

SURVEY ON E-COMMERCE SITES



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INTRODUCTION:

E-commerce, also known as “electronic commerce,” is the buying and selling of goods or services electronically on the internet. It can also refer to other online activities like online auctions, ticketing and banking. E-commerce is an essential part of many businesses that rely on the sale of physical products or services online. Now there is a lot of importance of ecommerce sites like

- E-commerce is popular because of its vast advantages.
- It is very convenient because anyone can shop from it in any time, anywhere, from any devices instead of visiting shops.
- No need of physical; company set up
- Buying/ Selling 24
- Better quality of service
- Ability to reach new market

OBJECTIVES:

The main goal of the project is to analyse the customer behaviour toward the E-commerce sites i.e.

1. which age group use the Ecommerce sites most,
2. Analysing E-commerce sites usage with respect to educational qualification
3. What age group subscribed most E-commerce sites etc

DATA:

According to recent survey amazon.com is ranked number 1 as the most visited E-commerce And Shopping website in October 2021. The average amount of time that users spend on the website is 6 minutes, and they see, on average, 8.67 pages per visit.



But the tendency of shopping from other websites such as flipkart, big-basket, myntra, meeso are continuously growing so we prepare a questionnaire to analyse the E-commerce sites. So, we prepare a list of objectives to collect data, such as,

- Basic Questions
- Converting the answers of the question to the necessary data
- Preparing the data set
- Plot the graphs with the help of R-programming to clearly visualize our objectives
- Finally to have a clear insight of our project



METHODOLOGY OF PROJECT:

Customers build up a sense of loyalty to those e-commerce websites that offer them a good user experience, and that transmit to confidence and reliability. There are various factors that influence this: how easy it is to find the product they are looking for, how easy/difficult it is to make the payment, how fast the order was executed. All of these factors determine whether the customer will shop at that website again or not. In general, potential buyers are more and more impatient, which means they do not have much time to find what they are looking for, or to receive a positive first impression. Our e-commerce module, which is part of our Content Management System, takes these needs into consideration and as well as others. Attracting and retaining customers Gaining high visibility on search engines is key to attracting new customers.

This is why our e-commerce projects make the Google indexation easy, as well as that of the other main search engines. With regards customer retention, our Content Management System includes some online Marketing and customer services, such as forums, e-magazines, surveys, etc., and also recognises returning customers in order to facilitate the payment process, and thus help with customer retention. Searching in an easier way Our approach is customer-focused and geared towards intuitive web browsing, which combined with a customizable search helps new and returning customers to find the products and services they need, quickly and easily. We also integrate suggestions about similar products to promote other products and increase sales and orders, and



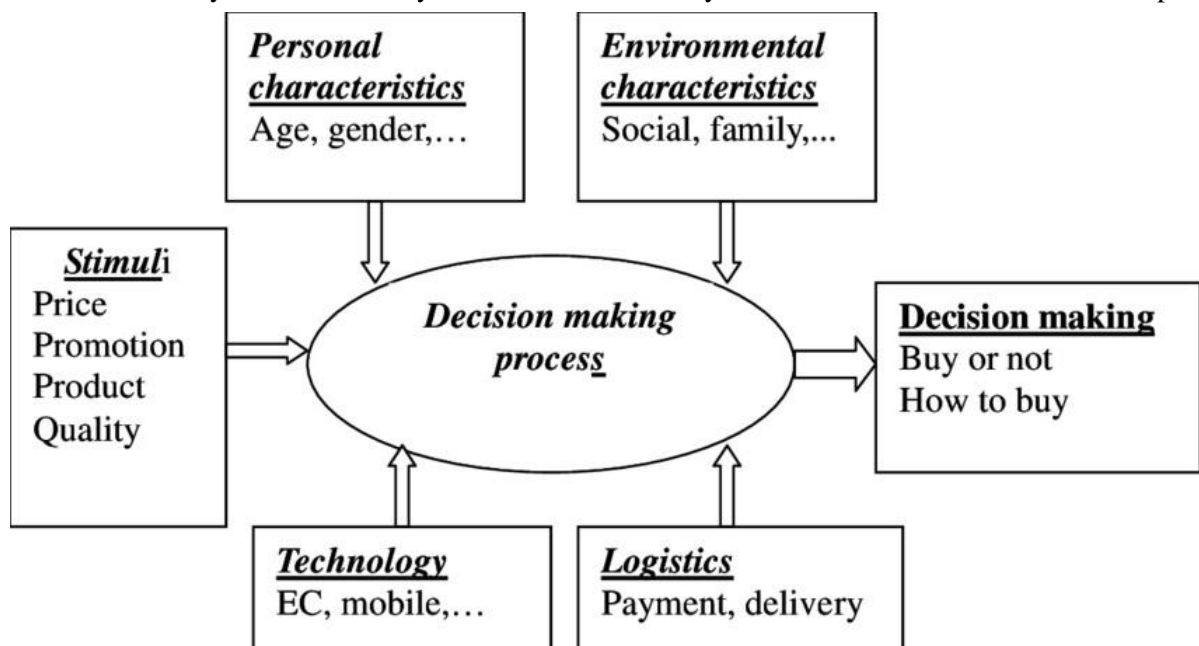
Our approach is customer-focused and geared towards intuitive web browsing, which combined with a customizable search helps new and returning customers to find the products and services they need, quickly and easily. We also integrate suggestions about similar products to promote other products and increase sales and orders, and

thus improve the e-commerce's profitability. Potential customers will not wait When new customers go onto a website that is slow to load, they are quick to get impatient and leave the site. Our e-commerce projects guarantee quick loading, as we use stylesheets (CSS) and files which have been size-optimized. Our servers also allow for boosting hosting capacity on days with high traffic, such as the first day of the sales. Peace of mind for customers



a website that is slow to load, they are quick to get impatient. Our e-commerce projects guarantee quick loading, as we use stylesheets (CSS) and files which have been size-optimized. Our servers also allow for boosting hosting capacity on days with high traffic, such as the first day of the sales. Peace of mind for customers

Many users are cautious when shopping online, especially given the regular coverage of online scams on the news. As a result, the web design, usability and content of an ecommerce business needs to offer customers complete peace of mind and convince them of the company's reputation and integrity. We can write or advise you on what to say about customer security on the site. If done well, this will help



you increase Work methodology for E-commerce conversions and the site's overall profitability.

RESULT:

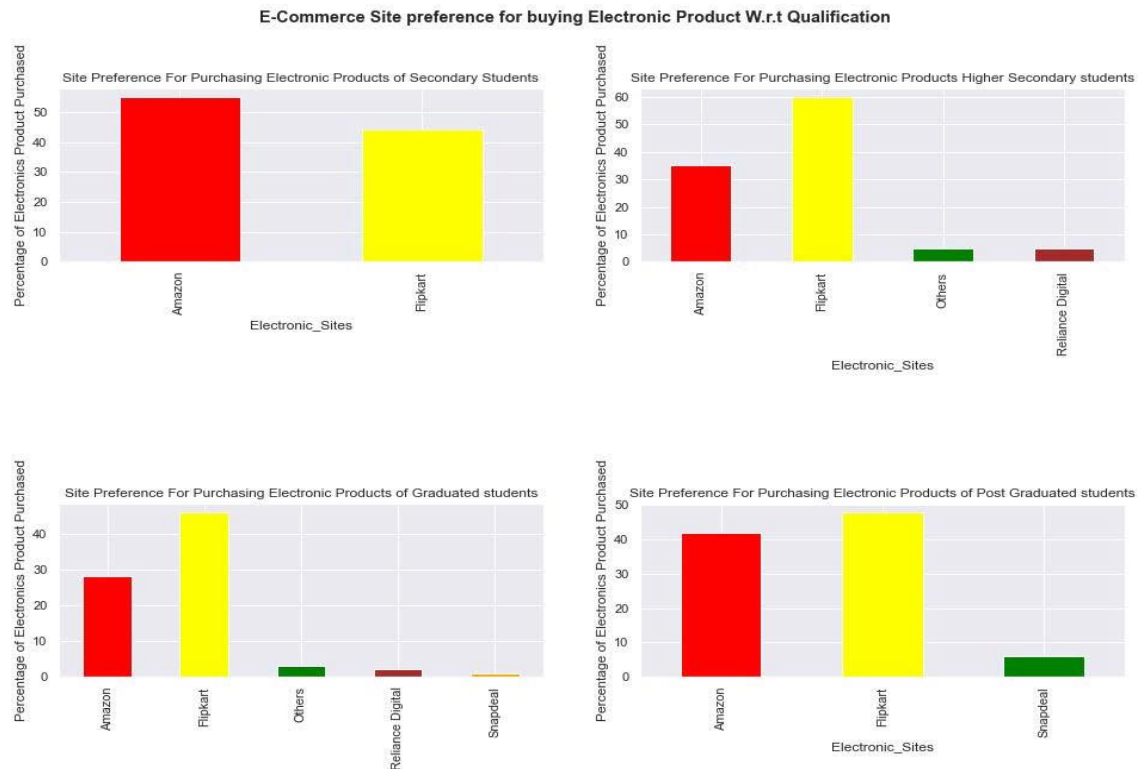
1:E-commerce site preference of buying electronic products:

Buying electronic products depends on various aspects, such as.

a.Qualifiacation:

Now we look into the tendency of buying electronic product vary with the the qualification. As the world become a online bubble, everyone, specially young stars depends on e-commerce sites to buy their necessary useful gadgets, such that, headphone,laptops,mobiles,keyboard,mouse,calculators,etc . So we investigate the which site is most preferable to buy such things. Now we take a glance to our corresponding graph,

As in India we consider the secondary education is the most fundamental education, so we consider four group of education level secondary, High-secondary, Graduate and Post-graduate and above. From above we interpret that,



● Secondary students usually find the Amazon their most useful and reliable website to buy their needed electronic products.

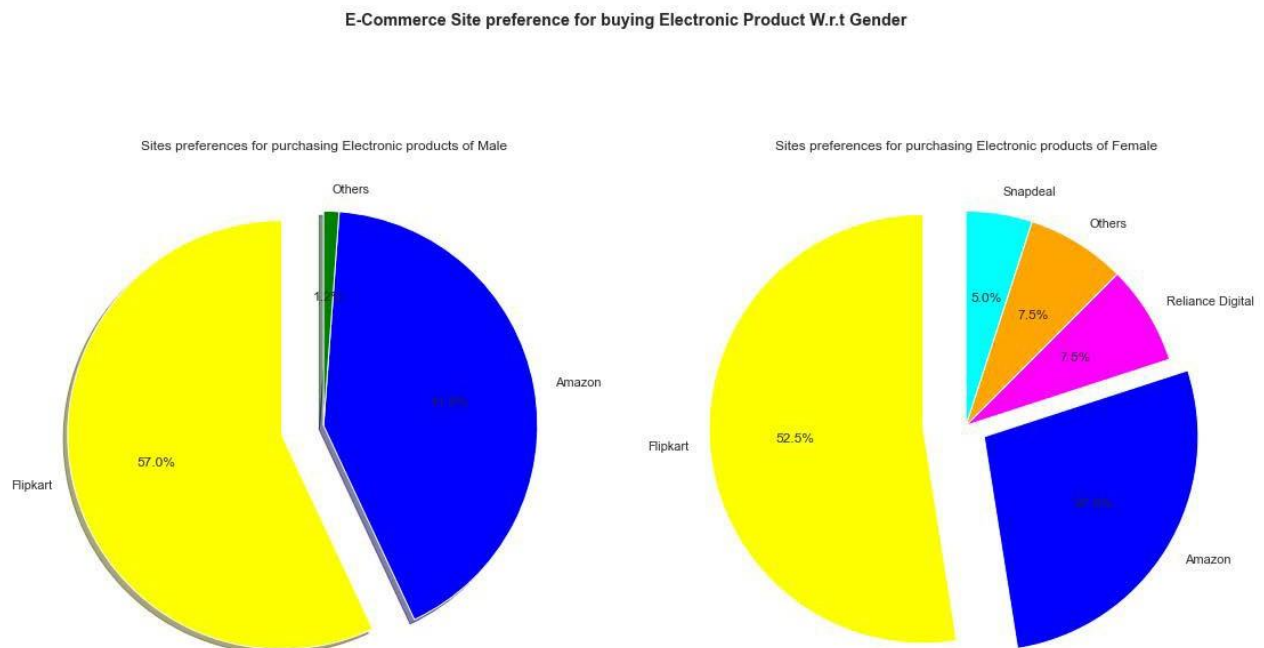
● But from our 2nd plot it is clearly seen that Higher-secondary students find Flipkart is the most useful website for their necessary electronic products.

