# E-retail factors for customer activation and retention: A case study from Indian e-commerce customers

Customer satisfaction has emerged as one of the most important factors that guarantee the success of online store; it has been posited as a key stimulant of purchase, repurchase intentions and customer loyalty. A comprehensive review of the literature, theories and models have been carried out to propose the models for customer activation and customer retention. Five major factors that contributed to the success of an e-commerce store have been identified as: service quality, system quality, information quality, trust and net benefit. The research furthermore investigated the factors that influence the online customers repeat purchase intention. The combination of both utilitarian value and hedonistic values are needed to affect the repeat purchase intention (loyalty) positively. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.
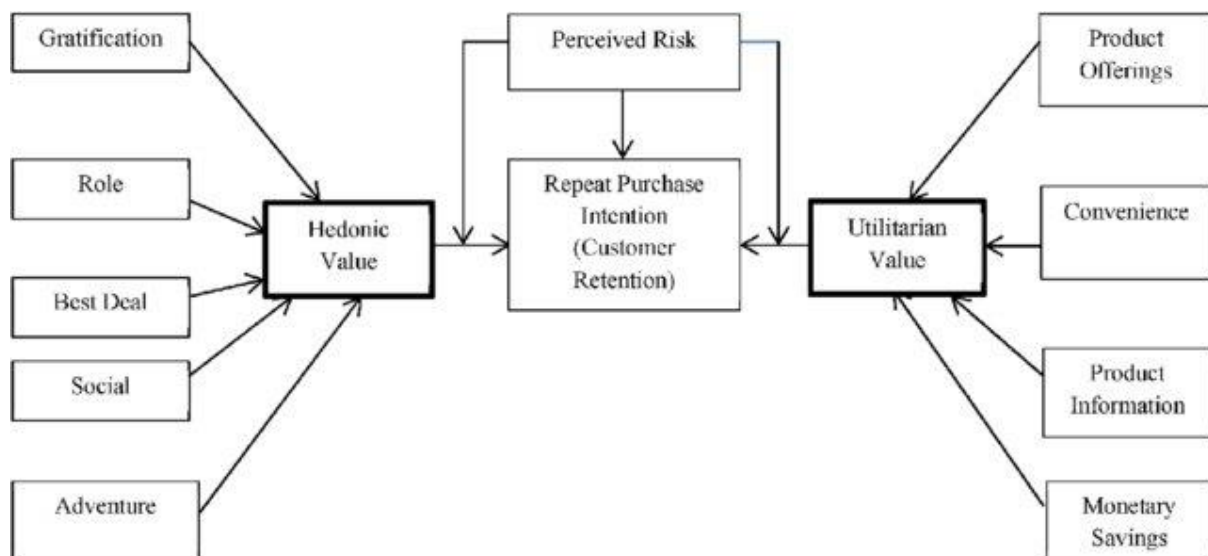
This report contains:

- _Problem statement and understanding_

- _EDA steps and visualizations_

- _Steps and assumptions used to complete the project_

- _analysis, and conclusion_

PROBLEM STATEMENT:

With increasing competition in the online store space, it is very important that every action/strategy we make (we means the online stores) should be effective enough in bringing the desired change and increasing the chances of landing more customers that too in required period. Detecting the key factors/features which decides the market share of the stores. Getting an idea of what issues, the customers face while shopping and what are the chances, they may abandon the store leading to loss of potential customers Discussing the measures to be taken to overcome the shortcoming/lags if any and increasing the engagement of customers with the store leading to increased profitability.

EDA steps and visualizations

Step 1: importing all the necessary libraries which are going to be used in the notebook and eda

Step2 :extracting the excel file with sheetname as " datasheet" using pandas

Step 3: observing the total number of columns/features check

Step 3: checking the type of data in columns and separating all the categorical columns header in a separate list

Step 4: checking for the nulls if any

Step 5: creating a dataframe of column name, number of unique features, name of the unique features which helps us getting a clear idea of the categories
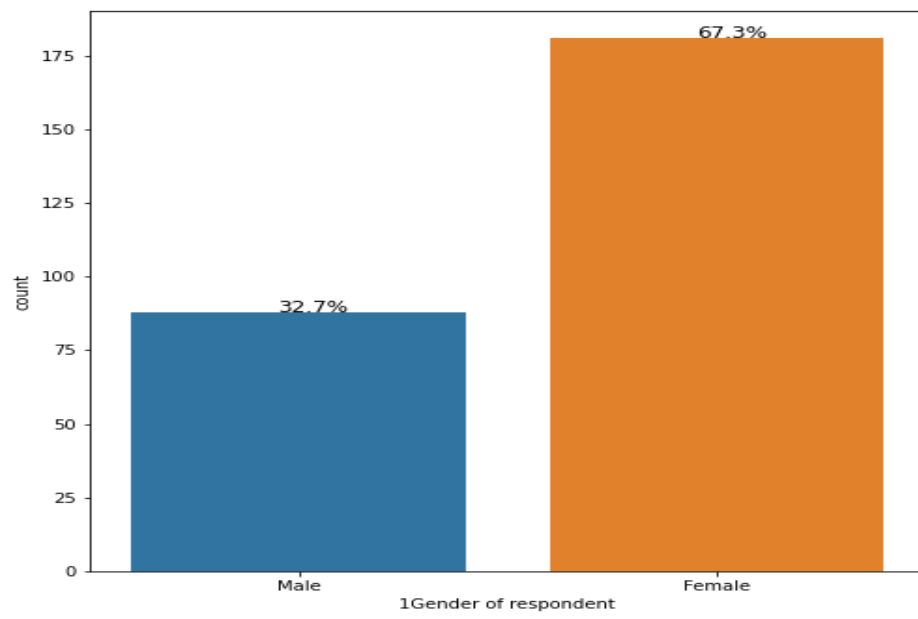
Analysis :

BASED ON THE GENDER OF THE CUSTOMERS FURTHER CLASSIFIED WITH THE AGE GROUPS
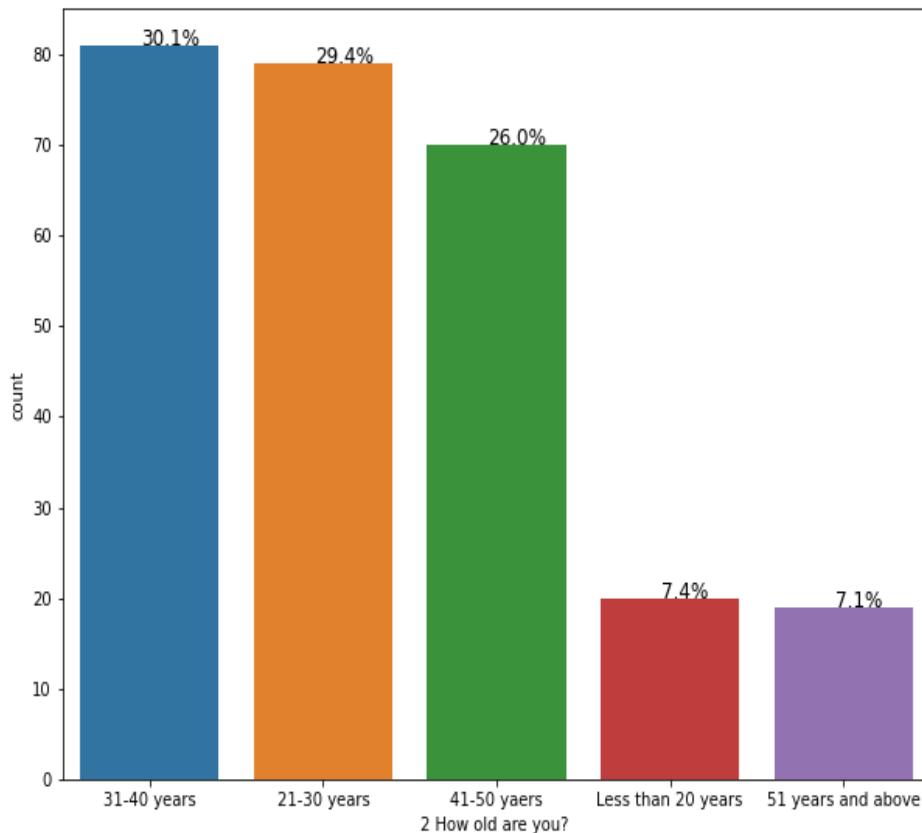
Men and women shop in very different ways, which should come as no surprise. People have needs, and in order to meet those needs, they will shop. Shopping is a daily activity for people all over the world, from low-cost goods to high-end products.

Most people believe that women spend more time shopping than men, who prefer to browse through the store, look for a specific thing they want, buy it as quickly as possible (unmindful of minor differences that lead to somewhat more expensive purchases), and then leave. Women, on the other hand, patiently search for the type of product in all available brands, compare the designs, check for any available offers (unmindful of the amount of time they spend selecting a product of their choice), bargain, and ultimately purchase the product to their complete satisfaction.

When online shopping was limited to computers, electrical products, music, and other similar items, it was a male-dominated world. Women grabbed the lead in internet shopping as the product category grew.

Most women prefer to purchase online on a desktop computer, while men prefer to shop on their smart phones. Men limit their search to specific things they are looking for now of purchase, whereas women look for products different than what they are looking for. Both sexes consider price when deciding, but men tend to compromise easily with quality over price, whereas women are more price sensitive and will make a purchase based on the best available offer.

