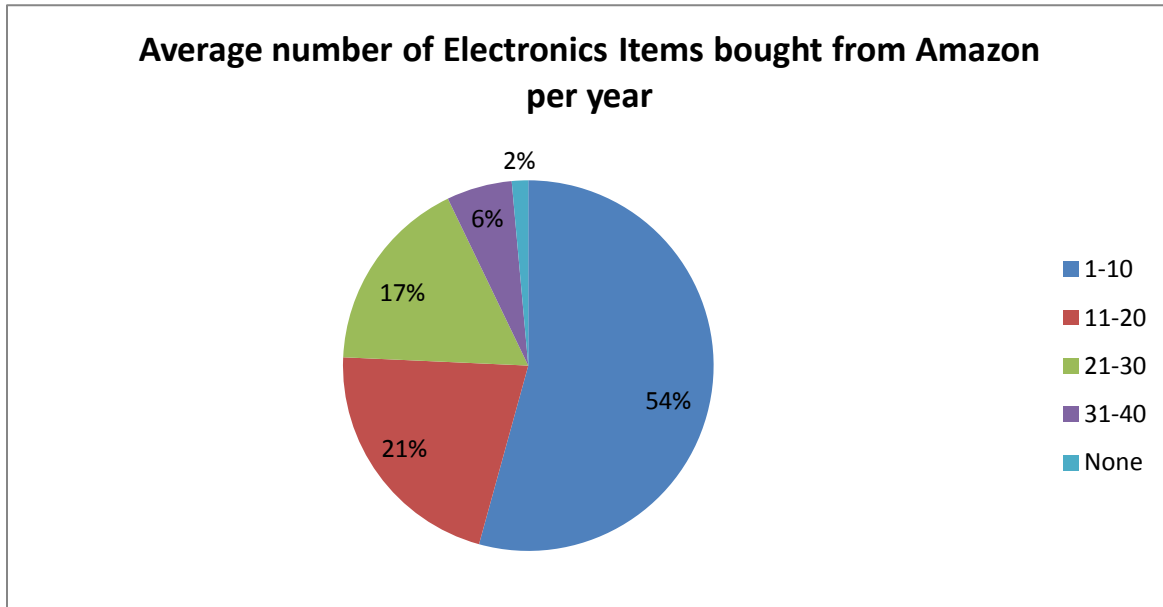
We can see from the above pie chart that 54% of the respondent buys 1-10 numbers of Electronics Items from Amazon.in per year whereas some 21% buys 11-20 Items. 17% respondents buy 21-30 Electronics goods from Amazon in, 6% buys 31-40 and a bare minimum 2% buys nothing from Amazon.in annually.

Average number of Electronics Items bought from Other sites

■	1-10
■	11-20
■	21-30
■	31-40
■	None

44%
52%
1% 0%
3%
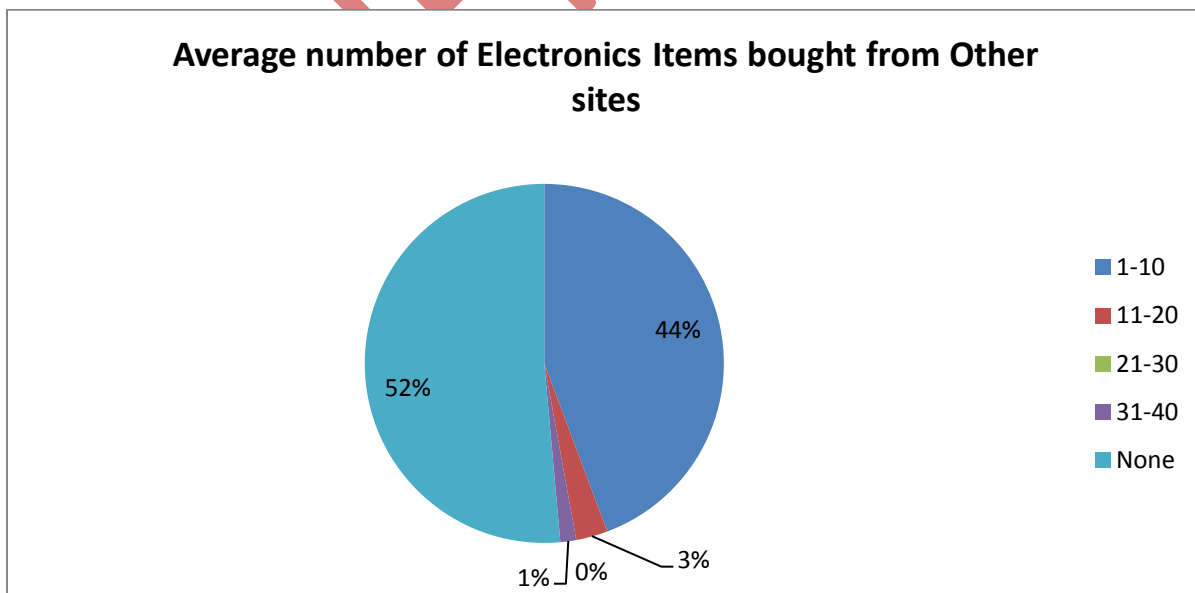
The study dealing with Average number of Electronic Items bought from Other online sites reveals that 52% people buys no Electronic Items annually from Other Sites while 44% stick to buying minimum number of Electronic Items (1-10) from other Sites. Some 3% buy 11-20 Items while 1% buys 31-40 Electronic Items annually from Other Sites and no one buys in the range of 21-30.