● Graduate students find Flipkart hands full websites for their Electronic goods.

So from above analysis we can reach to a view that , as the age grows , Flipkart remains the most used website all over.

b.Gender:

Necessity of various electronic products also different for different genders. Our analysis put torch onto this view and visualize the picture clearly,



From the above plot we can interpret that,

● Males usually find Flipkart is the most useful and reliable website to buy their electronic products. Though Amazon is just running behind the Flipkart .i.e., a number of man also prefer Amazon to be their most useful website .

● Similarly females also find Flipkart is to be the most useful and reliable websites for their electronic products. But on the other hand ,unlike the male , a few percentage of female find Snapdeal, Reliance Digital, etc to be their preferable websites to buy their electronic products.

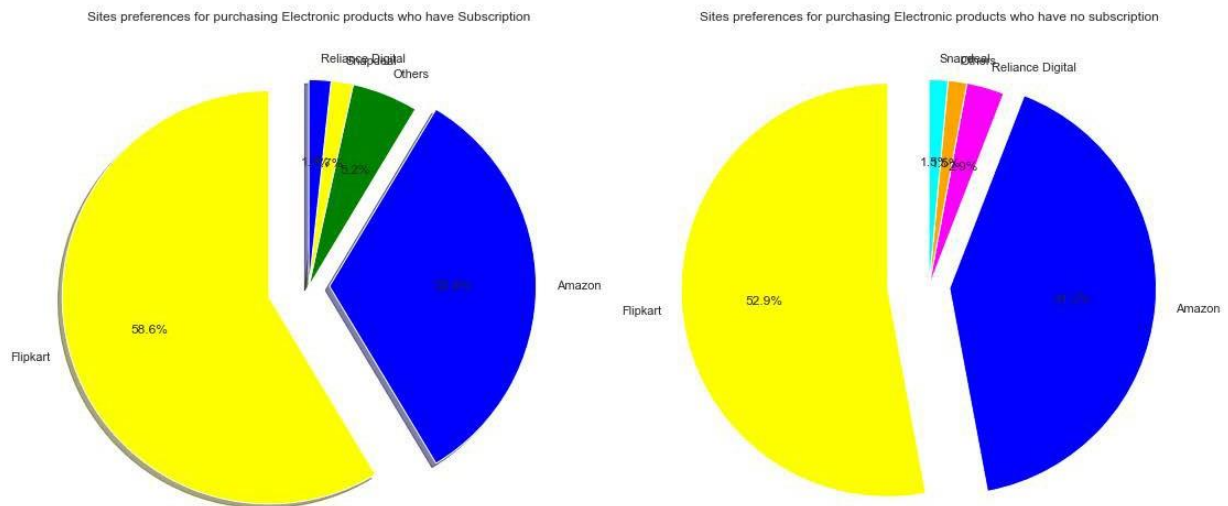
So from above we can conclude , females have more diversity on choosing E-commerce sites over males.

C.Subscription:

Our analysis also put light on how buying of electronic products vary with the subscription status, now we look onto the plots ,

We can reach to the views from our above plot that,

E-Commerce Site preference for buying Electronic Product W.r.t Subscription

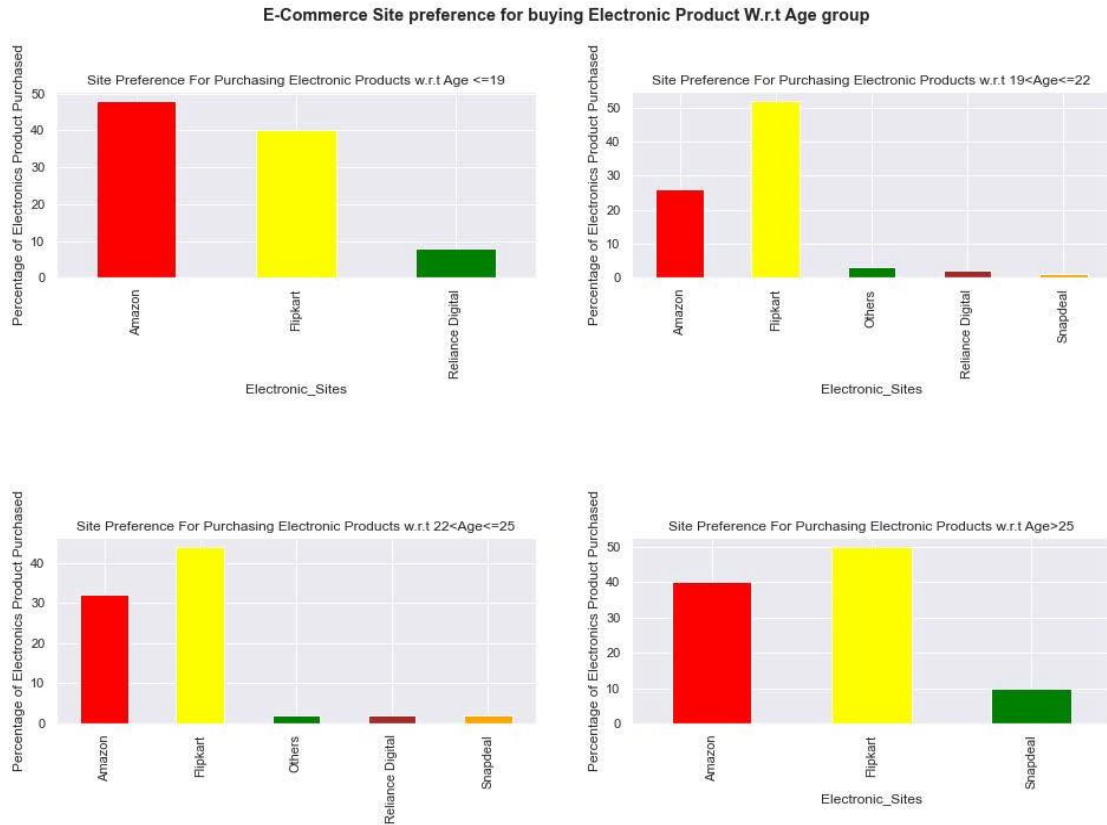


● Mostly people who subscribed, find Flipkart , and Amazon most reliable website to buy their necessary electronic products, But they also find Reliance Digital , Snapdeal to be their alternative useful websites to fulfil their electronic requirements.

● People who have not subscribed any websites , comparatively find Amazon is useful, though in this case Flipkart again wins the race.

Age:

Here we analysed the necessary of electronic products changes with respect to age . From the below plot interpret that,



● People of below 19 age .i.e. teenagers prefer Amazon for their necessary electronic products , though Flipkart is not very far behind. And a very few prefer Reliance Digital.

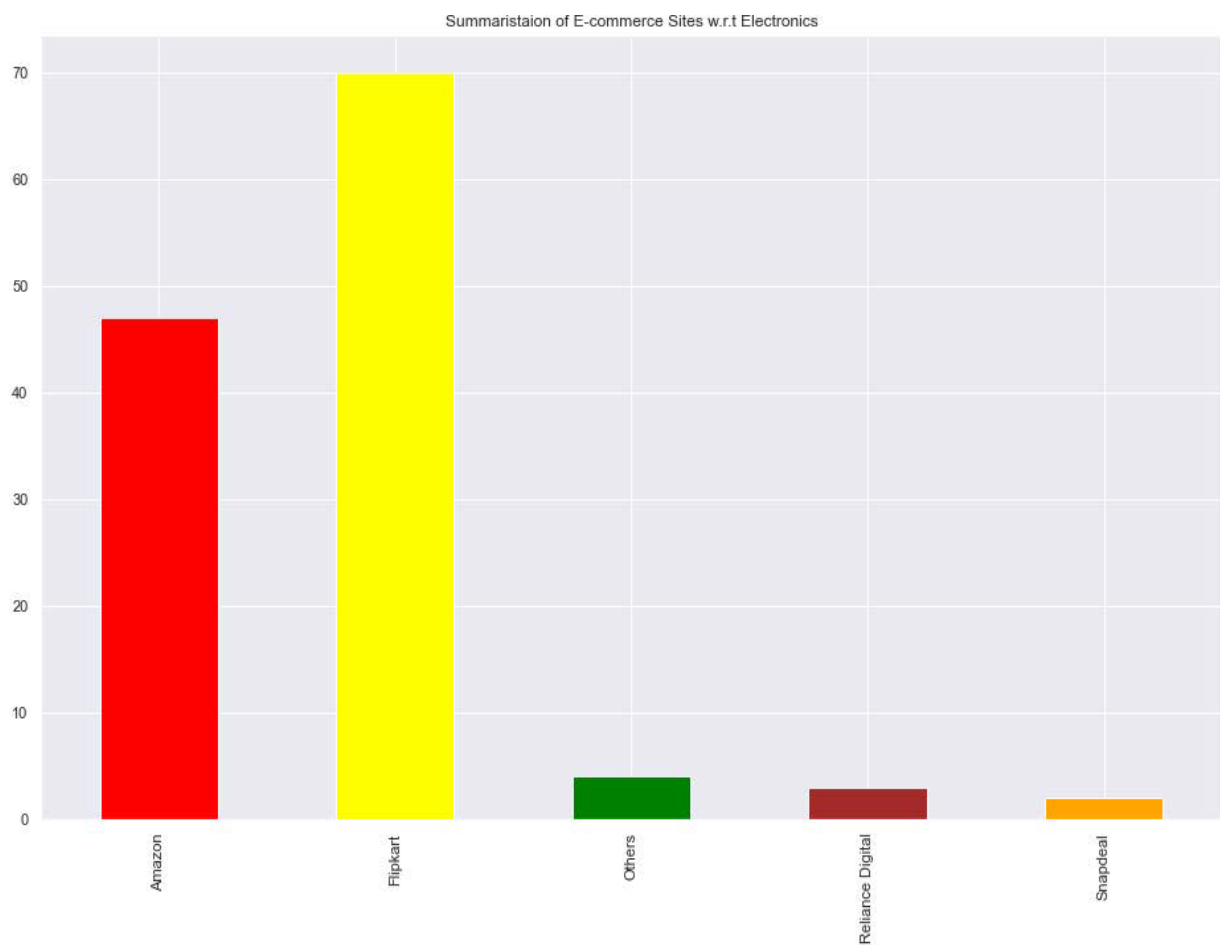
● People of age between 20 to 22 generally like Flipkart for their electronic products.

● People of age between 22 and 25 prefer Flipkart for their electronic goods.