32.7% 67.3%

count

Male   1Gender of respondent   Female

The chart shows a bar graph titled "2 How old are you?" with the following values:
- 31-40 years: 30.1% (count ≈ 81)
- 21-30 years: 29.4% (count ≈ 79)
- 41-50 yaers: 26.0% (count ≈ 70)
- Less than 20 years: 7.4% (count ≈ 20)
- 51 years and above: 7.1% (count ≈ 19)

CITYWISE DISTRIBUTION OF CUSTOMERS:

With the exponential growth in internet and online infrastructure in India it was no surprise that the e-commerce market experienced a corresponding boost. Increasing rates of internet penetration, along with an increasing share of the organized sector within retail markets created the strong foundation that e-commerce needs. In addition, governmental policies further strengthened the market, in particular those that allowed 100 percent foreign direct investment in B2B (business-to-business) e-commerce. Moreover, the pandemic invariably served as a stimulus for driving forward the e-commerce sector in the previous years.

It's very clear from the plot that major metropolitan cities like Delhi, Greater Noida, Bangalore contributes a lot in total percent of online purchase being made.

3 Which city do you shop online from?

PER CITY
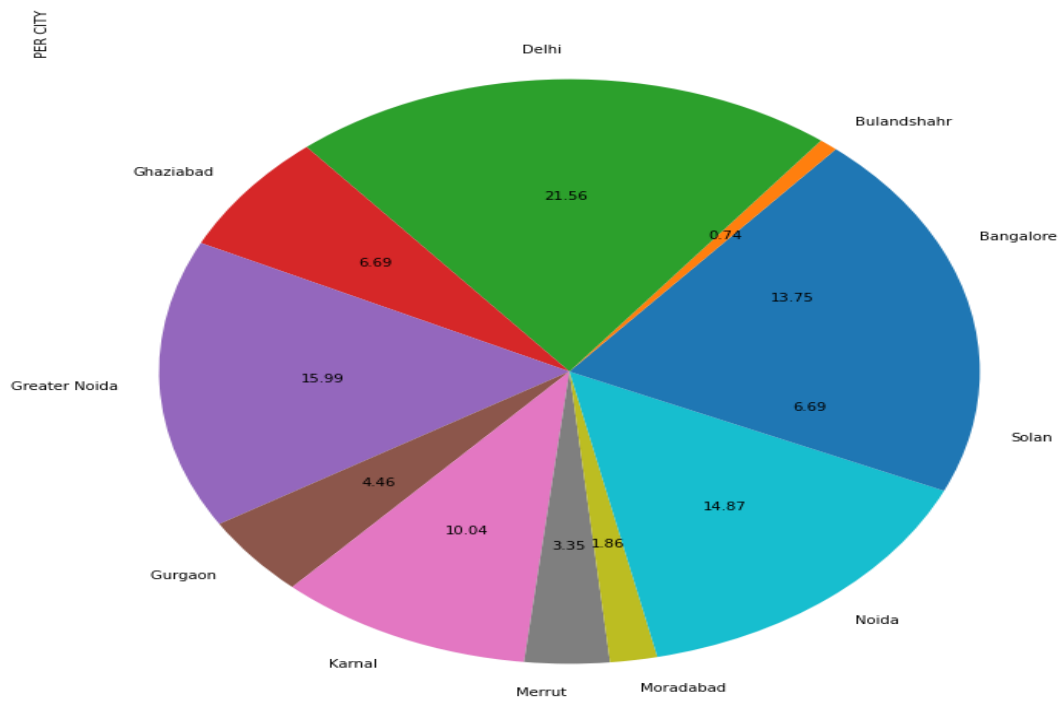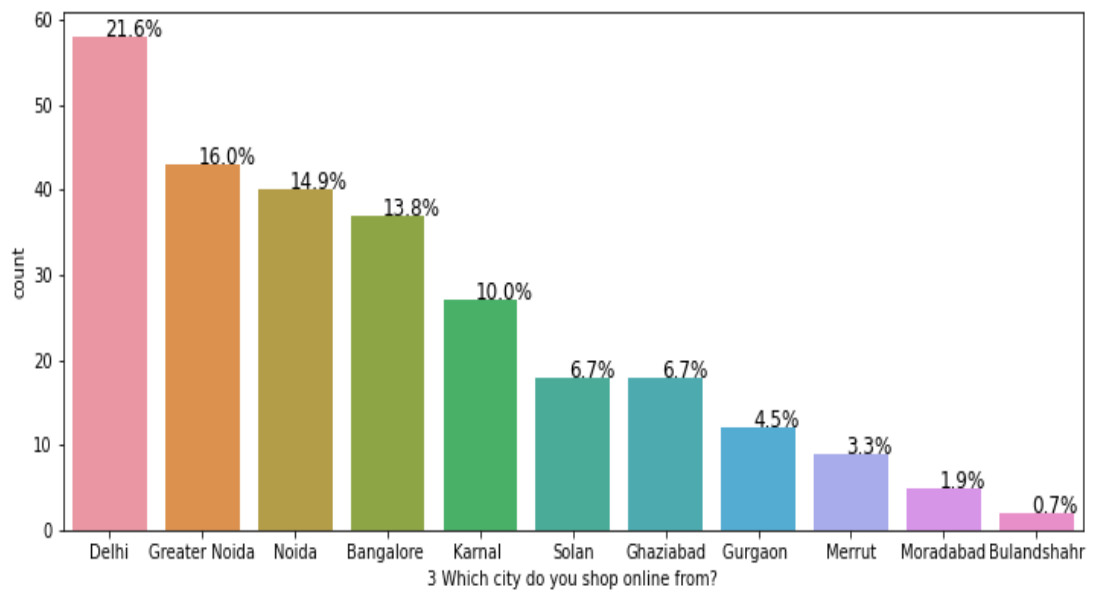
Trends of customers based on years they been purchasing from these online stores:

It can be observed that there is a good amount of retention of customers as number of year increases. Main reason maybe the trust a customer develops, smoothened processes, flexibility they enjoy while shopping online Wide variety to choose from, more options available ,Easy transactions as online infrastructure is getting better per day .

Retention with the activation has been proved a good schema for the online store.
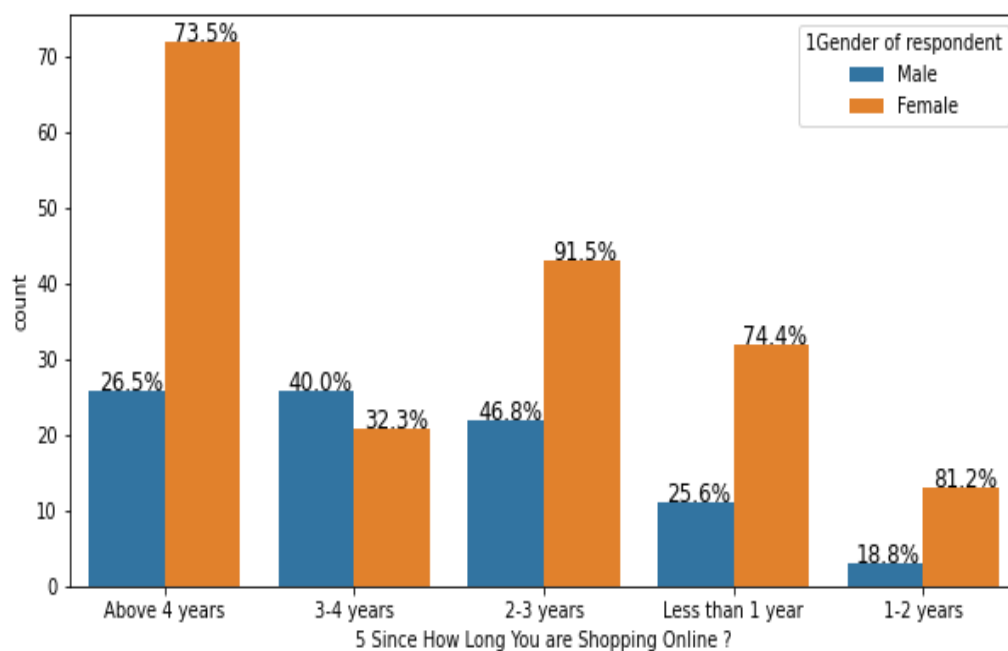
Based on how customers access the internet while shopping online and further categorized on device they use:
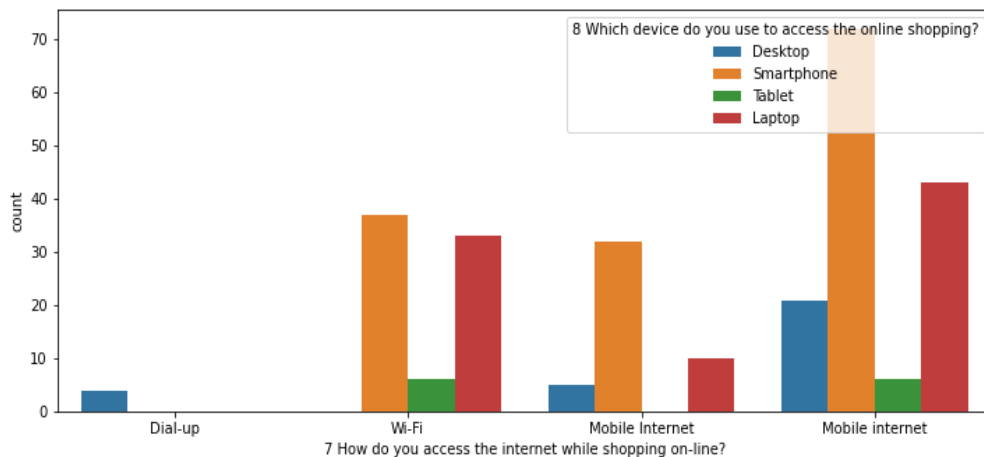
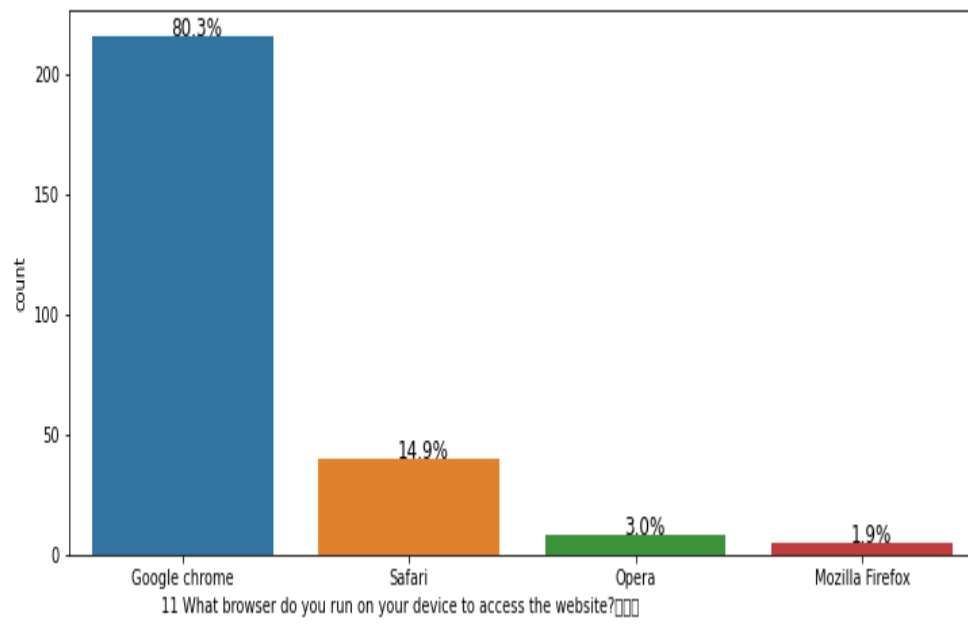Following are the different trends in online shopping based on different devices and mode use to access it