Further if we make a per-respondent basis analysis of their buying pattern of Electronics Items from Amazon.in vs. Other Sites, it shows as below:

Average number of Electronics Items bought from Amazon.in vs. Other Sites per Year

Legend:
- ◆ Average Annual Buy of Electronics Items per year from Amazon.in
- ■ Average Annual Buy of Electronics Items per year from other Sites

We can see that the average number of Electronics Items bought from Amazon.in per Respondent in general is more than the number they buy from other sites. There are few people who buy from both Amazon.in and other Sites in equal ranges while one being an exception buys more Electronic Items from Other Sites than from Amazon.in and only one respondent buys nothing from Amazon.in annually, this maybe because of less exposure of a once occurred bad experience. But overall we see that majority people buy Electronics Items Online from Amazon.in compared to Other Sites.

- Reason for choosing Amazon.in over Other Sites for buying Electronics Items

	Reliability	Variety	Offers	Customer Service (Delivery and Installation)
Reason for choosing Amazon over other Sites for Electronics Shopping	32	9	11	18

Reason for choosing Amazon over other Sites for Electronics Shopping
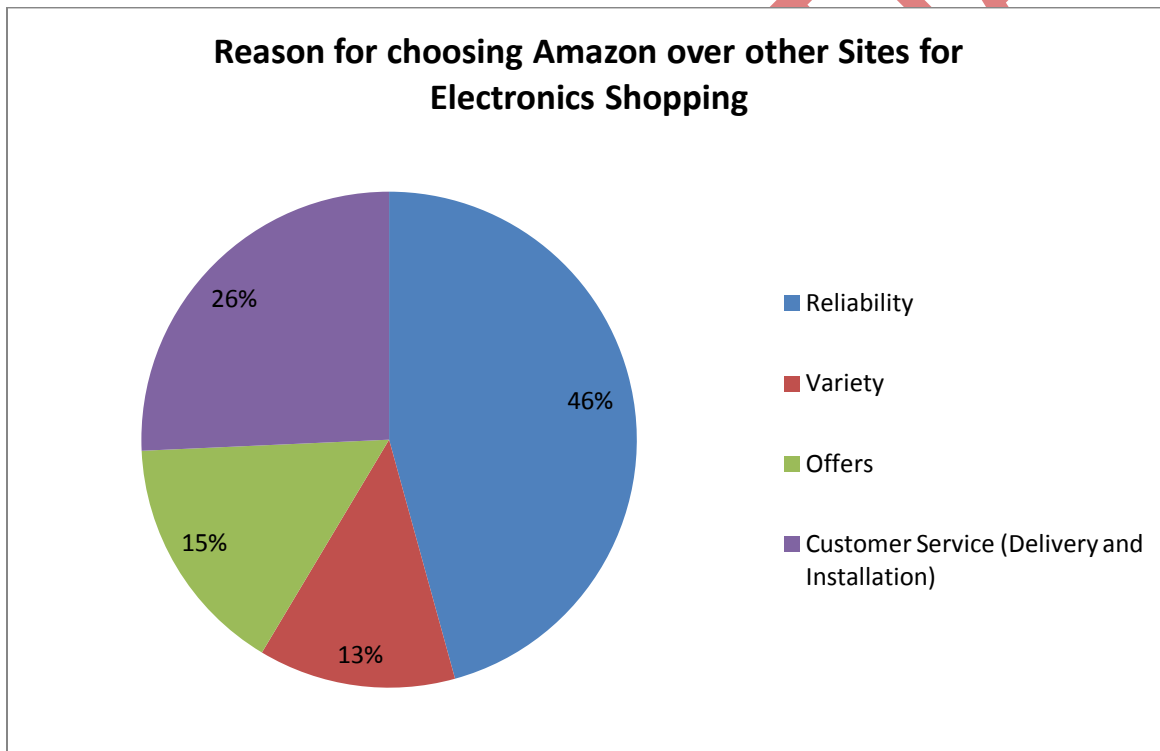

Over the last few analysis, we have observed that in general respondents prefer buying Electronic Items from Amazon.in over Other Sites. There are a number of reasons why people prefer doing so, like the reliability provided by Amazon.in, variety of stock offered by them, various offers provided by them, and last but not the least the customer service offered by Amazon.in.

About 46% of the respondents choose to buy Electronic Items from Amazon.in due to Reliability they provide. 26% of the people choose it for Customer Service, 15% for the various offers they give and 13% choose to buy Electronics Item from Amazon.in for the wide range of

Stock and variety they provide. So, we see that people mostly choose Amazon.in for buying Electronic Items for the Reliability and Customer service offered by them.

- Is delivery of Electronics Items ordered from Amazon faster than that ordered from other sites?