● People of age above 25 generally prefer Flipkart over Amazon for their electronic goods

e.A summarization of electronic products:

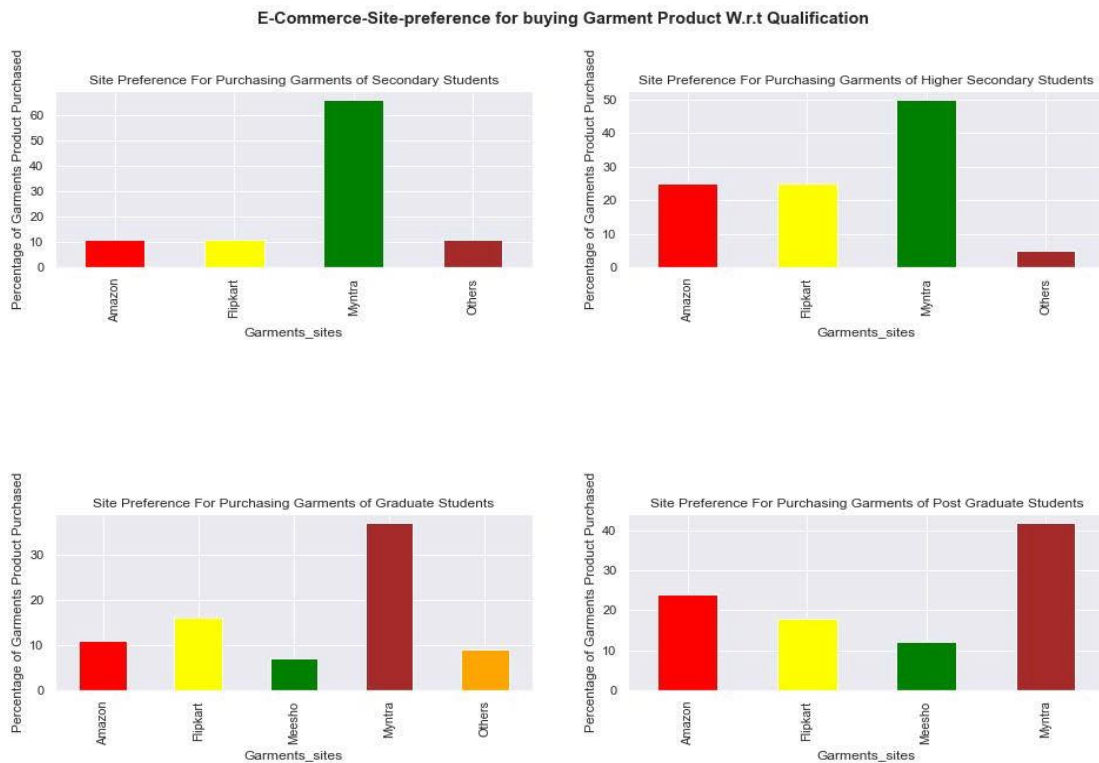
People prefer to buy Electronic goods from online, as they are easy to buy and reliable. Some good companies also give the warranty to their product as their offline customers. So from our analysis we have seen that two giant of E-commerce ,Amazon and Flipkart are much ahead of other competitors. Though newcomers are worthy to consider as competitors but they should have put much effort to posses the market of online electronic goods.



2. E-commerce site preference of buying Garment products:

a:Qualification:

Now we look into the tendency of buying garments vary with the the qualification. As the world become a online bubble, everyone, specially young stars depends on e-commerce sites to buy their necessary garments , As fashion is one of the the most important in 21st century, it changes with the qualification.Now we take a glance to our plots,



Here we can interpret that,

⦿ Though Amazon and Flipkart are two giants of e-commerce, but in fashion Myntra become a very strong competitor for past 2 years. As we can see for the secondary students generally prefer Myntra over Amazon and Flipkart for their fashion goods.

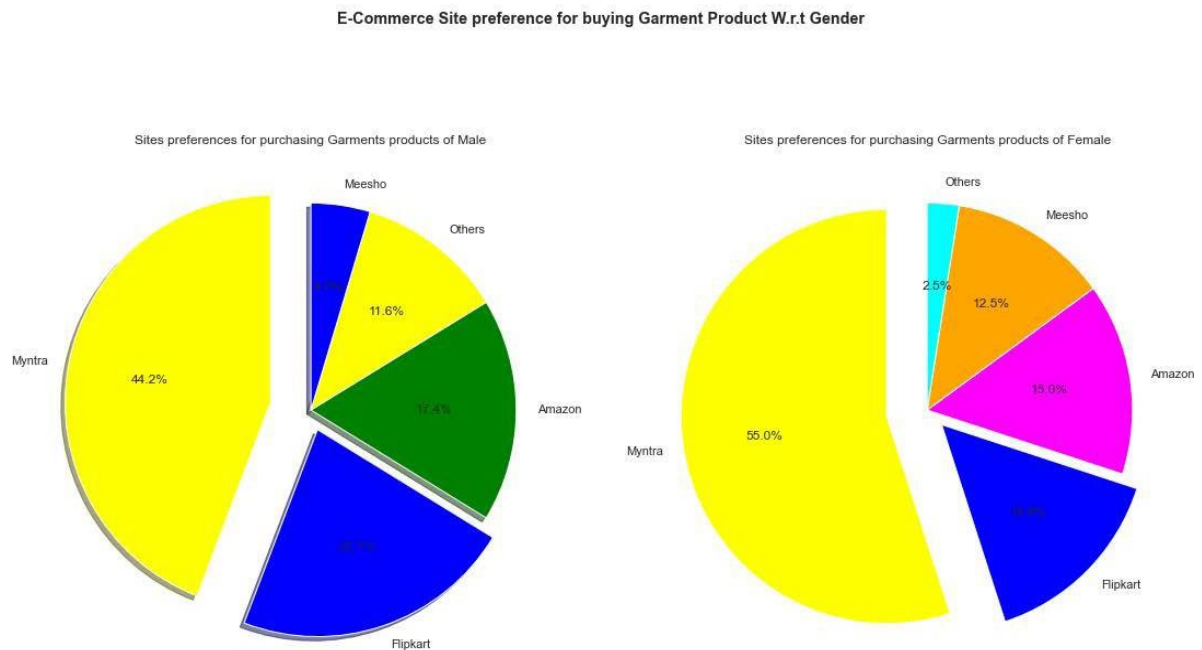
⦿ For the higher secondary students , they also prefer Myntra over amazon and Flipkart .

⦿ Graduate students prefer Myntra for their fashion garments, so in this again Myntra wins the race.

⦿ When we look to our fourth plot .i.e. the post-graduate students generally prefer Myntra for their fashion statements, then comes Amazon and then Flipkart. And they also more and less prefer Meesho, a new-comer to the fashion industry.

b.Gender:

Fashion industry hugely depend on gender. Preferences of garments hugely vary with gender .from our below plot,



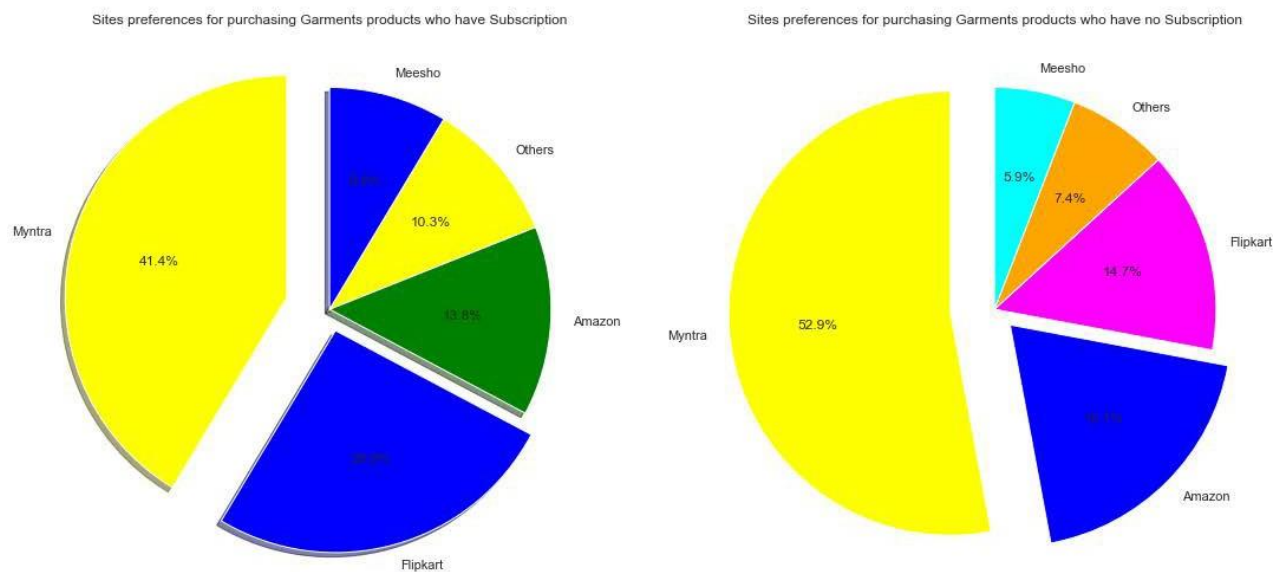
● Though Amazon and Flipkart are two giants of e-commerce, but in fashion Myntra become a very strong competitor for past 2 years. As a result we can easily see Male prefer Myntra over Amazon and Flipkart for their fashion goods.

● And here we can easily see that Myntra again wins the race, but comparatively females prefer more Myntra's products than males, Though Flipkart and Amazons not very far behind .Here we again take the the name Meeso , a new newbie to the fashion industry and continuously becoming famous among women.

c.Subscription:

People also subscribed various websites to enjoy the discounts given by various websites for their garments,now we look into to our analysis,

E-Commerce Site preference for buying Garment Product W.r.t Subscription



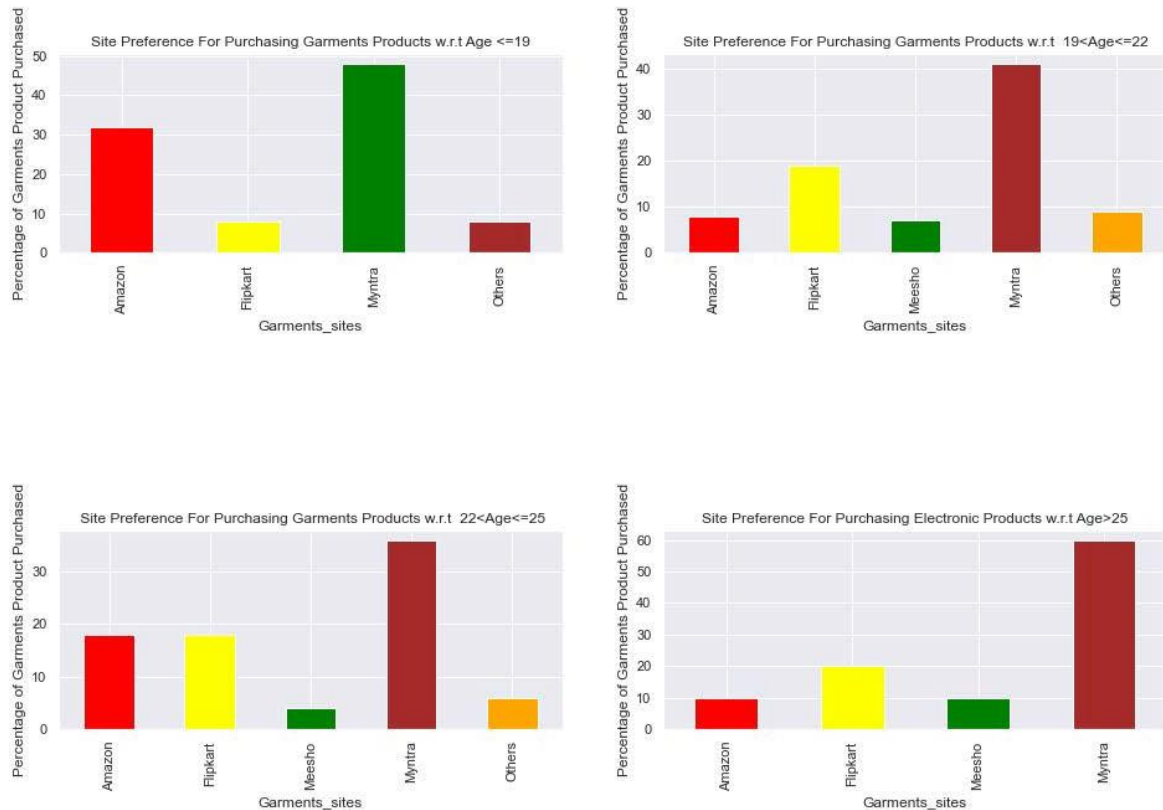
● People who have the subscription prefer Myntra over Amazon and Flipkart .A very few people also Meeso to buy their garment .