3 major categories are:

1. Mobile internet
2. Wifi
3. Dial up

As we can see with the increase in technology and online infrastructure in India dial up connection lost their space in the market and showed the least of engagement among the customers

Mobile internet seems to be a at the top of the table. As mobile internet has become cheap and accessible by wide majority of population there is no denying fact that it can help the online shopping boom in India.

Plot showing the distribution when it comes to browsers:

80.3%

14.9%

3.0%

1.9%

count

Google chrome   Safari   Opera   Mozilla Firefox

11 What browser do you run on your device to access the website?

A website browser, or browser for short, is your window to the World Wide Web. Browsers are a tool used to search for websites, and they display the website you see in the window. There are several website browsers available, Google Chrome, Edge, Mozilla Firefox, Internet Explorer, Opera, and Safari to name a few.

Web browsers are the window to your website and online marketing, and it is how people see your business online. Each web browser will display websites a little different from one another. Some browsers display websites faster than others, and text and images can look different based on which browser you use to view a website. So, it is important to make sure that your website displays correctly in all browsers for potential customers who find your business online using different browsers.

Comparing browsers head-to-head, Chrome comes out on top. It loads websites faster than any other browser, it is extensible, integrates with Gmail and other Google products easily, and has the best developer tools. Firefox comes in a close second place, losing out only to rendering speed, and Internet Explorer comes in last due to not supporting newer technology and a slow load time.

Fast loading websites and applications countplot:


Fast loading website speed of website and application
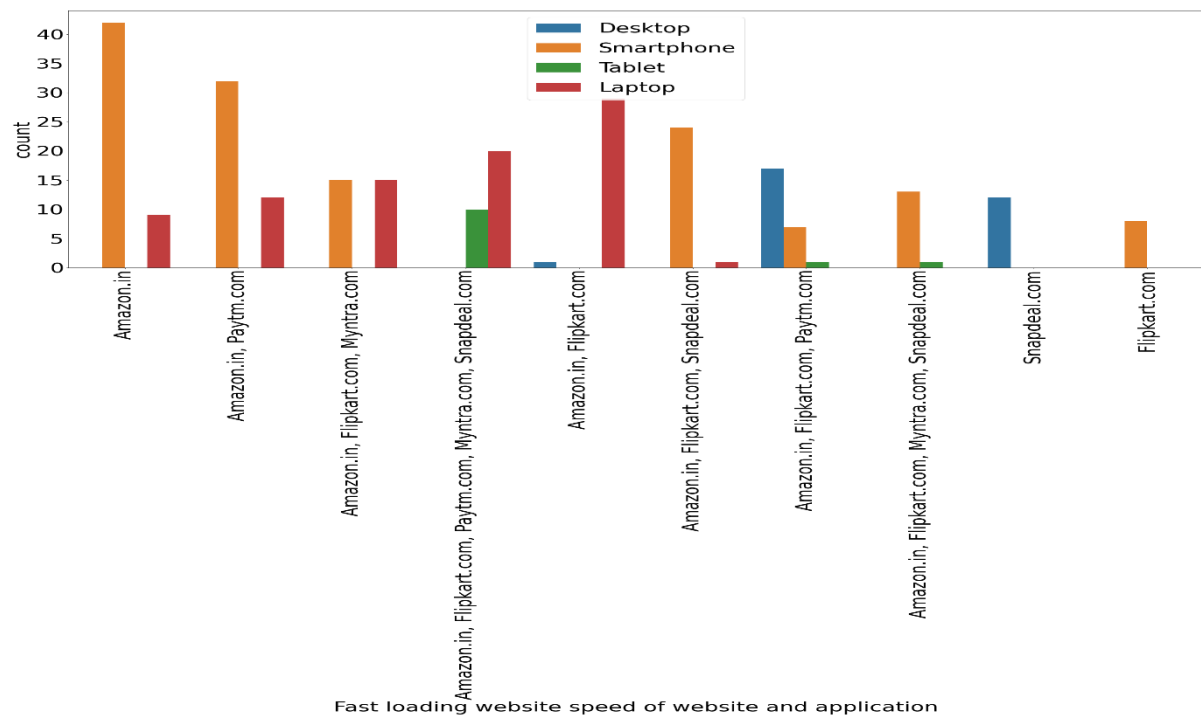
Website load time — or web page load time — refers to how long it takes for a website, or web page, to fully load and appear on screen. This includes all content on the page such as text, images, and videos. Simply, it's how fast all content on a web page loads.

Page speed can depend on several factors — some examples include: Page type, user behaviour, file sizes, website server/host, inefficient code, hotlinking, and too many plugins and/or widgets.

In 2018 Google Research reported the average mobile web page takes 15.3 seconds to load. The same report said the problem is due to the majority of mobile sites having too many page elements. This problem persists despite most web traffic occurring on 4G instead of 3G.

- It can be observed that most of the people are using either mobile phones/smartphones or laptops to make a purchase or surf through the store

- In this category its easily visible that amazon did a great job with their mobile application and site as it takes less time to load and takes advantage over the competitors

- Snapdeal ,flipkart have to work on their applications and sites as they are not very responsive as compared with the competitors