	Yes	No
Is Delivery from Amazon Faster than other sites?	54	16

**Is Delivery from Amazon Faster than other sites ?**
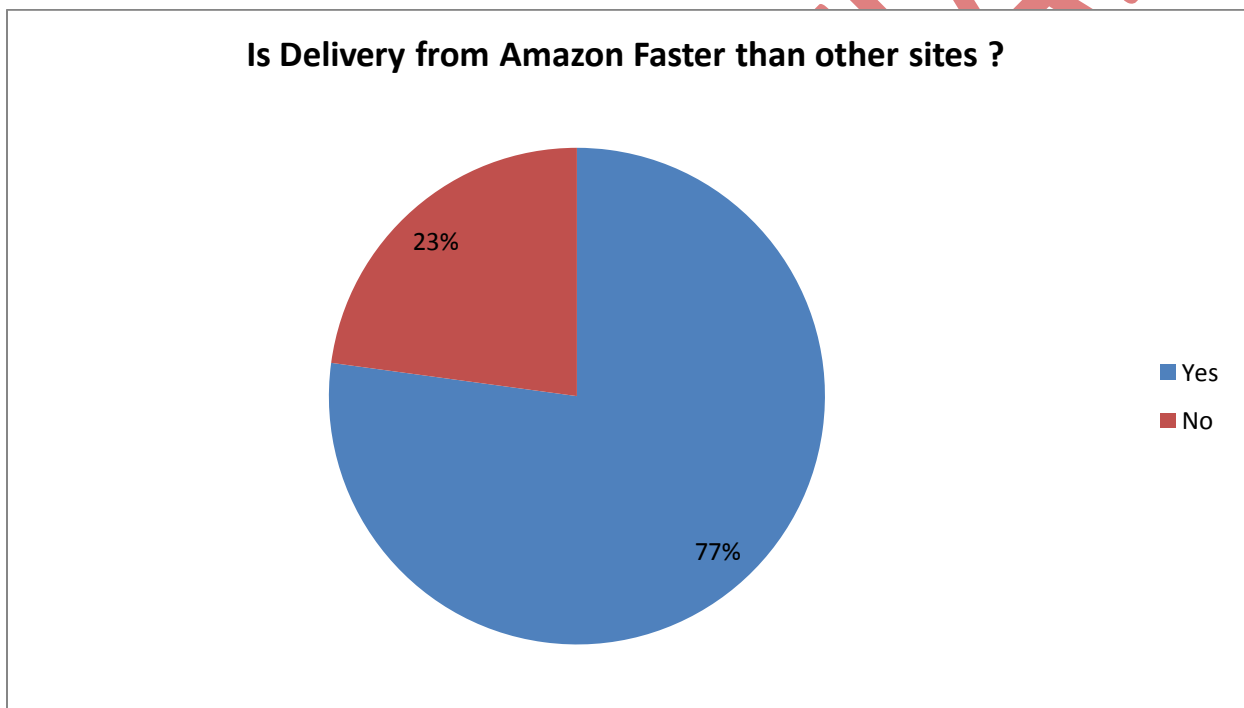
Another reason for people to prefer buying Electronic Items from Amazon.in is its faster delivery. When enquired from the sample about who all feel that delivery of Electronic Items bought from Amazon.in is faster than Other Sites, it is seen that 77% of the population voted for a faster delivery while 23% feel that delivery of Electronic Items bought from Amazon.in is same or slower than that ordered from other Sites.

Amazon has a huge retail base in India and invests huge amount of money each year in its business in India. This helps them to provide good stock of items in their Online Store and also a faster delivery option as they have control over a larger available stock and delivery men.