● People who have not any subscription for any websites ,prefer Myntra. Though Flipkart and Amazon not just knocking at the door.

Age:

Age is the one of the major index when it comes into fashion. Our analysis fall torch onto the analysis how website preferences vary with the age for buying their garments.

E-Commerce Site preference for buying Garment Product W.r.t Age group



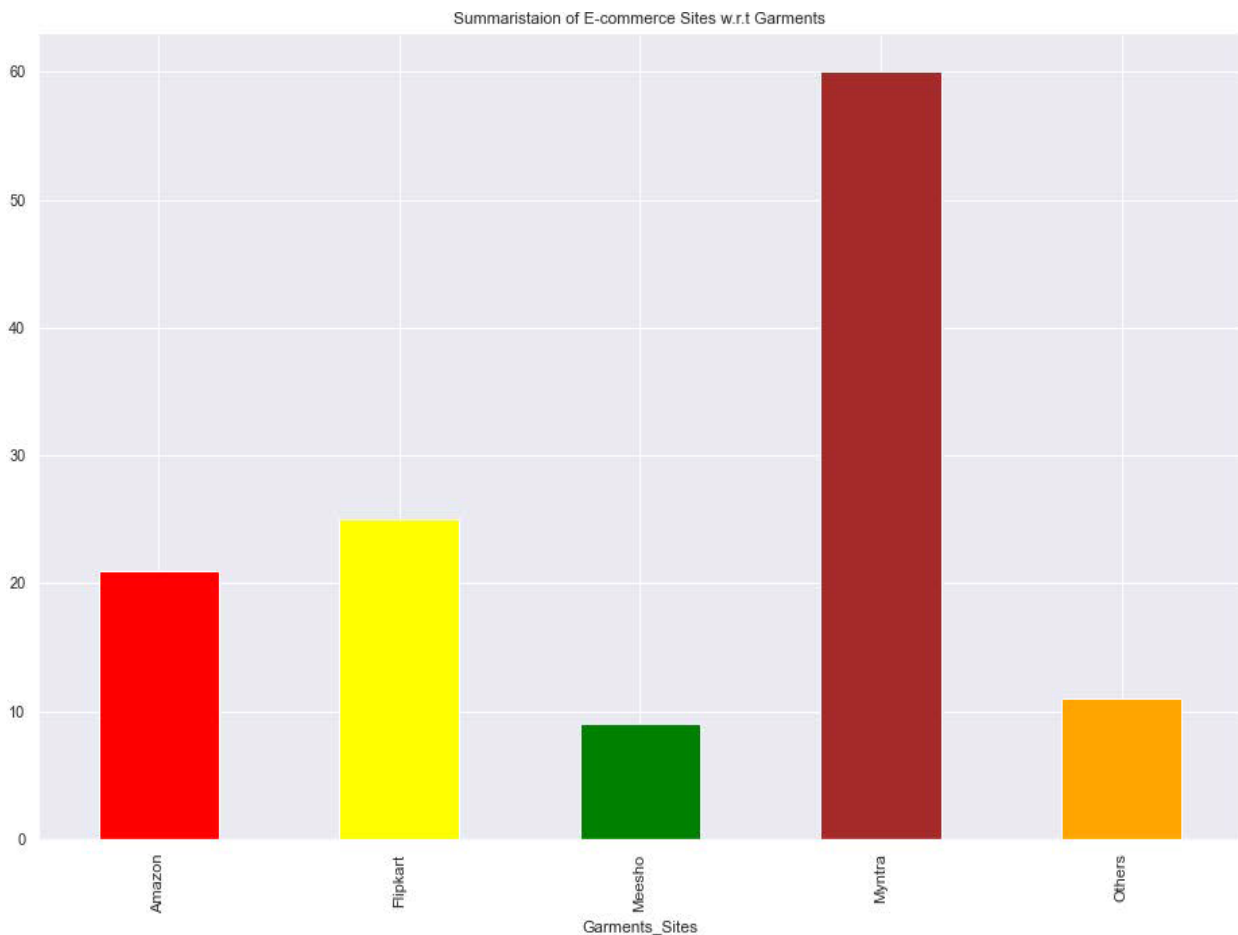
● People of age below 19, .i.e. teenagers, prefer Myntra for their all kind of garments, then comes Amazon .Another point to be noted that Flipkart and other companies are less popular among teenagers when it comes to fashion.

● Now ,those who have age between 20 and 22 prefer Myntra .In this case Flipkart ,Amazon and other websites are too much far away.

● Age between 22 and above like Myntra ,and Flipkart and Amazon is not even close to it.

e.A summarization of Garments products:

Fashion is one of the most important things in the modern world. So, the E-commerce sites take the full advantages of this scope. As we have previously seen that two E-commerce giants, 'Amazon', 'Flipkart' cover all the online market ,so it is not surprising that they much have coverage in fashion garments. But here we have seen from our analysis that 'Myntra' cover most of the E-commerce fashion market, and other sites are much behind of it.



3. Analysis on Grocery:

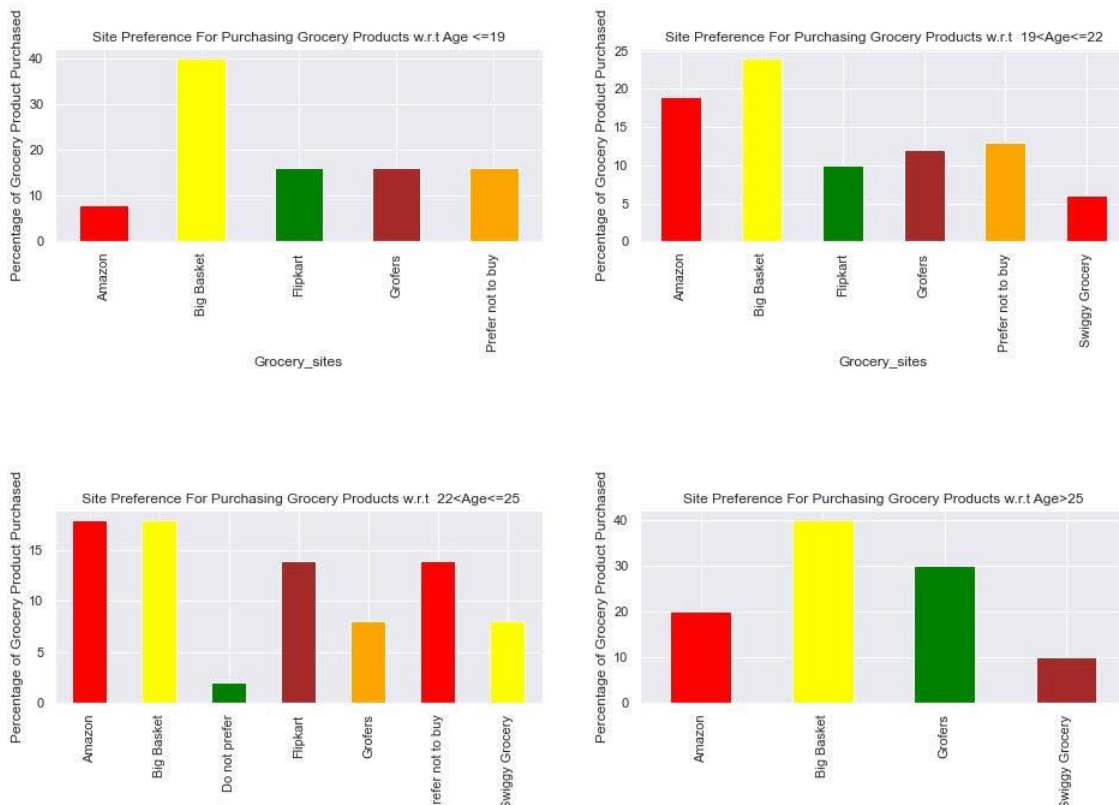
Digitisation of the world encourages the business to come on the online platforms and increase their reach. Various companies get benefited from the leverage of online mode. In recent years we have noticed that grocery store owners also come out from the traditional brick and mortar stores and spread their wings on the digital world, various E-commerce companies take the advantages of this growing market and they spread their reach to the online customers. So in this project we have analyzed some aspect of this growing market with respect to some various parameters such as age, qualification, gender and premium customers(those who use subscription over E-commerce sites). Here is detailed review of this analysis

(a).Age:

Our survey was specifically restricted on the young age groups of 15 to 35 , since today's youth have unprecedented access to digital media and technologies, having grown up as 'digital natives. On our study we have divided this age group to four different age groups as

1. Less than 19 age group
- 2 . In between 20 to 22 to age group
3. In between 22 to 25 age group
4. Greater than 25 agegroup

E-Commerce Site preference for buying Grocery Product W.r.t Age



⊙ Overall on every age group people's prefer Big-Basket for purchasing Grocery items. That is Big-Basket is the leading E-commerce company to providing their service on the grocery sector.

⊙ We can find that Amazon that is a leading E-commerce company on various sector have less popularity on grocery items in young age-group, though the popularity never cross the popularity of Big-Basket in any case.

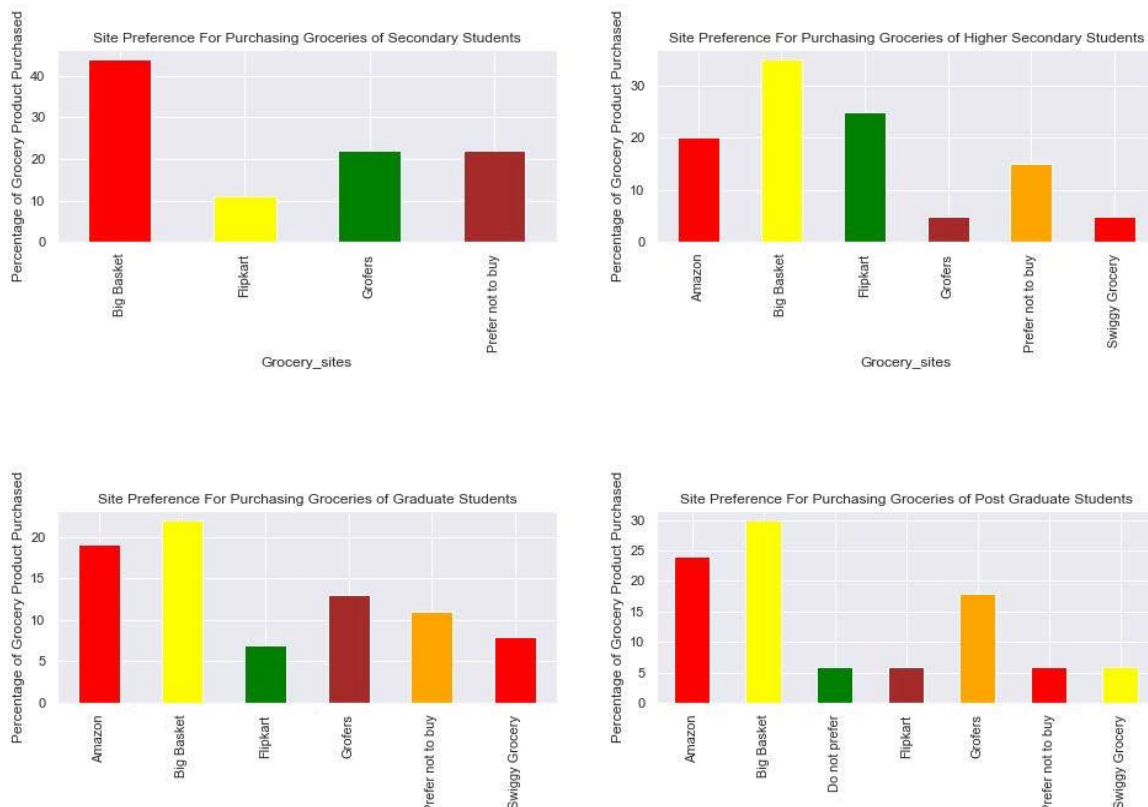
⊙ On the other half Grofers , Swiggy Grocery and Flipkart is new into this sector but still have a presence in different age groups, that is these new companies rapidly increasing their muscles to compete this two giant Big-Basket and Amazon

⊙ On the other hand a well amount of people are not preferring to buy grocery items as there is some issue of freshness and quality that can be compromised on using theses online products .