Relationship between loading/processing speed and device used for online shopping
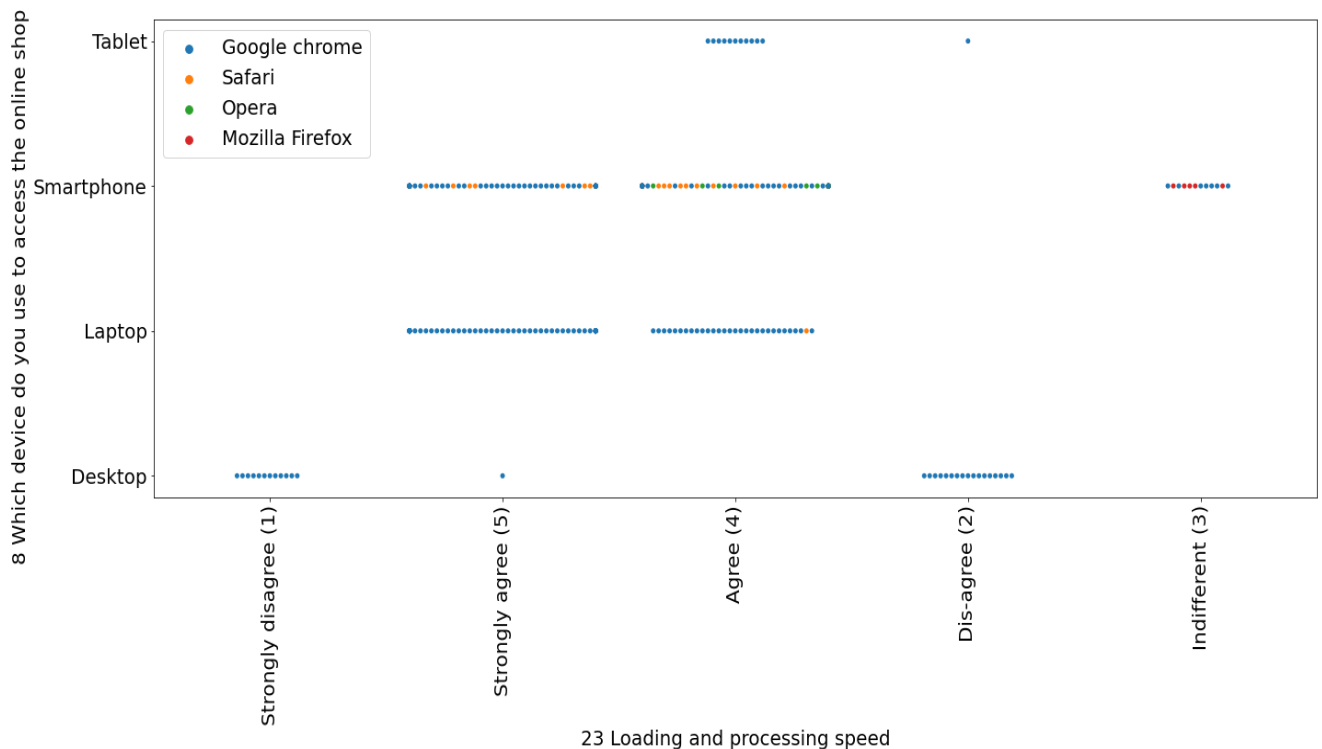
__User experience is all about speed. A faster site will make happier users. And happier users will consume more of your services or products.__

Conversion rate is the ratio of visitors who take the action you want them to on a page and the total number of visitors. Examples of actions you want page visitors to take are to sign up for your newsletter, fill out a form, drop a product in a shopping basket, use a tool on your site, download a brochure, pay for a product, sign up for a subscription, etc. Conversions, and their rates, come in two flavours: goal conversions and transaction conversions. A transaction conversion is a goal conversion, but it's one with a transactional, or e-commerce, character. In other words, transaction conversions are conversions where a visitor ultimately buys your product. Now that what we are talking about is fresh in your mind, let's dive into the interesting bit

__Plot describing how the customers landed on the store first time ever__
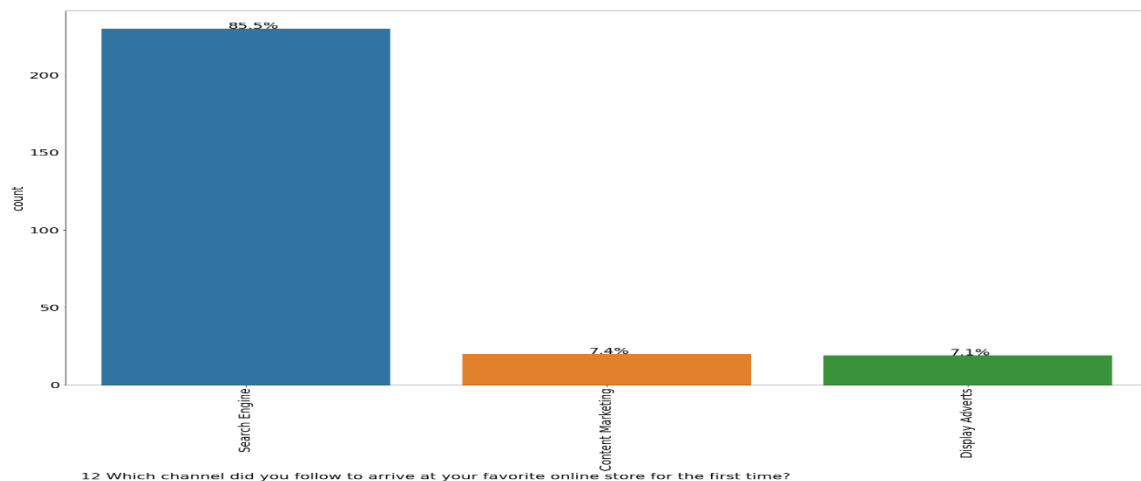
Its very clear from the analysis that majority of the customers landed on the store directly through the search engine. But there is no denial fact that content marketing and display adverts had played a good role in impacting the rise in customers
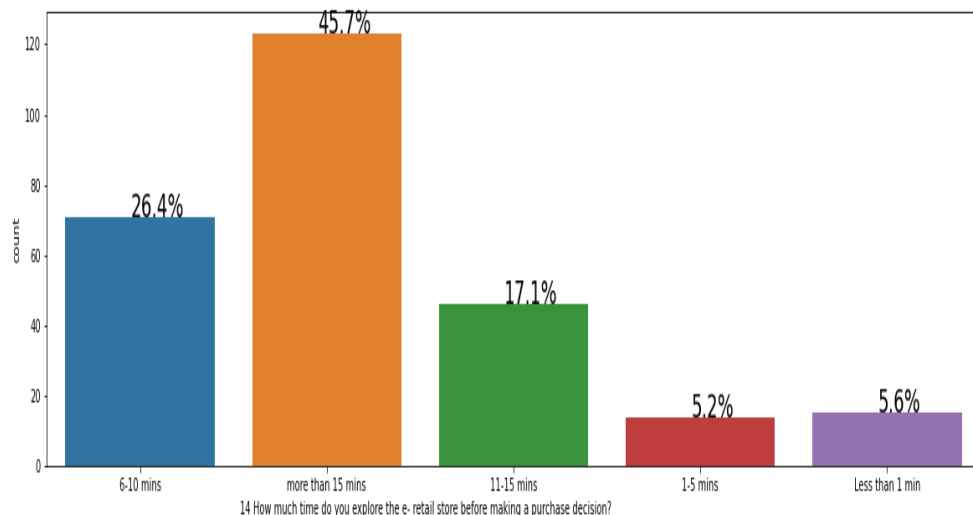
Ninety-two percent of consumers will visit a brand's website for the first time for reasons other than making a purchase, according to a study released today by "Episerver", a global provider of a single platform to smartly manage digital content, commerce and marketing in the cloud.

The "Reimaging Commerce" report found that of shoppers visiting a website for the first time, 45 percent are searching for a product or service, one-quarter are comparing prices or other variables, and more than one in 10 are looking for store details.

The survey of more than 1,100 consumers points to the importance of relevant and engaging content throughout the purchase journey, as most interactions with a brand's website do not end in conversion. In fact, a third of consumers who visit a brand's website or mobile app with the explicit intent of making a purchase rarely or never complete checkout. Further, 98 percent of shoppers have been dissuaded from completing a purchase because of incomplete or incorrect content on a brand's website, underscoring the need for descriptive, accurate content.

12 Which channel did you follow to arrive at your favorite online store for the first time?
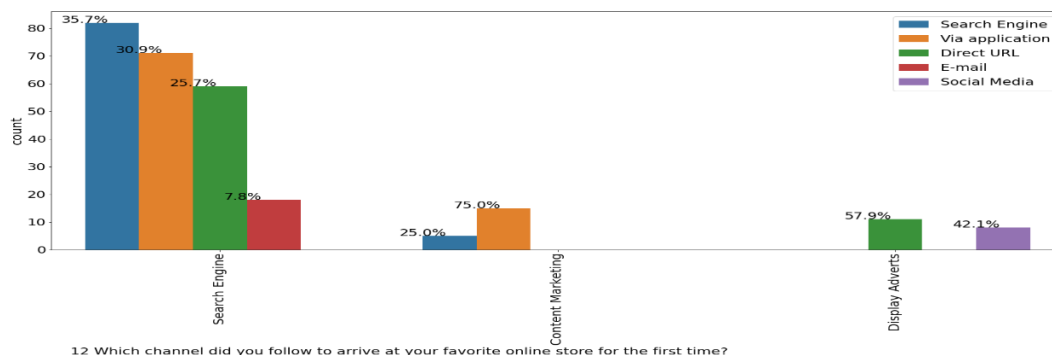
Plotting a countplot to know about the average time required before a purchase is made:

Around 45.7 percent of customers take more than 15 mins to make a purchase decision. Around 26.4 % of customers lie in category of 6-10 mins. It is interesting to note that around 5.6 percent of the customers do not even take a minute before reaching at a point of decision of purchase. Our main aim as a e-store should be to drop those in more than 15 mins category to the 6-10 min category as it seems achievable and quite logical. Dropping these decisions timings will help in preventing customers from abandoning the cart/bags as there may be shift in the mood of the customers or they might find better deal at competitor's store. Providing best deals, using optimised timers which gives a sense of time limit in customers mind. Creating different modes Depending on the attention spans of various categories of customers

Average time on page is exactly what it sounds like — the average amount of time users spends on any given page of a website. *Time on page* takes all users into account, not just those that come from the search engine results page (SERP). Social media, emails, and redirect links from another webpage all count as sources. According to a study entitled "Predictive Analytics of E-Commerce Search Behavior for Conversion", "the purchase probability reaches the highest when a person spends around 50 seconds on the item page". Consequently, the product page content should provide maximum value without overwhelming the client. More time on a page translates into sales.