- Buying Experience of Electronics Items from Amazon.in

	1	2	3	4	5
Rating of Buying experience of Electronics Item Amazon.in	0	1	7	45	17

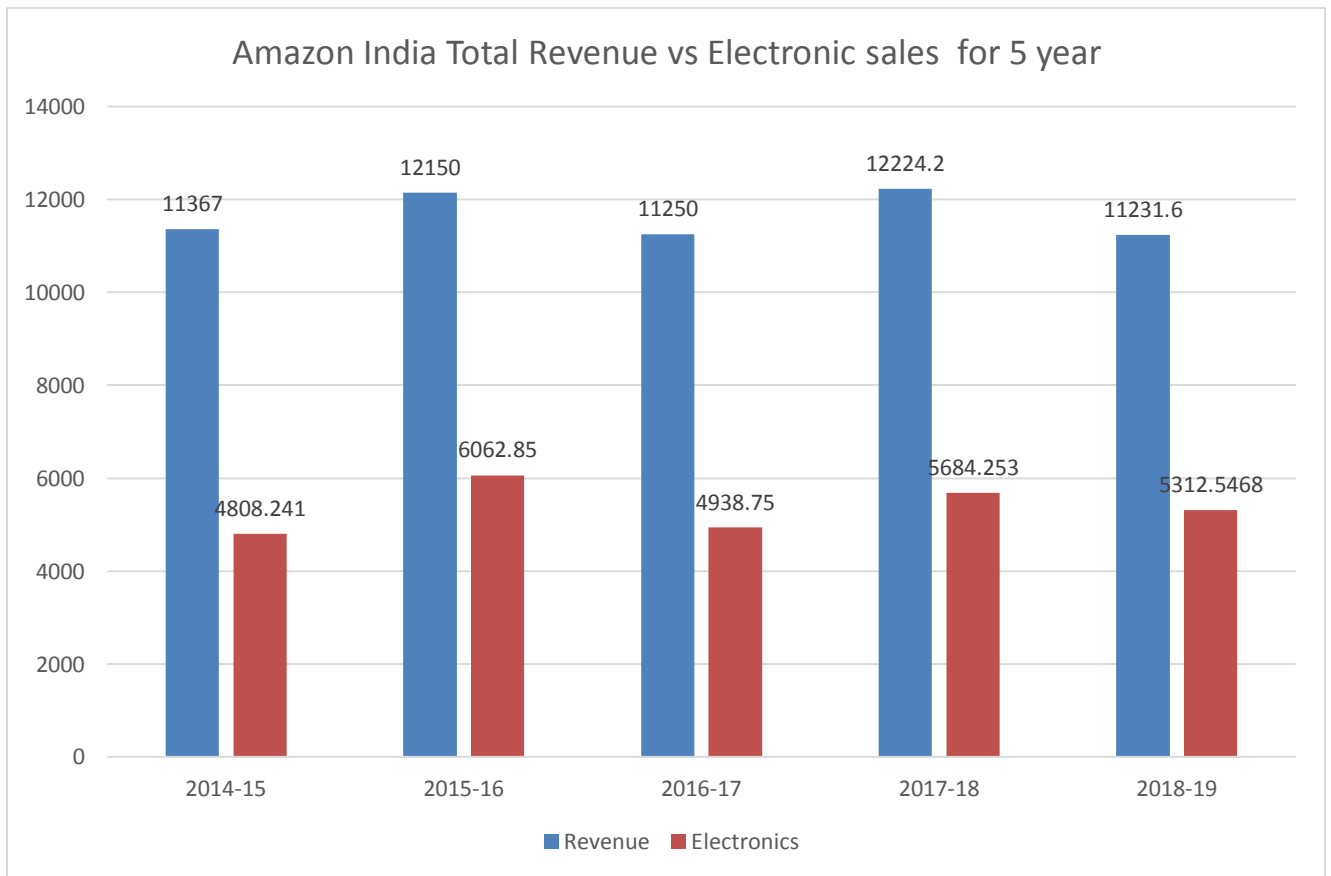**Rating of Buying experience of Electronics Item Amazon.in**
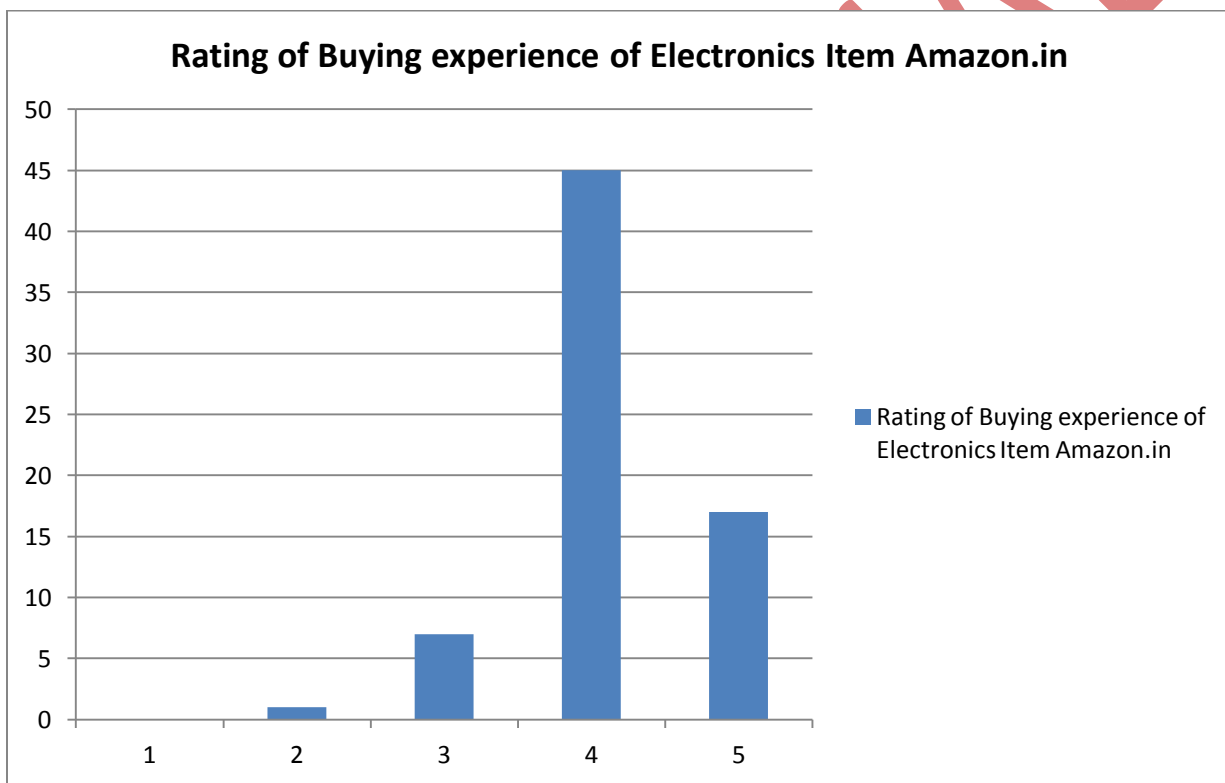
Here we can clearly see that majority of the consumer in the sample have a satisfactory experience with Amazon.in. They have mostly given a rating of 4 and 5, few of them – 7 of 70 have given 3 while only 1 respondent have given an experience rating of 2. So, overall we can say that customer experience of buying Electronic Items from Amazon.in as seen in the discussed sample is "Good".
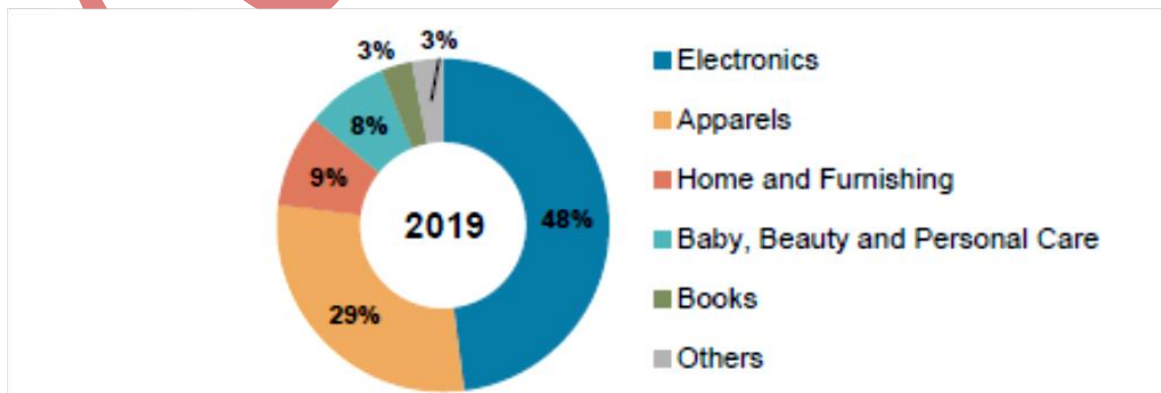
Consumer Pattern of purchasing in Amazon