(b).Qualification:

In our survey we have included a parameter qualification to study how various aspects changes with respect to educational level. As educational level grows the mental development simultaneously grows side by side and that's effect on change of their preference and choice, so study with respect to the education levels are important. Here is a detailed review of the analysis

E-Commerce Site preference for buying Grocery Product W.r.t Qualification



From the above plot we can conclude that -

⊙ From the above plots we can easily say that Big-Basket is the leading E-commerce company in the grocery section among all other competitors, the same result we also find while comparing on different age groups.

⊙ We find another interesting result that the E-commerce giant Amazon have no popularity on secondary students for buying grocery items. While popularity of Amazon increases as educational level goes high.

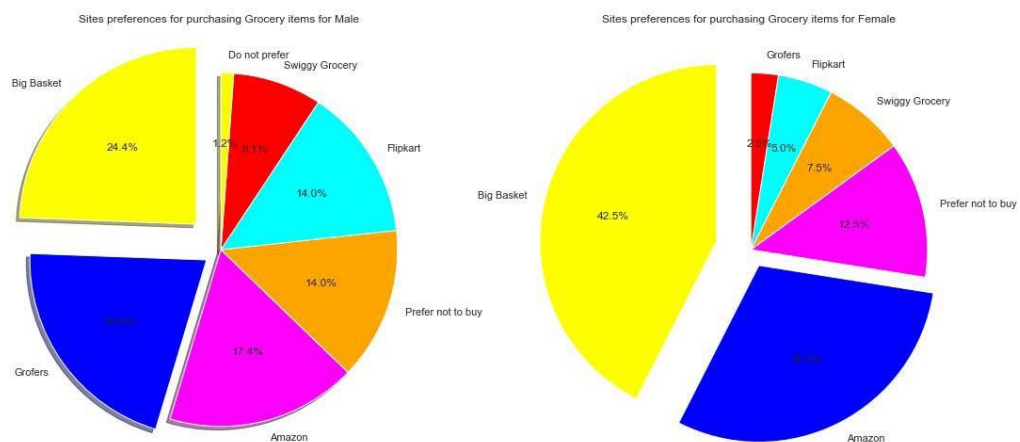
⊙ The other companies such as Flipkart , Swiggy grocery and Grofers have a few little presence on the graphs that implies people uses this companies product as an alternative of Big-Basket and Amazon. So these companies also have an opportunity to improve themselves and place themselves a strong position in the graphs .

⊙ The above graphs also implying that a few percentage of people are not preferring for buying grocery products online.

(C). Gender :-

The term gender refers to the economic, social and cultural attributes and opportunities associated with being male or female. In most societies, being a man or a woman is not simply a matter of different biological and physical characteristics. Men and women face different expectations about how they should dress, behave or work. Relations between men and women, whether in the family, the workplace or the public sphere, also reflect understandings of the talents, characteristics and behaviour appropriate to women and to men. So keeping this in mind in our study we also included the parameter gender. Now a detailed review through plots on this

E-Commerce Site preference for buying Grocery items W.r.t Gender



aspect is-

From the above plots we can conclude that –

⊙ Male customers have on an average same preference on Big-Basket, Amazon, Grofers and Flipkart. So from this we can say that males have no biasness on choosing E-commerce sites.

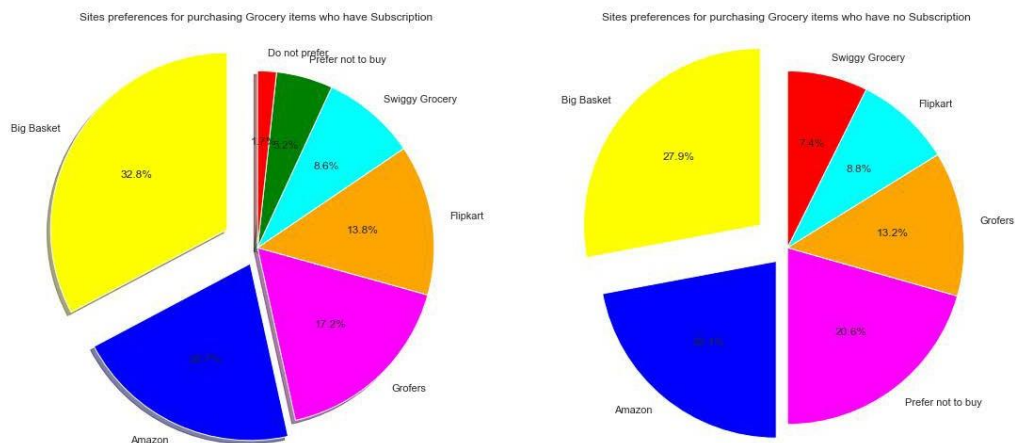
⊙ On the other hand Female's have most preference Big-Basket and Amazon for buying grocery items, whereas other companies such as Grofers, Flipkart, Swiggy grocery are almost remains ignorant.

⊙ There is another point, that is same on both genders that a percentage of customers also does not support on paying their pennies on buying online grocery items.

(D). Subscription :-

With the wide accessibility of the internet and its increasing usage, several giants have also started offering digital content subscription services. Simply put, this type of subscription allows customers to access exclusive online content and privileges reserved only to them. So study with respect to these premium customers are necessary while analysing these E-commerce giants.

E-Commerce Site preference for buying Grocery Product W.r.t Subscription



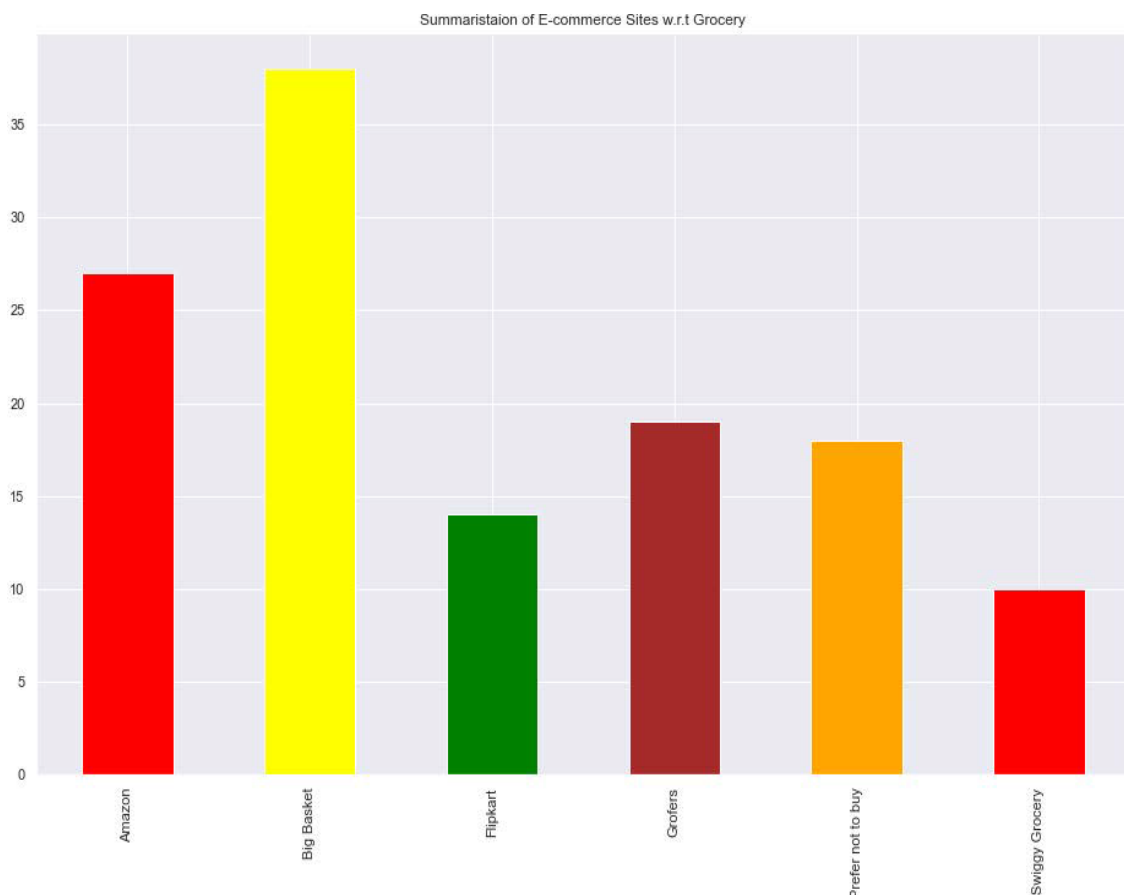
From the above plot we can interpret that –

⊖ In both cases customers mostly prefer Big-Basket and Amazon for buying grocery items, while Grofers and Flipkart have some stack on that place. But comparatively the unsubscribed people's usage decreases on alternative websites such as Flipkart and Grofers.

⊖ Comparing both plots we can easily interpret that those person's who have subscription they mainly prefer for online grocery shopping while those who have no subscription a big percentage of them don't purchase grocery online.

(E).Summarisation:-

Grocery sector in E-commerce business is a new sector and this have been improved and developed on last few years. This sector is full of opportunities as the market is day by day increasing. Till the date according to our study the only two companies that are Big-Basket and Amazon are strictly dominating on such areas, while Grofers putting their efforts to compete these two giants. On the other hand a good amount people doesn't prefer for buying grocery products online.

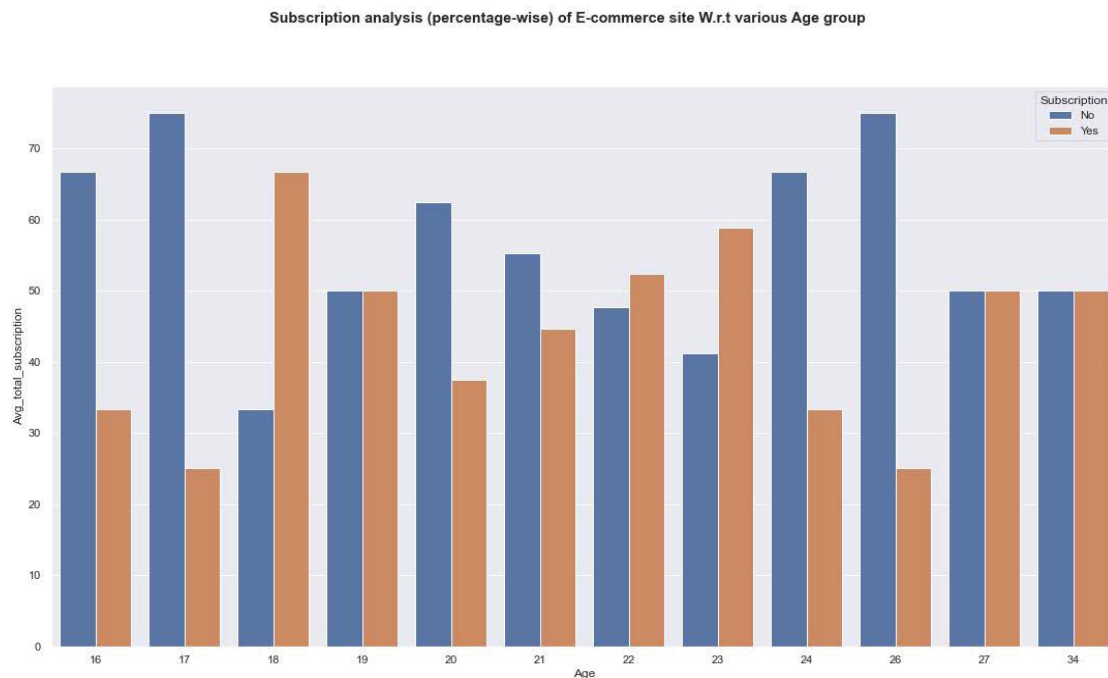


4. Analysis on Subscription:

a. Age:

Subscription on various website depends on various parameters , like ,age , qualification , gender. Now we look into the how age depend on subscription.