## Further categorized on gender basis
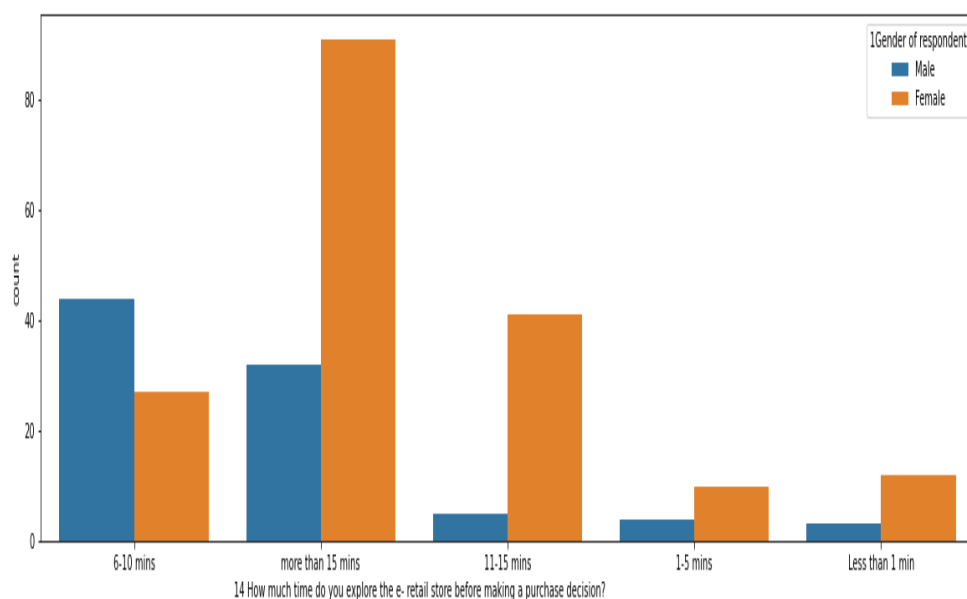
Women are found to spend more time than men when it comes to online shopping as observed from the above plot

Most customers are found to spend more than 15min before making an actual purchase decision

Another plot describing decision time based on the age categories

14 How much time do you explore the e- retail store before making a purchase decision?
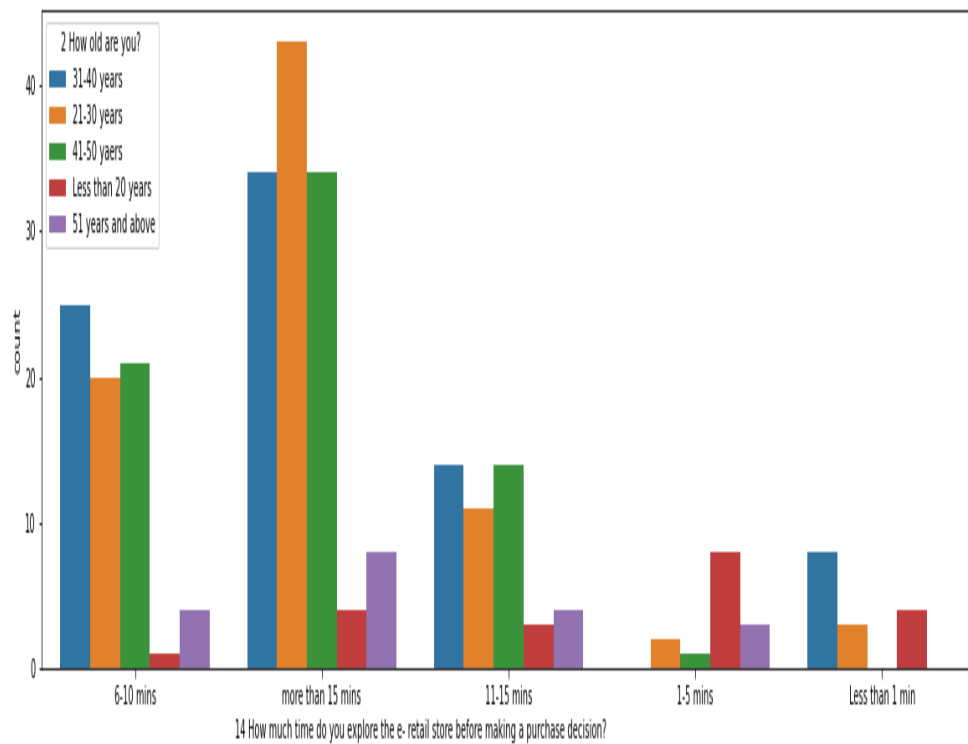
Plot describing relationships between how frequently someone abandon the bag and the reason they abandon the bag
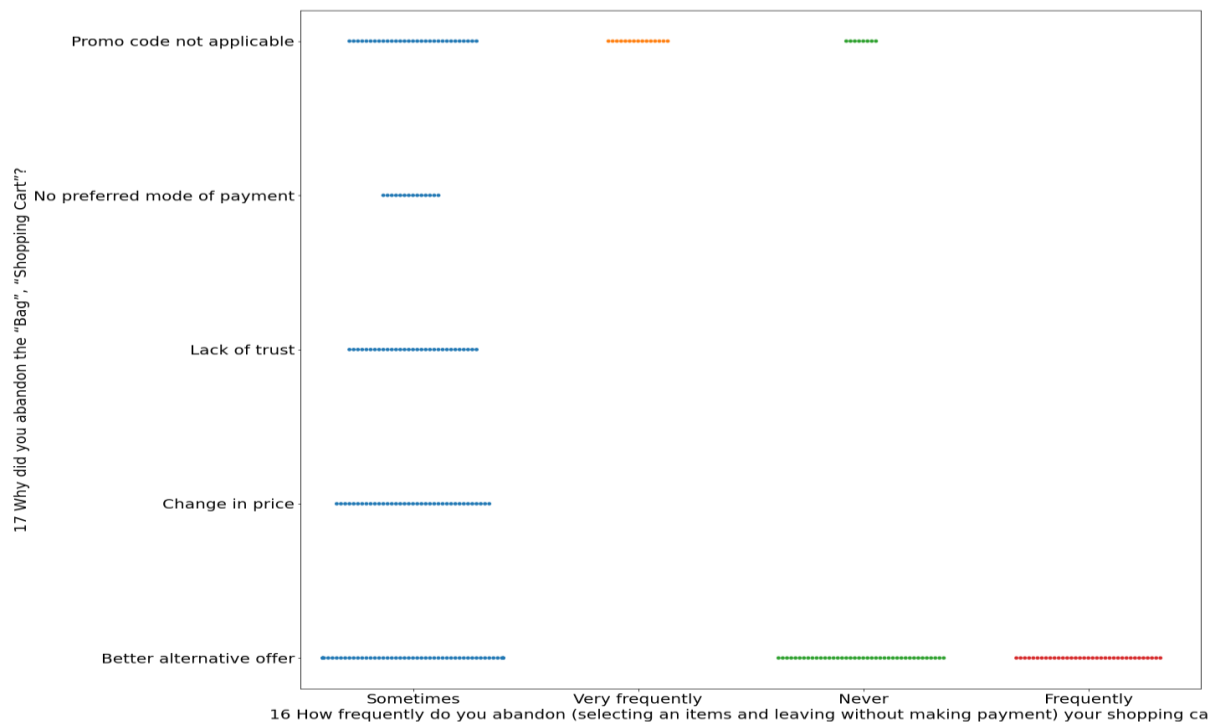

- It can be observed very easily that customers who frequently abandon the bag/cart is because the promo codes are not applicable

- There is no unique pattern for those who lie in "sometime" category

They are likely to abandon the bag in all cases

Measures that can be taken:

- Informing about the schemes/policies in a very clear way so that customers should not feel like being click bated which may destroy the reputation of store

- Regular feedbacks, follow-ups for those who have items in the cart and they are not making the purchase

- Rewarding those who very rarely or never abandons the bag/cart giving them a sense of importance which further will help in retaining those customers

Importance of complete detailed information of listed seller and about the product in a purchase decision