As data taken from the Amazon annual report it is found that average of 45% of the total revenue is of sale from the consumer electronics which is the major portion of the total revenue. We have

taken the reports for the period from 2014-2019 where we have taken the total revenue and the electronic items sale contribution from the financial reports.

Amazon India Total Revenue vs Electronic sales for 5 year

| Year	Revenue	Electronics
2014-15	11367	4808.241
2015-16	12150	6062.85
2016-17	11250	4938.75
2017-18	12224.2	5684.253
2018-19	11231.6	5312.5468

Moreover in the figure below we have shown the detailed contribution of different product in the total revenue of Amazon India.

Electronics 48%
Apparels 29%
Home and Furnishing 9%
Baby, Beauty and Personal Care 8%
Books 3%
Others 3%

2019

Reason for Shifting of Consumer habit from offline retail of online retail.

Increase in the internet user with the introduction of the 4G network. As with internet the user were able to access the ecommerce site and purchasing procedure became much easier than the offline retails.
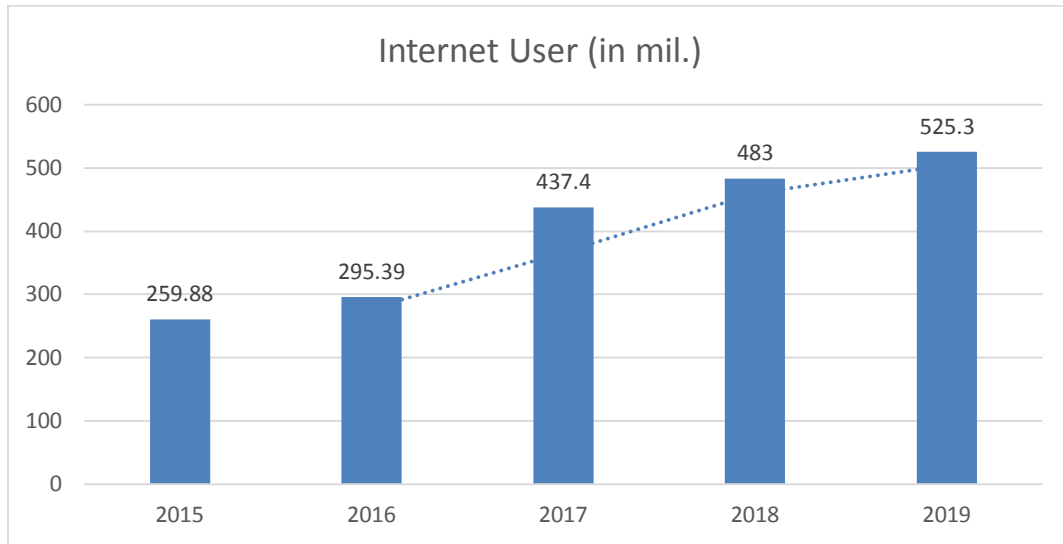
Internet User (in mil.)

Since the introduction of 4G and the growth of internet user the traffic on the Ecommerce website also increased. These ecommerce websites were flooded with the daily traffic with an average of 8.5mn visit . Each customer spending on average of 8.3 min in the ecommerce websites.

Daily Traffic	Flipkart	Amazon.in	Snapdeal
Traffic	56%	29%	15%
Daily visits	9.1 mn	12.8mn	3.7mn
Avg. visit duration	9min	9.4min	7min
Pages per visit	10	13	6

This changing way of thinking of the Indian customers and ease of buying online. Major Indian E-commerce groups have arise with techniques 12 months on yr to trap the clients – Flash sales one among them.As Flipkart's – 'Big Billion Day', Amazon. In's- 'Great Indian Shopping

Festival' and Snap deal's- 'Unbox Zindagi (Unbox Life)' offer promotional income on deeply discounted prices on predominant Indian festivals.

Year	Revenue	Name Of The Flash Sale
2013-2014	Rs.169 cr.	The Great Diwali Sale
2014-2015	Rs.1022 cr.	Diwali Dhamka Week
2015-2016	Rs.2275 cr.	Great Indian Diwali Sale

Hypothesis Working

In this chapter we will be analyzing the data collected in order to prove our Hypothesis which has been created based on our objectives of Study.

Let us discuss the Hypothesis one by one.
Note: For all Hypothesis test a Significance Level of 5% has been used.