From the below plot we can interpret that ,



● From age 16 to 21 prefer not to take subscription for any websites.

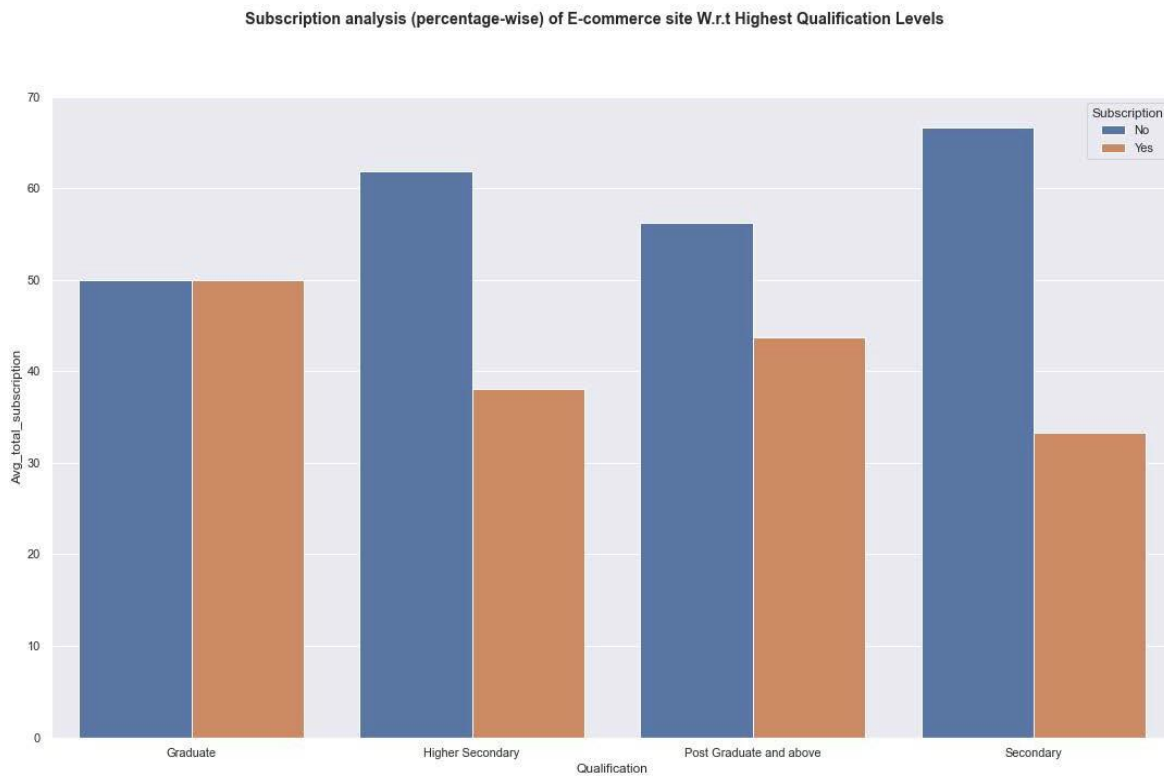
● For the age 22 and 23 has high tendency to take subscription for any websites.

● For the age group 24 to 34 on an average do not prefer to take any subscription for any websites

From the above plot we find diversity on preference of taking subscriptions on various age.

b.Qualification:

Our analysis fall torch onto how the subscription status vary with the qualification,
From our plot we can interpret that,



● Graduate students have almost equal preference of taking subscription over E-commerce websites.

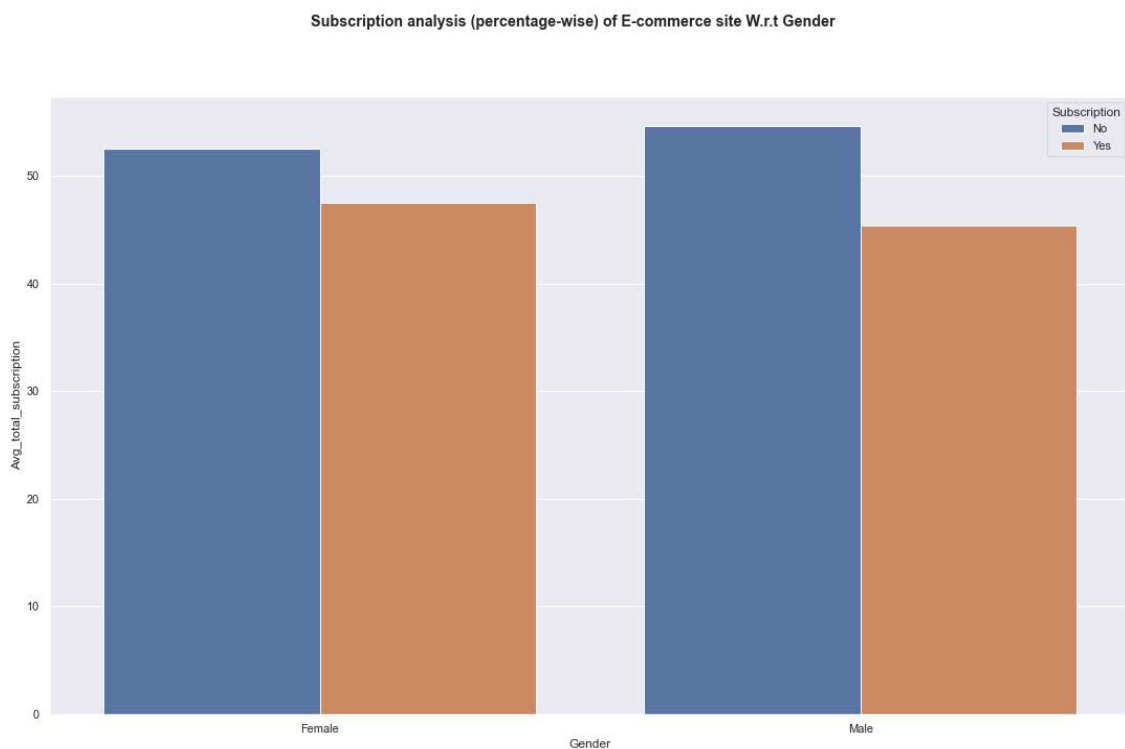
● Secondary and High Secondary students also do not take subscription and comparatively difference between having subscription and not having subscription a little bit high.

● Post graduate students also do not prefer to take subscription for any websites.

So we conclude that students do not prefer to take subscription for any websites.

c. Gender:

Male and Female has difference preference for taking subscription for any websites. Their choice is different . so we visualize depending on their preferences ,

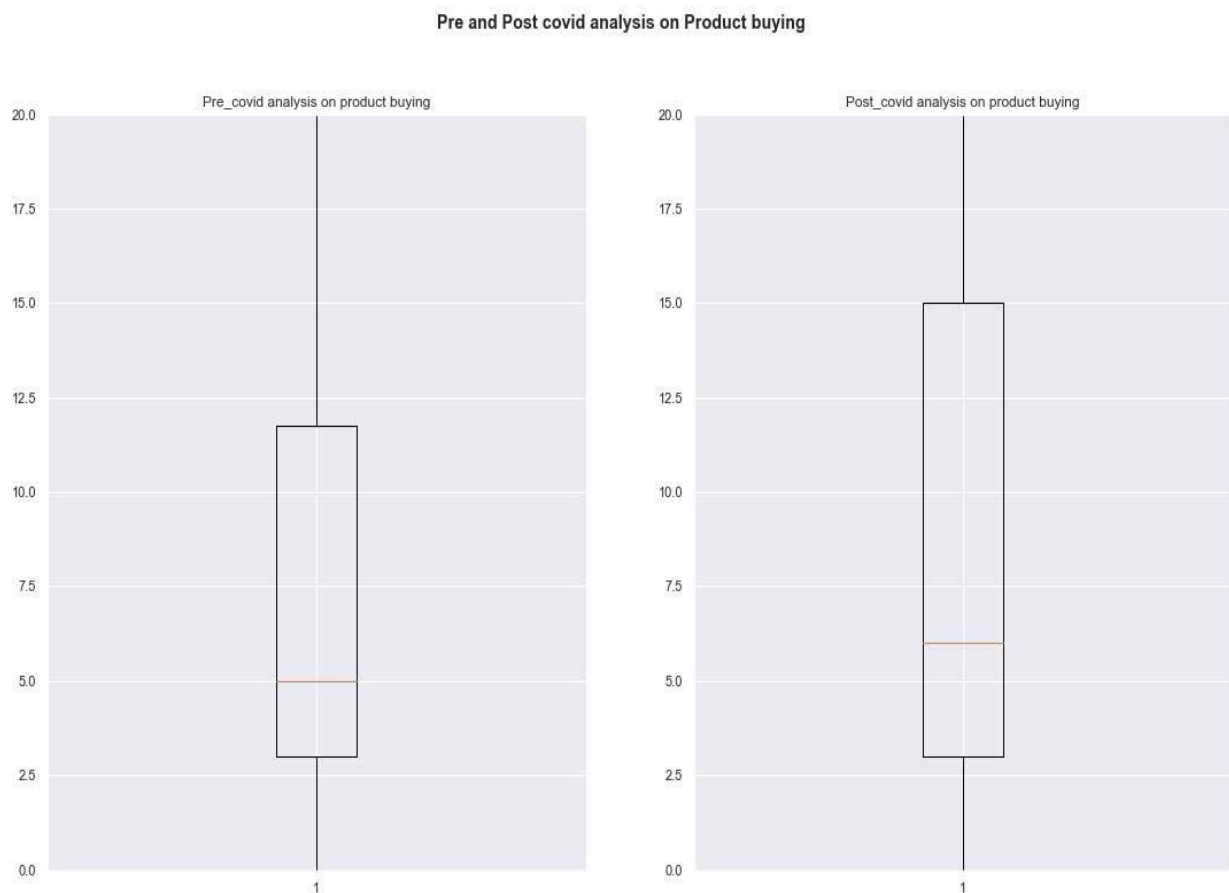


● We can see that comparatively Female do not prefer to take subscription for any websites . Above 50% of women do not prefer to take subscription whereas almost 40% of them prefer to take subscription for any websites.

● Male also do not prefer to take any subscription for any websites. Here also above 50% do not like to take subscription for any websites and above 40% but not near even 50% like to take subscription.