20 Complete information on listed seller and product being offered is important for purchase decision.
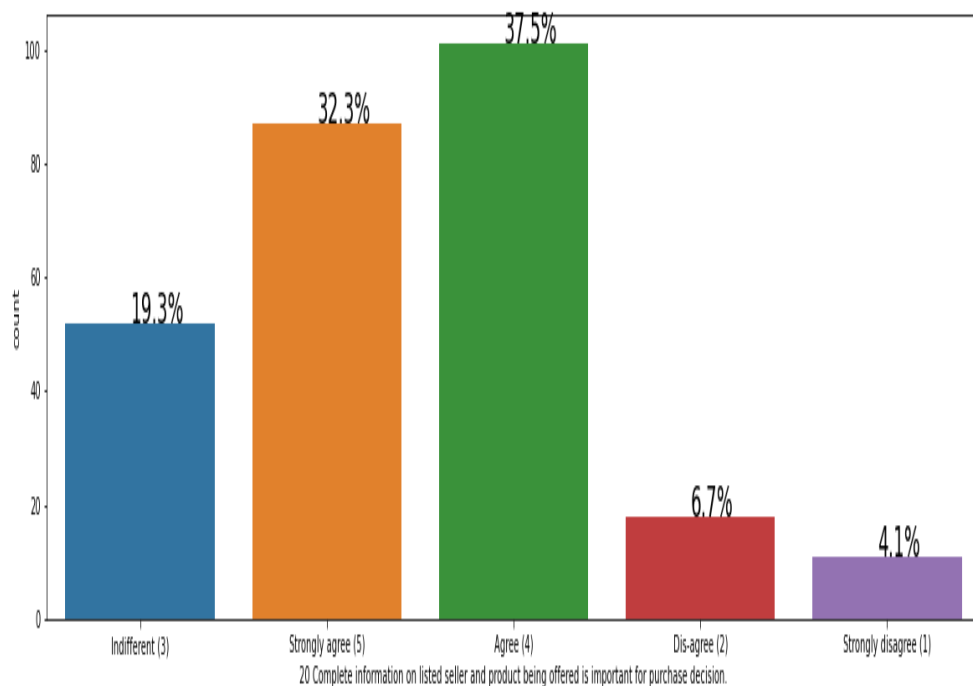
Product descriptions are an important aspect of an e-commerce business. Unfortunately, they often get overlooked or underutilized. It is easy to fill this area with unappealing information, or just to copy the factory specifications from your supplier. This should be avoided at all costs. Although it may take some time, we advocate having strongly written product descriptions which can help to increase sales and revenue for your company. A product description is used to show a products value to a potential customer on your website. If done well, it will provide features and benefits of the product which will influence a potential customer to purchase. A product description should include a description on how it can fix a customer's problem. Many times, customers go shopping to find a solution to a problem, this is a perfect area to highlight why your product is the best for them.

When customers shop online, they prefer having all the details about a product. On the basis of this, they decide to either buy or not buy. So, when you list your products, make sure that you mention as many specifics as possible.

Listing products also helps in these ways:

- Providing a detailed description ensures that the customer has all the information at the time of shopping. This may help boost your sales.

- The more information you provide about your products, the more their visibility improves.

- Transparency helps in getting good ratings and reviews from customers.

Below are some of the tips that we have created to help you get the most out of your product descriptions:

- **Write Your Product Descriptions**
- **Tell a Story**
- **Write For Your Target Audience**
- **Test Descriptions**
- **Details**
- **Easy To Read**

Plot to check the dependency of " trust that online store will make it delivery on time" on convenient payments methods
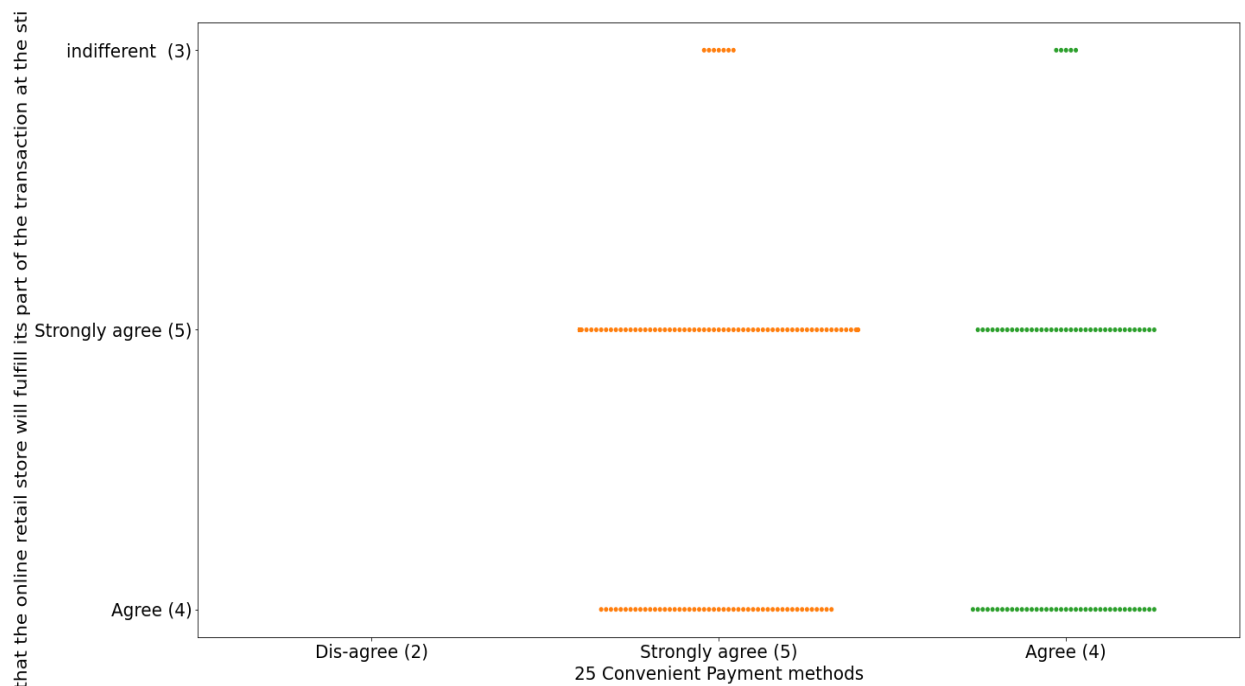

While setting up a fully functional online store/ eCommerce website, you must make sure that the online store enables online payments from your customers. Selecting the right type of payment method is essential and a critical task for eCommerce.

There are different types of payment methods and they vary from business to business. You must figure out which payment method will suit the nature of your business and at the same time appeal to your customers. Long gone are the days where only cash was used for accepting payments. Thanks to technology, there are various instant payment methods available. Also, with new players like UPI, mobile payments, mobile wallets, etc. payment space is shifting more towards the digital side.

No doubt, it is important to choose a payment method that is suitable for your business, but you also must consider other affecting factors. One of which is customer interaction.

People nowadays are using more than one online payment method. They are trying to tailor the application and method as per their convenience. And that is the main reason, an eCommerce site should provide more than one payment method. By enabling different payment methods, your online store can enhance the opportunities of conversion.

## Assistance /support as a important feature hued with multiple channels for assistance /support
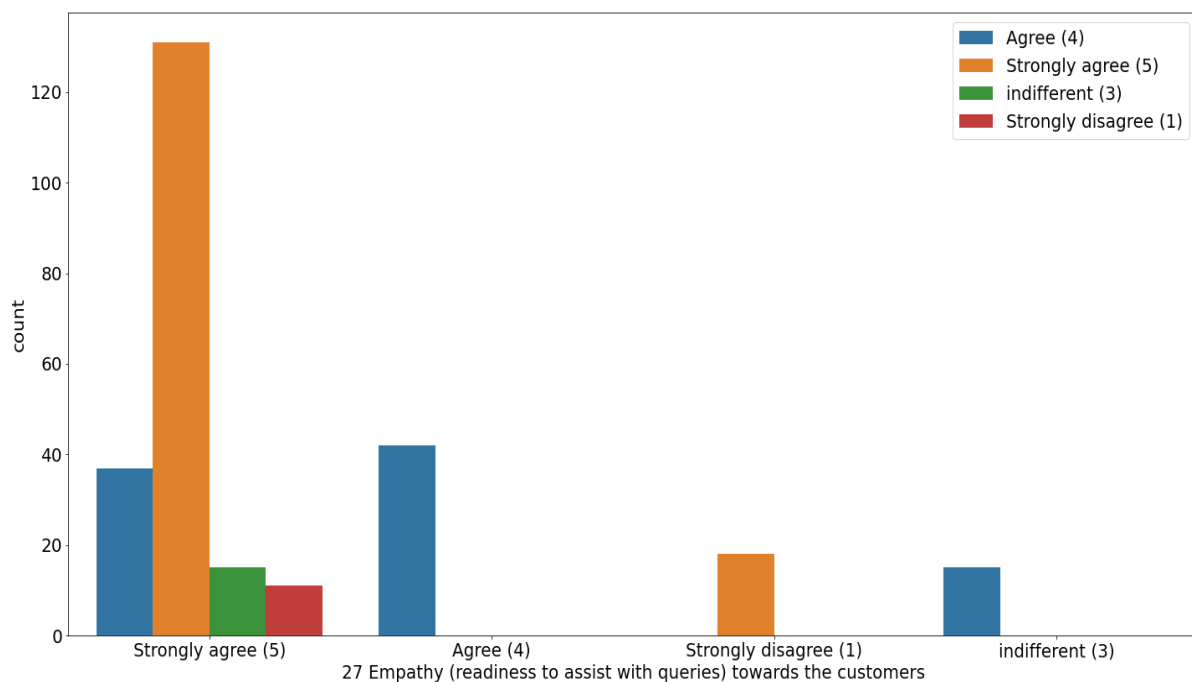
A decade back, social media apps like Instagram became popular as a way to stay digitally connected to your near and dear ones. Since its inception, platforms have Facebook, Instagram and Pinterest have seen many transformations and upgrades. With the recent surge in online consumerism, it was only natural for these platforms to shift towards a more eCommerce-centric approach. This shift has brought forth a

change in the way online businesses look at their "customer experience". Ecommerce businesses are incentivized to gauge their brand image in terms of social currency accumulated over a number of channels.

An eCommerce business cannot survive solely on one channel anymore. The discovery of new products has evolved in the last five years. Instagram, Facebook, and even TikTok have become the default shoppers' choices. A multichannel experience, which used to be a differentiator, has become the table stake in the eCommerce industry. Your customer needs to talk to you NOW. And they want to do it on their preferred channel.