- H01: Male and female use online shopping equally
  H1: Male and female do not use online shopping equally.

So, H01: $\pi 0$ (Female who shop online) $= 0.5$
H01: $\pi 0$ (Female who shop online) $!= 0.5$

From our sample size of 70 we see that 62 people are there who prefer shopping online, so for this test of studying the ratio of Male and Female who prefer shopping online we will use n=62.

Out of 62, number of Female respondents are 30.

	Online
Male	32
Female	30

So, p = 30/62 = 0.484
$\alpha = 0.05$ (mentioned above)

Z – Value $= (p - \pi 0) / (sqrt((\pi 0(1 - \pi 0))/n))$
             $= 0.484 - 0.5 / (sqrt (0.5 * 0.5)/62)$
             $= \sim -0.25$

P-Value (z= -0.3) for a 2-Tail test = (0.4013*2) = 0.8026

As we see (P-Value = 0.8026) > (α = 0.05) → So we accept the Null Hypothesis at 95% Confidence Interval.

Conclusion drawn here: Male and Female ratio of the population using Amazon.in for buying Electronics Item online is same.

- H02: Age Groups (25-32) cumulatively sum up to 70% or more of the population using online shopping
  H2: Age Groups (25-32) cumulatively sum up to less than 70% of the population using online shopping

So, H02: π_0 ((25-32) age group online shoppers of Electronic Items) $>= 0.75$

H2: π_0 ((25-32) age group online shoppers of Electronic Items) < 0.75

From our sample size of 70 we see that 62 people are there who prefer shopping online. So for this test of studying the hypothesis that "People of the age bracket – (25-32) sum up to more than 75% of the population who shop Electronics Item online" we would be using n=62.

Out of 62, number of people who are of the age group 25-32 = 50.

	16-24	25-32	33-45	46-58
Online	2	50	8	2

So, p = 50/62 = 0.8065
α = 0.05 (mentioned above)

Z – Value $\quad =(p - \pi_0) / (sqrt((\pi_0(1- \pi_0))/n))$
$\qquad\qquad =0.8065-0.75 / (sqrt (0.75 * 0.25)/62)$
$\qquad\qquad = \sim\ 1.03$
P-Value (z= 1.03) for a 1-Tail test for this hypothesis = (1-0.8485) = 0.1515

As we see (P-Value = 0.1515) > (α = 0.05) → So we accept the Null Hypothesis at 95% Confidence Interval.

<u>Conclusion drawn here:</u> Population of Age Group (25-32) sum up to 75% or more of the users who buy Electronics Items online.

- H03: "Discount, Variety, Comparison option" together form more than or equal to 85% of the reason why people opt for online shopping.
  H3: Discount, Variety, Comparison option together form less than 85% of the reason why people opt for online shopping.

So, H03: π_0 (Discount, Variety, Comparison option together as reason for buying Electronic Items online) $>= 0.85$

H3: π_0 (Discount, Variety, Comparison option together as reason for buying Electronic Items online) < 0.85

For this test of ours we have taken preferred reason for the respondents to buy Electronic Items Online. So our sample size here is the full sample = n= 70.

Out of 70, number of people who consider "Discount/Variety/Comparison option" as their main reason for buying Electronic Items Online = 57.

	Discounts	Variety	Ease of Payment Methods	24*7 Store	Comparison Options
Frequency	34	12	4	9	11

So, p = 57/70 = 0.814
α = 0.05 (mentioned above)

Z – Value   =(p – π_0) / (sqrt((π_0(1- π_0))/n))
             =0.814-0.85 / (sqrt (0.85*0.15)/70)
             = ~ -0.84

P-Value (z= -0.84) for a 1-Tail test for this hypothesis = 0.2005

As we see (P-Value = 0.2005) > (α = 0.05) → So we accept the Null Hypothesis at 95% Confidence Interval.

<u>Conclusion drawn here:</u> At 95% Confidence Interval, we can say that 85% of the population prefers buying Electronics Items online for the 3 most important facilities – Discounts, Variety and Comparison Options.

- H04: In Indian Market, the online shopping dominates (sums up to more than 90% of the purchase) the purchase of Electronic Items

  H4: In Indian Market, the online shopping does not dominate the purchase of Electronic Items (sums up to less than 90% of the purchase)

So, H04: π_0 (Population section who buy Electronics Items online) $>= 0.90$

H4: π_0 (Population section who buy Electronics Items online) < 0.90

For this test of ours we have taken up the study that tries to validate the fact that nowadays, majority of the people prefer to buy Electronic Items online.

Out of 70, the number of people who "Buy Electronics Item Online" → 62

		Online	Offline
Buy Electronic Items		62	8

Buy Electronic Items (Study from the Sample
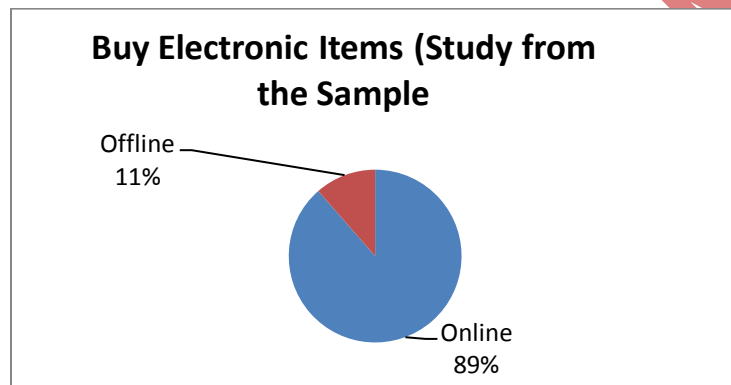
So, p = 62/70 = 0.814

α = 0.05 (mentioned above)

Z – Value $= (p - \pi_0) / (sqrt((\pi_0(1- \pi_0))/n))$

$= 0.814-0.90 / (sqrt (0.90*0.10)/70)$

$= \sim -0.39$

P-Value (z= -0.39) for a 1-Tail test for this hypothesis = 0.3483

As we see (P-Value = 0.3483) > (α = 0.05) → So we accept the Null Hypothesis at 95% Confidence Interval.