5. Pre and Post-covid analysis on products buying:

Previous year on March the world has first seen a tiny virus which affected mankind most in the entire history. All the world got stuck behind the door and they even unable to go to buy their necessary things. E-commerce sites become the largest helping hand for everyone. Our analysis report show what amount of products people buy before covid and after covid. Now we look into our plots,



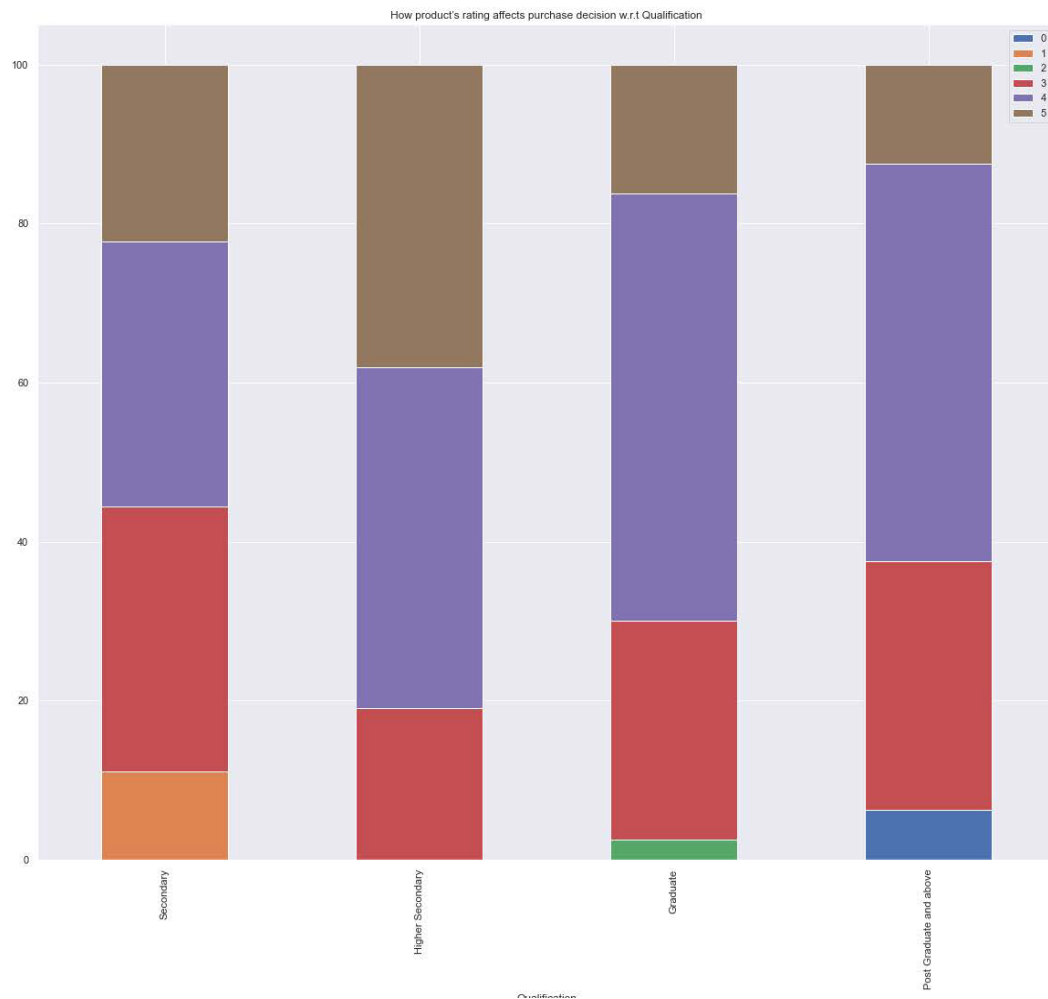
From the plot we can see

● Though the difference of buying products between pre-covid and post-covid era are very less, but distinguishable. We can see in the post covid era the range of buying online products is little bit high. Humankind is hugely depend on E-commerce sites, so rate of buying products is almost same.



6. How product's rating affects purchase decision w.r.t Qualification:

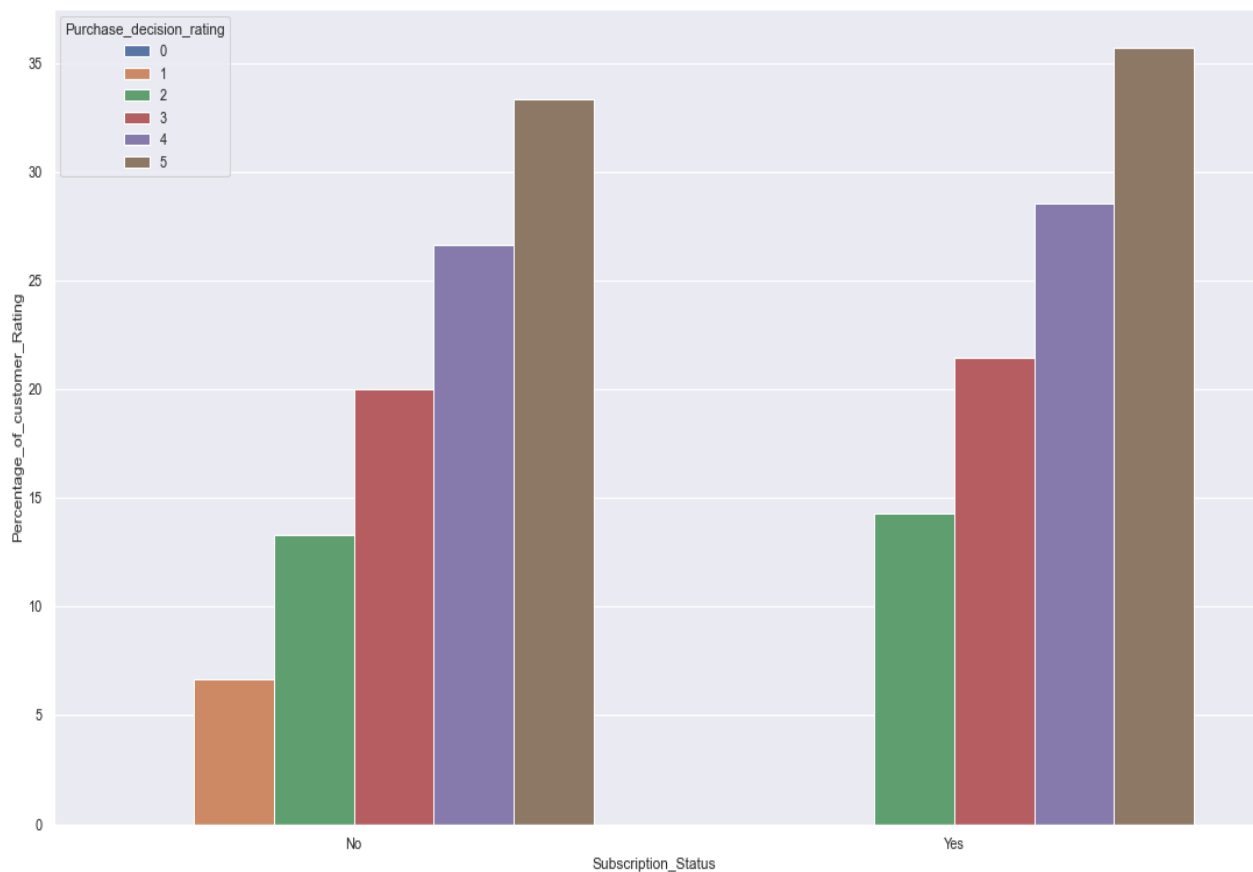
Nowadays rating on E-commerce sites is one of the most important thing to run the



- Dependency of purchasing a product by rating is very much higher on the segment Secondary and HigherSecondary.
- From the above rating we can say that the graduate students also prefer online shopping and their dependency on product rating is a little bit higher.
- For Post graduates and above students purchase decision is mildly affected by the product rating.

7.How rating of E-commerce sites depends on subscription status:

People generally subscribed E-commerce sites to enjoy the different parks, discounts given by E-commerce sites . Now our analysis visualize how people rate various E-commerce sites .



⦿ People those who have subscription over any e-commerce websites are comparatively less dependent on rating of the products than those who have no subscription

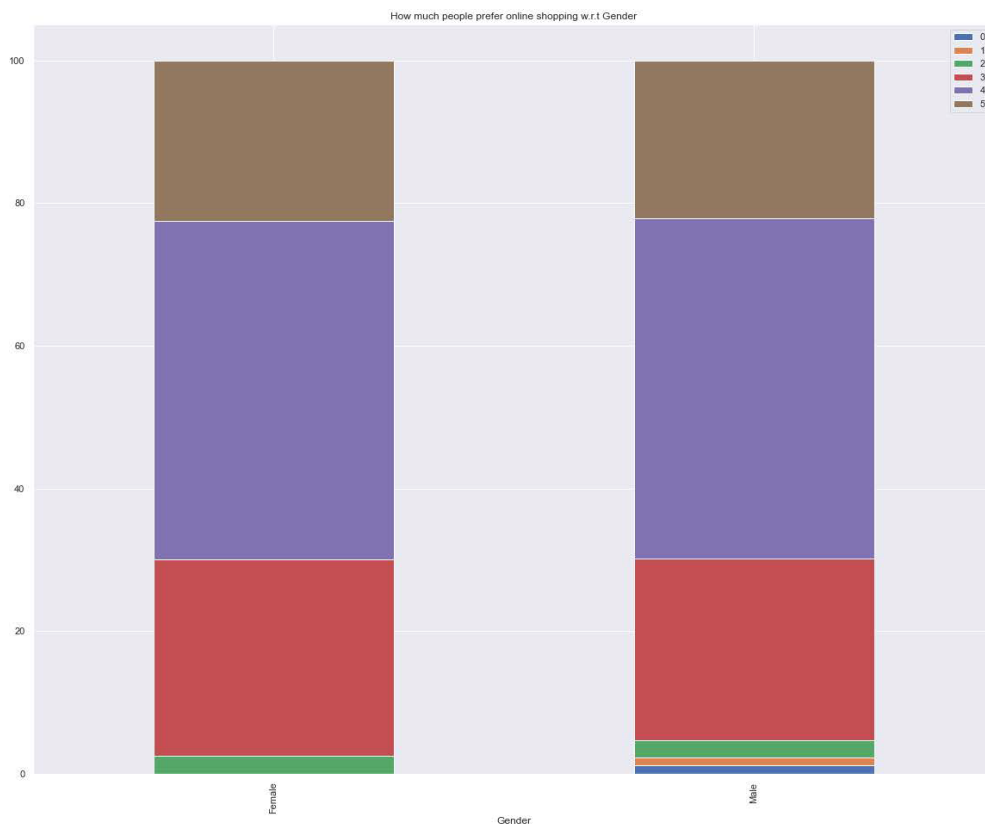
So here can conclude that every kind of people ,whenever they have subscription have or not , they prefer online shopping.

8.How much people prefer online shopping:

On 21st century people are hugely depend on online shopping. And previous year that covid covid happened which force people to take their house as a jail. But the only sunshine was the various E-commerce sites . so people take full advantage of this. We have seen how it affects on our previous analysis .Now we look into that a summarisation how people prefer online shopping .It depends on various aspects, like

a.Gender.

Male and Female as different necessity and therefore their usage is different , Here in the plot we visualize how rating on E-commerce sites vary with the gender,



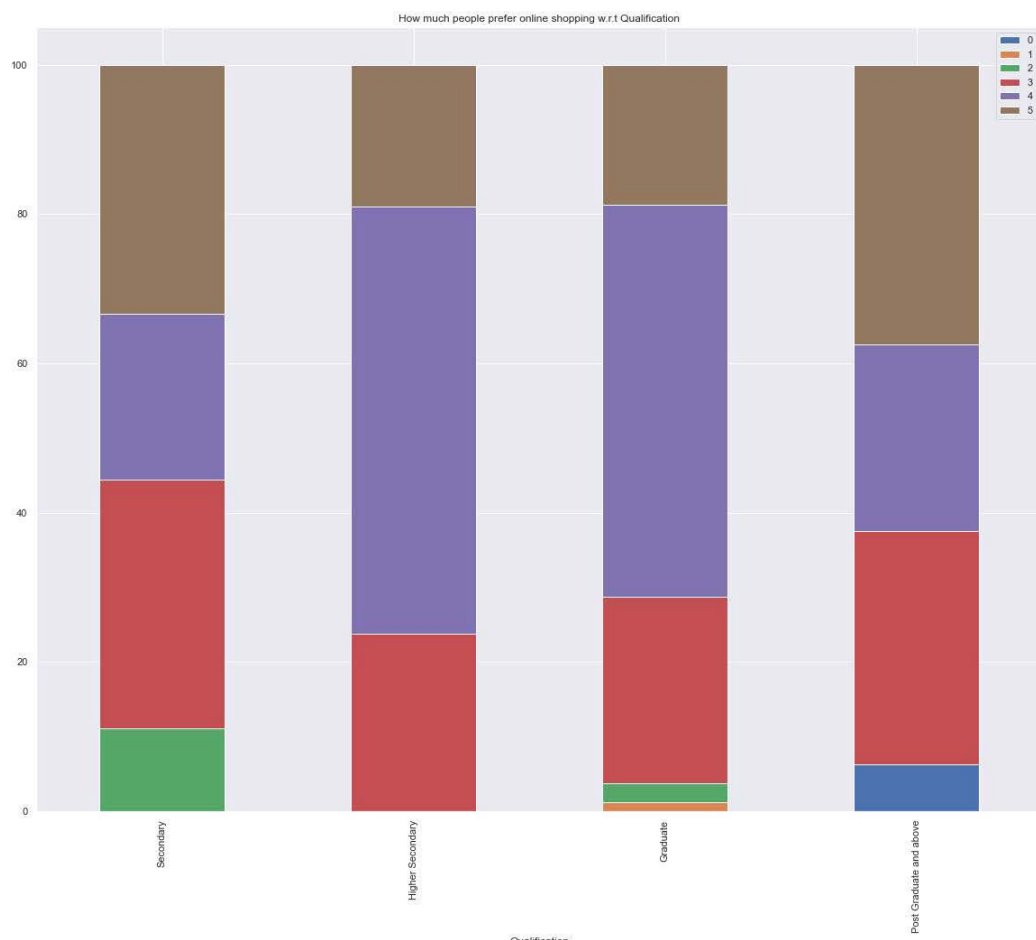
● So from our analysis we can find males generally highly prefer online shopping.