But multi-channel customer service brings with it its own set of benefits and challenges

Take on importance of privacy on influencing the decisions

28 Being able to guarantee the privacy of the customer
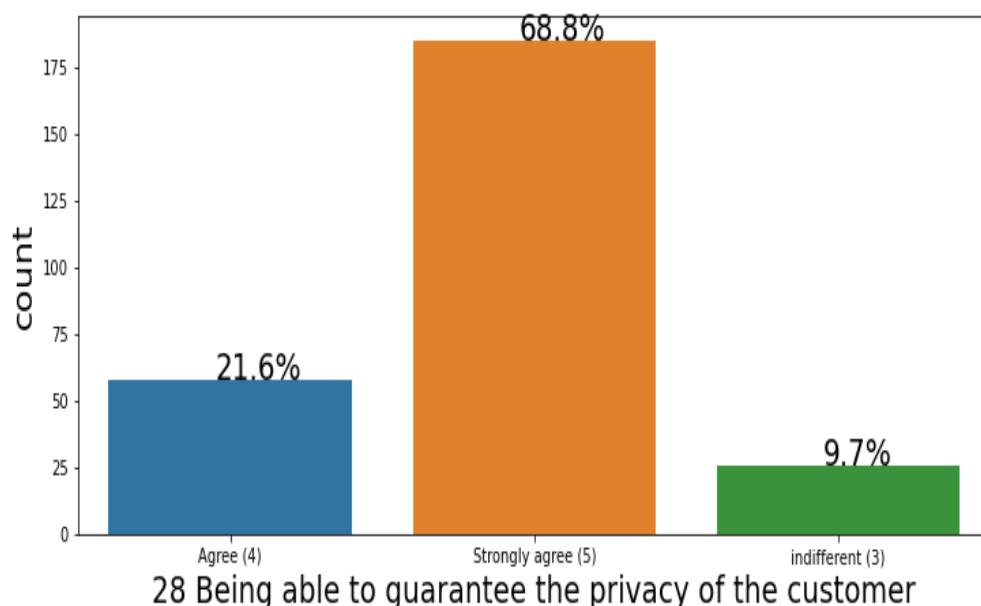
Relationship between "having monetary benefits and discounts" with enjoyment derived from shopping online
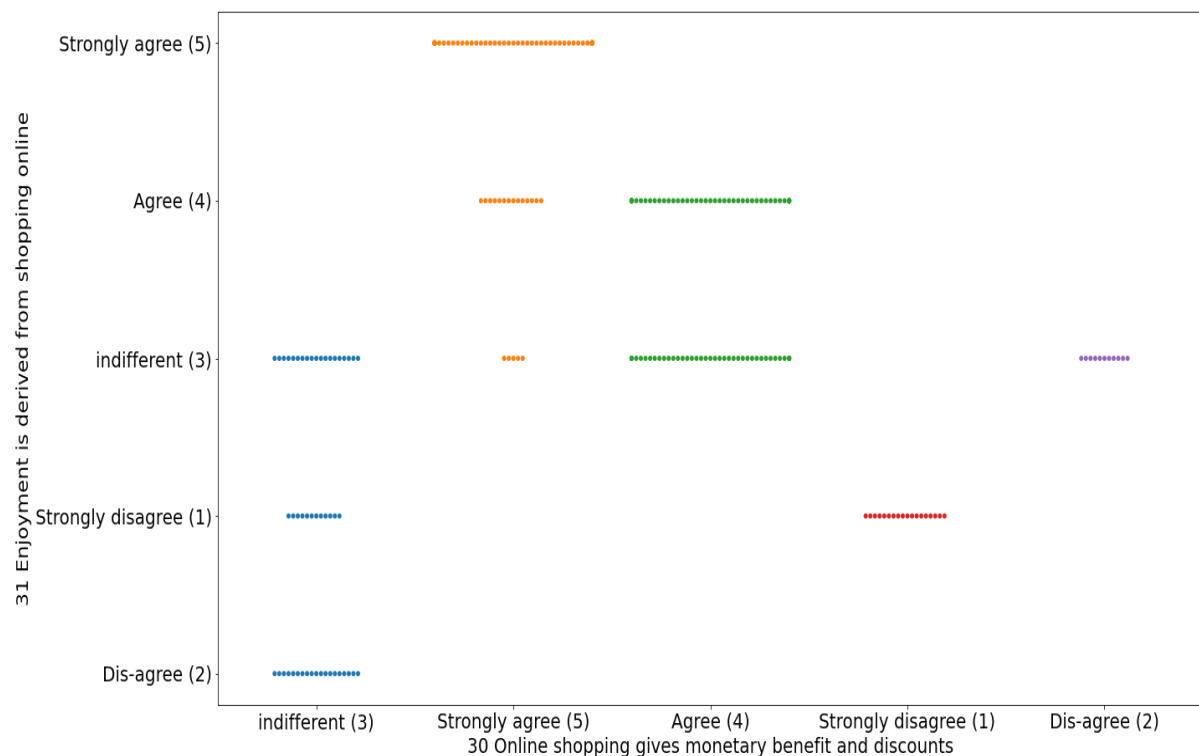
Customer satisfaction is crucial to the success of your business. No matter how innovative your product or competitive your pricing, if your customers are ultimately unhappy, they are not going to stick around.

Is buying something online cheaper than buying it in the store?

In many cases, it is! Some online stores and platforms will offer yearly subscription services that offer discounts and free shipping for every item bought. Even when this is not the case, online buyers can save

money because they can easily compare prices for the best possible deal.

When your competition is only a click away, there is a huge incentive to offer the lowest possible prices. Price has always been a critical component of ensuring sales, and the ease of price comparisons on the web, is an important benefit to online shopping.

Another price advantage of online shopping is that, depending on the state, many online stores do not charge sales tax, giving a huge competitive advantage to online retailers. But what about shipping prices?

 Many stores will offer free shipping charges if you purchase a certain amount.

Considering loyalty program as a benefit of online shopping
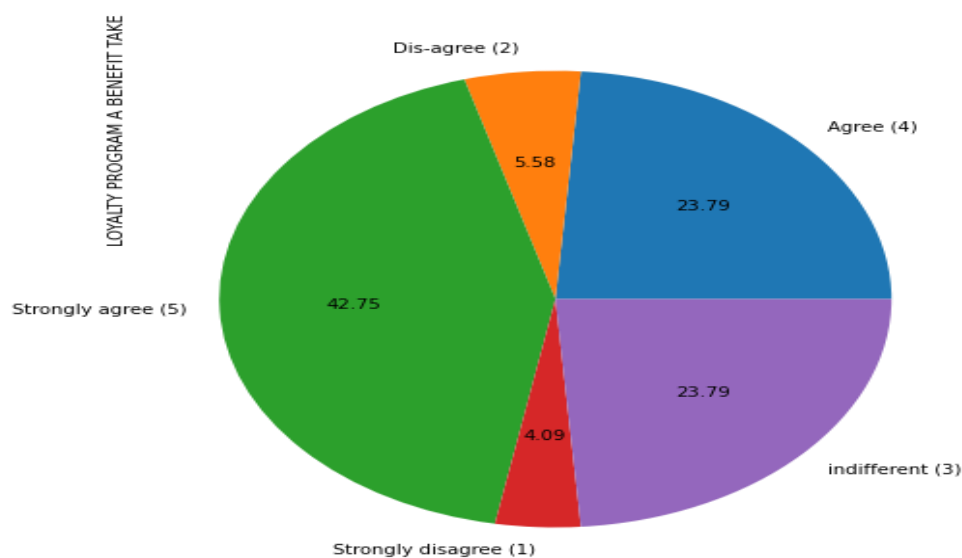
When the eCommerce industry was less crowded and people had limited options to shop online, Brands did not use to be much concerned about losing customers. Since the choices were few, people used to shop from the same brand from which they shopped earlier.

But today, when the eCommerce sector has hugely expanded, people have countless options to shop from. This led to brands losing out customers to their competitors, and hence loyalty programs came into existence.

A Loyalty Program is a marketing strategy used by Brands where they reward incentives or loyalty points to the shoppers every time they purchase from their website/store. The points are awarded so that the customer continues to shop from the same brand in his/her future purchases.