Conclusion drawn here: At 95% Confidence Interval, we can say that 90% of the population prefers buying Electronic Items online over offline.

- H05: Majority of online buyers(More than 90%) buy Electronic Items from Amazon.in
  H5: Less than 90% of the online buyers buy Electronic Items from Amazon.in

So, H05: $\pi 0$ (Buyers who buy Electronic Items from Amazon.in) $>= 0.90$

H5: $\pi 0$ (Buyers who buy Electronic Items from Amazon.in) < 0.90

For this test of ours we have taken up the study that tries to validate the fact that, majority of the population prefer to buy Electronic Items from Amazon.com.

Out of 70, the number of people who "Buy Electronics Items from Amazon.in" $\rightarrow$ 61

	Amazon	Flipkart	Other
For Electronics Item which Site do you prefer the most?	61	8	1

So, p = 61/70 = 0.814
α = 0.05 (mentioned above)

Z – Value   =(p – π0) / (sqrt((π0(1- π0))/n))
                =0.8714-0.90 / (sqrt (0.90*0.10)/70)
                = ~ -0.80
P-Value (z= -0.80) for a 1-Tail test for this hypothesis = 0.2119

As we see (P-Value = 0.2119) > (α = 0.05) $\rightarrow$ So we accept the Null Hypothesis at 95% Confidence Interval.

Conclusion drawn here: At 95% Confidence Interval, we can say that 90% of the population prefers buying Electronic Items online from Amazon.in over any other online websites.

- H06: Customer buying experience from Amazon.in is rated on an average >= 4 .
  H6: Customer buying experience from Amazon.in is rated on an average below 4

So, H06: $\mu 0$ (Rating of population for experience of buying Electronic Items from Amazon.in) $>= 4$

H6: $\mu 0$ (Rating of population for experience of buying Electronic Items from Amazon.in) < 4

For this test of ours we have taken up the study that tries to validate the fact that, the average rating of population towards the experience of buying Electronic Items from Amazon.in is equal to or greater than 4.

Out of 70, the number of people who vote for 4 and above in below mentioned rating is = 62

	1	2	3	4	5
Rating of Buying experience of Electronics Item Amazon.in	0	1	7	39	23

For this we will use "One sample Z-test" →
Z-Value = ($\bar{x}$- $\mu 0$) / (s/sqrt(n))

α = 0.05 (mentioned above)
$\bar{x}$ = 4.11
$\mu 0$ = 4
s = 0.63 (sample SD)
n=70

Z-Value = ($\bar{x}$- $\mu 0$) / (s/sqrt(n))
     = (4.11-4)/(0.63/sqrt(70))
     = 1.46
P-Value (z= 1.46) for a 1-Tail test for this hypothesis = (1-0.9279) = 0.0721

As we see (P-Value = 0.0721) > (α = 0.05) → So we accept the Null Hypothesis at 95% Confidence Interval.

Conclusion drawn here: We can see that as the Null Hypothesis is proven true using One Sample Z-test so, we can say with 95% confidence that the average User rating towards "Buying of Electronics Item from Amazon.in" is 4 and above.

- **Average number of Electronics Items bought by the respondents from Amazon.in vs. Other Websites**

	1-10	11-20	21-30	31-40	None
Amazon	38	15	12	4	1
Other Sites	31	2	0	1	36

To understand the Annual purchase habit of the customer we have done the Friedman Rank Testing of the following data through the SPSS software using Non Parametric Data Analysis. The details of the raw data we have taken is the Avg number of times the customer purchase through Amazon or other E-commerce websites.

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment	Print Format	Write Format
AMAZON	1	<none>	Ordinal	Input	8	Right	F8	F8
OTHERS	2	<none>	Ordinal	Input	8	Right	F8	F8

Variables in the working file

Descriptive Statistics

	N	Percentiles		
		25th	50th (Median)	75th
AMAZON	70	5.50	5.50	15.50
OTHERS	70	.00	.00	5.50

Ranks

	Mean Rank
AMAZON	1.89
OTHERS	1.11

Friedman Rank Test

Test statistics [a]

N	70
Chi-Square	49.590
df	1
Asymp. Sig.	.000

a. Friedman Test

The Following test confirms that the null hypothesis as 0.00>0.05.

DATA INTERPRETETION

We had started this research paper with the mention of a number of objectives which we intended to study through this paper. Keeping them in mind we had devised the questionnaire and the related Hypothesis to study each of our objectives in details and come to a conclusive platform regarding them. Let us take each objectives one by and see what interpretations we can make on the basis of the Data represented and analyzed using the Hypothesis so far.

- To analyze how the buying pattern of Electronics items switched from offline to online with the advent of e-commerce.