● So from our analysis we can reach a verdict that females follow same trend as males of preferring onlineshopping.

So in general all kind of people prefer to buy products online.

b.Qualification:

One of the largest consumers of E-commerce sites are the Youngsters . So we analysed our objective with respect to qualification. Which supposed to be the best way analyse the any index . Now we look into to our plots,



● Graduate students prefer to give 4 rating to E-commerce sites .and very few number of people give 2 ratings and rest of them give 4 and 5 rating to E-commerce sites.

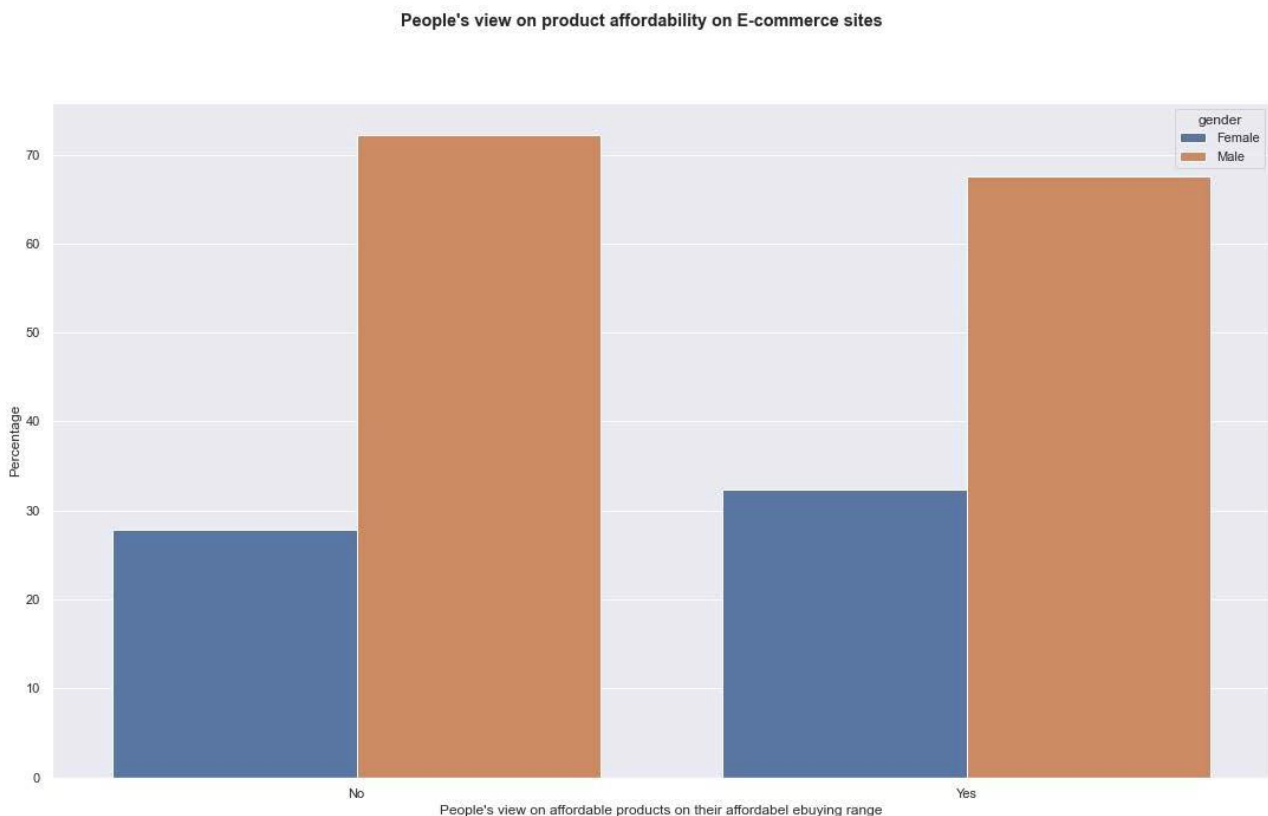
● High secondary students prefer to give 4 ratings to E-commerce sites, and very few number of students give 5 and 3 rating.

● Post graduate students like to give the 4 rating ,and rest of them give 5 and 3 rating.

● And from our plots it is clearly seen that secondary people prefer to E-commerce sites comparatively so they rate them with their experiences.

9. People views on affordability on E-commerce site :

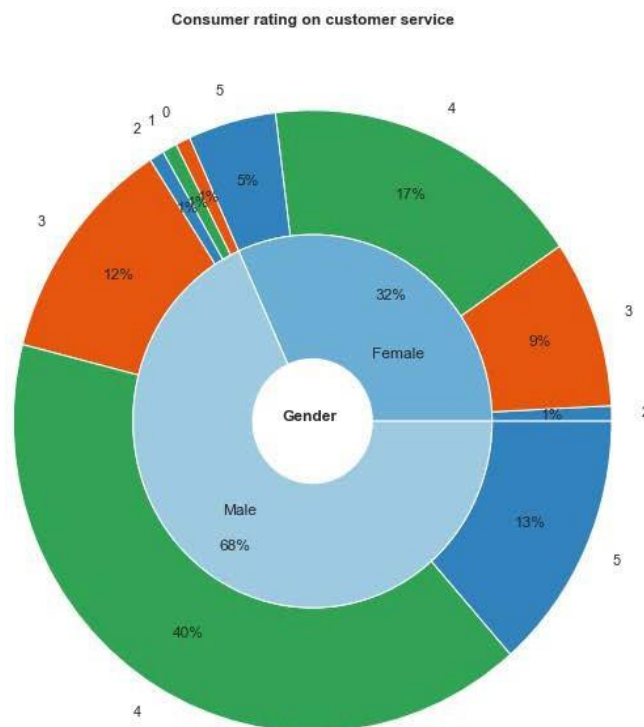
When comes to buying anything the first thing got stuck to our head is price. As the world become a online bubble so various E-commerce sites are attracting customers by giving different perks and discounts. Flipkart ,Amazon, Myntra, Grofers etc websites give different offers to their consumers in different time in the year . Here we can see views of male and female on affordable range on E-commerce sites.



● Males do agree on finding affordable goods on E-commerce sites. On the other hand females also agree on finding affordable products on their suitable range of budget on E-commerce sites. So we find that the finding of products in their affordable range is almost same in both gender.

10. People's views on customer service:

Nowadays E-commerce business hugely depend on customer's reviews. Whenever anything is delivered to us by any E-commerce sites our mobile phone asked to give a small feedback to them .So we can realize that how much a E-commerce sites depend on customer review. So in our analysis we visualize how people rate any E-commerce sites,

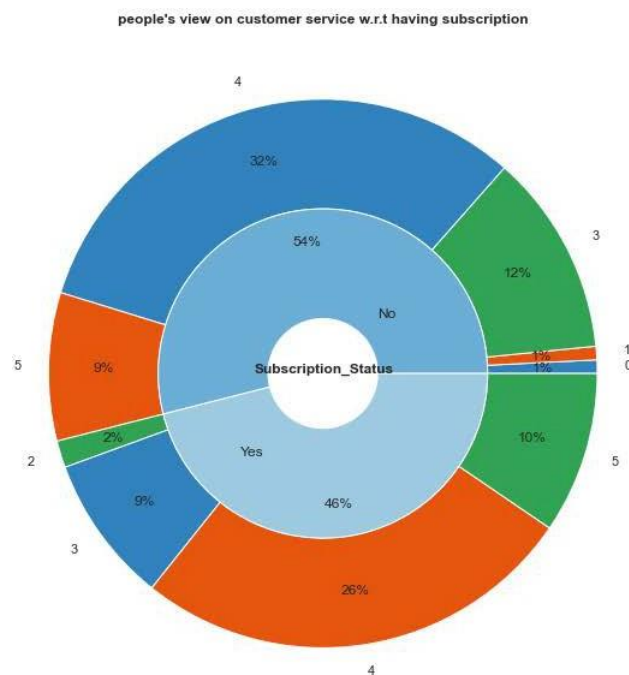


● Here we can see among 66% male that 40% give 4 rating to customer service of E-commerce sites.13% of them give 5 rating and 12% give 3 rating . and few percent of them give 0,1,2 rating to E-commerce sites.

● Among 32% female we can see,17% give 4 rating to any E-commerce sites.5% of them give 5 rating and 9% give 3 rating and few percent of them give 0,1,2 rating to E-commerce sites.

11.Customer service rating with respect to subscription status:

People subscribed various E-commerce sites to enjoy various offers, perks, discounts given by E-commerce sites .As it is previously told that people E-commerce business hugely depend on customer's rating. E-commerce sites also give various advantages to their subscribed customers. So here in our analysis we visualize how customer rate E-commerce sites with respect to subscription status,



● Here we can see that 46% of people subscribed to any E-commerce sites . Among them 26% give 4 rating to the E-commerce sites,10% give 5 rating and 9% give 3 ratingNone of them give 0,1,2 rating to any sites.

● From the plot it is clear that 54% of people do not subscribed to any websites. Among them 32% give 4 rating to the E-commerce sites,9% give 5 rating and 12% give 3 rating, and None of them give 0,1,2 rating to any sites.

Limitations:-

1. As the data which is collected is primary data that is a firsthand information so the data involves personal biasness and this very much reflected on our plots and interpretations.
2. Our data contains a multiple choice based question which we find difficult to analyze.
3. The data which is collected is a limited number of data, so some data such as age those which are continuous becomes discrete data sets, and limited to a particular interval.
4. Some of volunteers have submitted fictitious responses to our questionnaires, we have successfully cleaned most of such data sets but still some data are affecting our insights.

CONCLUSION

We have studied in detail customer behaviour towards the E-commerce sites. We have made a google form and collected responses. We imposed some interesting questions so that we can have a clear view of consumer's thought to the E-commerce's. Our questionnaire consists some important questions and how they depends on various aspects. After receiving hands on responses , we analysed the data and made necessary cleaning using Python. After cleaning ,we review our questions again and coded in Python using necessary plots. In this programming we used some built in modules such as 'numpy','pandas' and for visualization we use 'matplotlib' and 'seaborn' modules. Then we made a report where we summarise our whole project.

APPENDIX

Google Form (Questionnaire) Link:

https://docs.google.com/forms/d/1Hk8M-JUcE_yfgeZRJJCLm_MH-IuwCI14k2iPM2ITBhs/edit?ts=615a6a94

Double click the icon below to see the original dataset:

<https://drive.google.com/file/d/1bZu-A1AokAUoIMgnc6B5H5Mi83VqUS72/view?usp=sharing>