Flash sales come up with huge discounts on products and these discounts are time bound. There are deals on products with discount up from 15% to 20% via Citibank, Axis Bank and other banks. Flash sale deals for purchasing a wide range of product from several categories. App Only Deals, Best Deals, Big Billion Day Deals, Short Time Deals, bumper bonanza, a super-deal season are available for consumers. Deals to cost- conscious consumers are provided, usually over a period of five-day event to fend off competition by different E-retail platforms. Since 2015, Amazon came up with 'Curtain Raiser Deals', where users can choose between two groups of products - the one with the most votes will go on sale for more time such that more customers would buy the same. Amazon provided a platform to introduce new phones such as Motorola MotoE, Xaomi's newer phones on discounted prices. Amazon came up with new add strategy 'AurDikhao, AurDikhao' which had discount priced offers in the newer products.

- To understand the demographics of the group of Customers relies on online shopping of Electronics Items more?

By Demographics we mean the gender, age group, economic conditions, educational level etc. of the population. For this study we have particularly focused on the gender and age group aspect of demographics and how the customers of these demographics are associated with online shopping of Electronic Items. We have studied by taking samples from Urban Population only – Kolkata, West Bengal. Here we can see that majority of the sample prefers buying Electronic Items Online.

When we went on to make a further delve into the gender part of the demographics we saw that both male and female section of the sample almost equally prefer shopping only. This we see in the Data Representation section discussed in the related chapter. We saw that out of the 62 respondents who prefer shopping Electronic Items online 30 were female and 32 were male and thus reflecting an equal ratio between the two genders. Further using the hypothesis – H01/H1 we have been able to provide from our sample test that for the Urban Population from where our sample has been collected, that the male and female ratio of the population equally prefer to shop Electronic Items online. This can owe to the changing times when the education level, exposure

to the world, equal earning opportunities are present for both men and women, thus both are seen to behave similarly in this aspect as well.

With regards to the age aspect of demographics we found that the late twenties and early thirties contribute most to online shopping of Electronic Items. We have studied in the sample the various age groups like 16-24, 25-32, 33-45, 46-58. Of this we do not see much people from the 33-46, 46-58 age groups favoring online shopping of Electronic Items as much, maybe this owes to their attitude towards online shopping. These age groups have spent majority of their times shopping offline and prefers or trusts it that way. They might not want a change in their pattern of lifestyle and hence not much accepting to this aspect of change as well. Whereas people from 16-24 even if the generation totally in for of the online shopping and Online era, they would not have much of cash fluidity at hand as they are mostly the students, so they might contribute to Online Shopping out of awareness and interest but not as much due to lack of cash availability. But 25-32, the age group showing the maximum number of online shoppers of Electronic Items can be rightly justified for such behavior. They are the age group section of the demographics who belong more widely to the internet era and their exposure to internet and its utility is very high. They are in a phase of life when experimentation is a common thing and hence trying to shop things online is a preferable option for them. Plus they have the advantage over the teens with their earning capacity as this group of belong to the early earning sections of the society with money in hand. These claims have been proven from the Data Representation of the Age demographics of users who prefer to shop Electronic Items online. Also the hypothesis H02/H2 prove that 25-32 age group contributes to 75% of the urban population who prefer buying Electronic Items online.

- <u>To understand the reasons for the change in the trend of people buying online</u>

Since the advent of Internet, when slowly online shopping concept was introduced, there were some early adopters who embraced this new change. But with time seeing the advantage of online shopping more followers joined in. Some were late adopters as well but eventually landed up with the populace who prefer shopping Online. Through this research questionnaire we evaluated the most important reason to respondents for shopping online. We found that out the main reason – Discounts, Variety, Ease of Payment, Comparison Options, 24*7 store, respondents feel that Discount, Variety, Comparison options are most important reasons for which they buy online. Further through Hypothesis H03/H3 we saw that it can be proven that Discount, Variety, Comparison options contribute to 85% of the reason why Urban Population prefers buying Electronic Items Online.

Further we made a study to see why people started buying Electronic Items online, is it their own necessity or the advertisement of the online sites or a word of mouth from friends and relatives. It was seen that 71% of the sample voted that it was their own necessity which made them turn to online shopping, while 20% were motivated by various advertisement to try online shopping and that's how their journey started, while a small percentage of 9% turned to try their luck at online shopping of Electronic Items by being influenced by experience of peers.

So overall it was their own necessity, and the online shopping advantages – discounts, variety and easy comparison options which made most of the people turn to online shopping of Electronic Items.

- To understand how e-commerce dominates the sale of certain Electronics product in Indian market

With time, we have seen a remarkable switch in the market, where people have turned to Online Sites for buying their necessities and specially Electronic Items. This has caused a number of changes in the retail world too. So it becomes increasingly important to study if at all e-commerce dominates the sale of Electronic products in Indian market. For this we raised a question in our survey of sample from the urban population to see who all are there who buy E-Items more from online sites. We found that 62 respondents out of our sample size of 70 voted that they prefer Online shopping of Electronic Items. Further we studied the hypothesis H04/H4 where on basis of our sample responses, we could conclude that 90% or more of our urban Population prefer to buy the Electronic Items Online. Thus is becomes clear that e-commerce is dominating the sale of Electronics Items in the Indian market. Moreover Amazon.in being the largest player in this field, grabs majority of this market share. We could see this in our Data representation chapter, where 87% of the sample is seen to prefer Amazon.in for buying their Electronic Products online.