Benefits of a loyalty program are as follows:

1. Improved customer retention
2. Increase in sales
3. Loyalty programs are cost effective
4. Takes customer relationships to the next level
5. Grow brand awareness
6. Loyalty programs make customers happy , more than half of customers agrees to this fact as observed from the plot

Satisfraction and trust relationship:
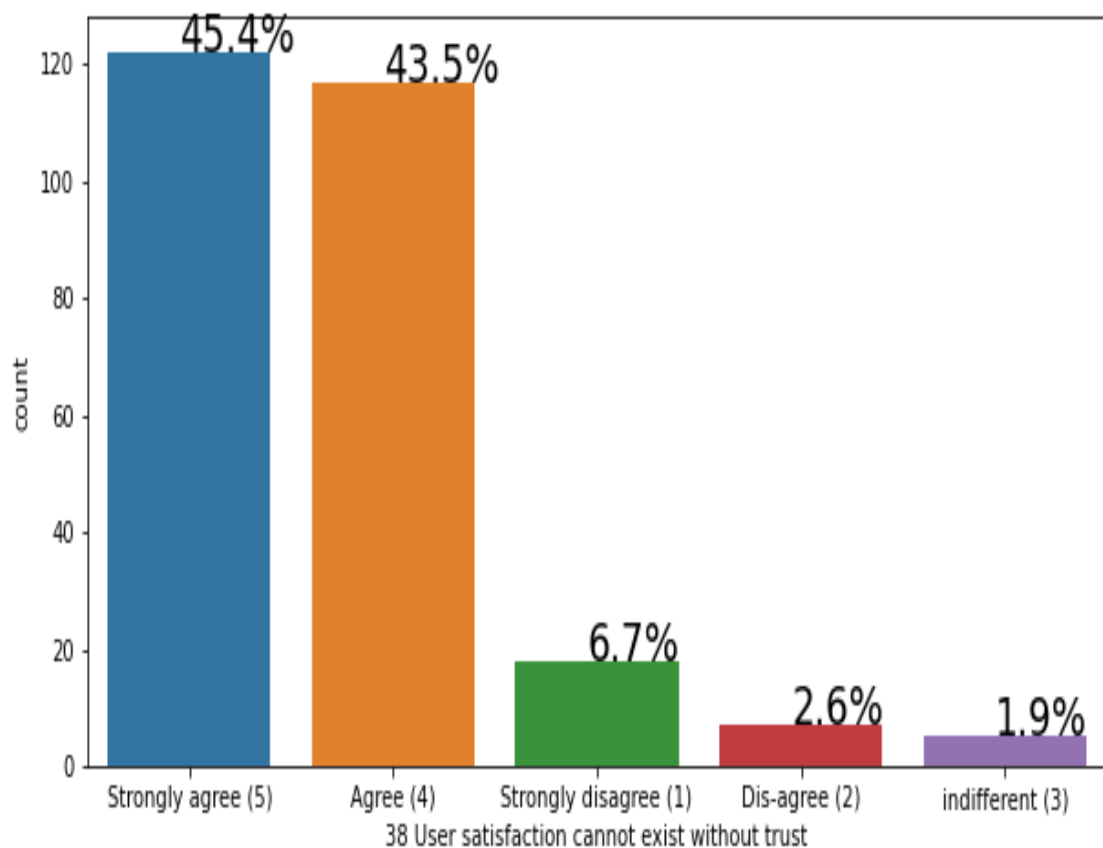
- This might be one of the most obvious as well as one of the most important relationships to be taken into consideration when it comes to selecting the features

- Huge number of positive responses in this category tells that trust is what most of the customers seeks online

- As businesses work on the principle of customer satisfaction this relationship and analysis cannot be ignored

Patronizing the online stores take:
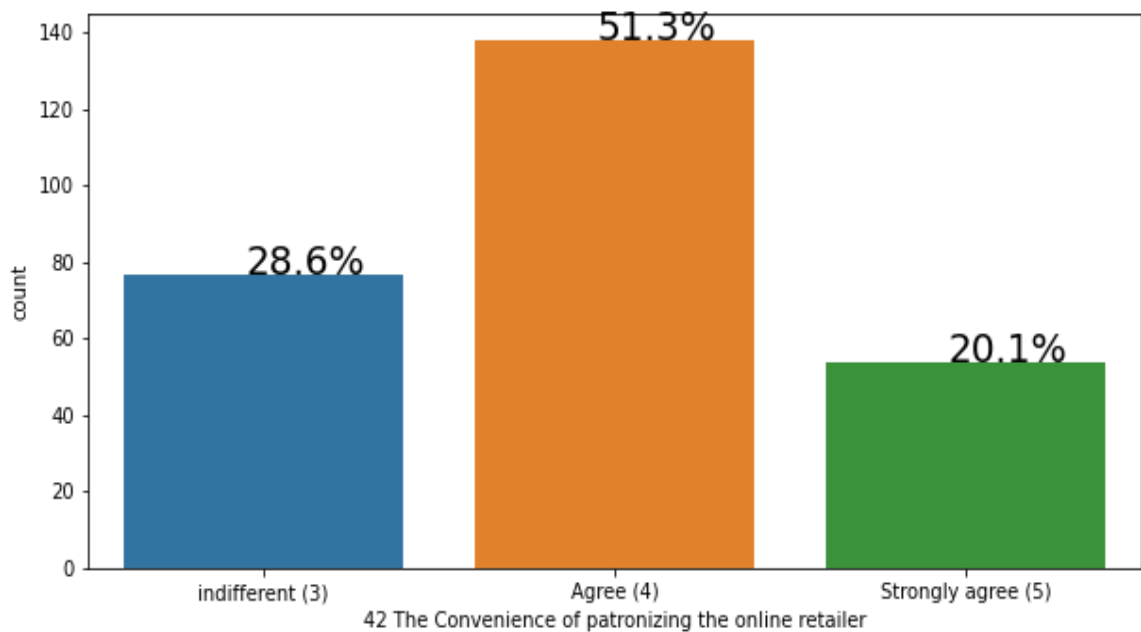
EMOTIONAL PATRONAGE BUYING MOTIVES OF A CUSTOMER

Emotional patronage motives depend upon the mentality of consumers. Customers become attached to a particular dealer or store. Emotionally, the buyer develops a sort of '*soft corner* 'towards a particular shop. While doing so, the customer does not apply his intelligence and judgement in buying goods. Rather, he is carried away by his emotions

The following could be the reasons for such a behaviour:

Appearance:

Sometimes, customers are attracted to a particular shop because of its appearance. A well decorated, colourfully lit, clean and well-furnished store with all modern amenities tends to attract the attention of customers.

Recommendations:

Customers also visit a shop on the recommendations of their friends and relatives. Usually, these friends and relatives could be the satisfied customers of that shop. As a result, they recommend the store to others.

Imitations:

Mostly, customers are motivated to follow others, since it often seems easier. Customers enter a shop imitating other. This motive is stronger in case of ladies. However, this motive is a short-lived one and does not remain long.

Prestige:

There are several customers who possess immense wealth. For them the sole buying motive is the prestige and superiority. The motive of prestige is so strong in them that they purchase articles which they may not need at all. Sometimes, they also buy the very best and most expensive product of the market. In order to maintain their dignity, they purchase goods even at a higher price. These people continue to patronize a shop or a dealer as a matter of prestige

Habit:

Consumer loyalty is developed out of consumer habit. Once a customer is emotionally attracted to a particular store, he continues to patronize the same. It is so with grocers, tailors, beauty parlours, restaurants, etc. It becomes a habit to go to a particular outlet

almost mechanically. The customer sells himself to that outlet automatically.

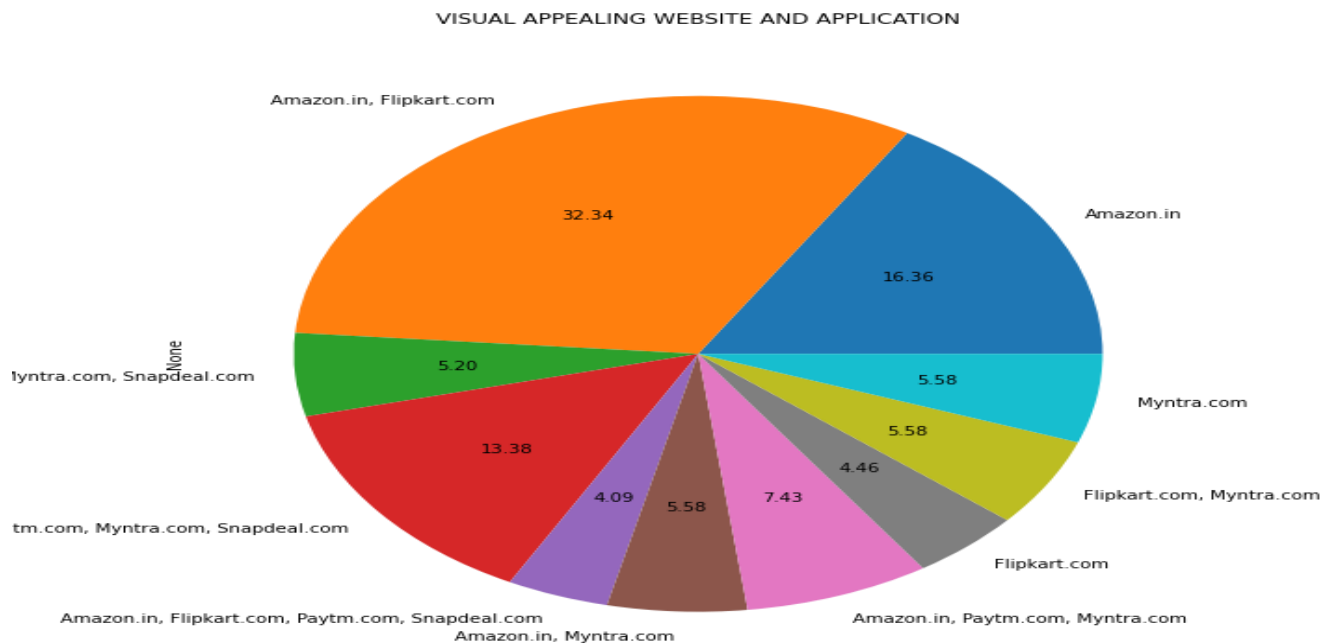## **Plot describing sense of fulfilment of certain roles:**
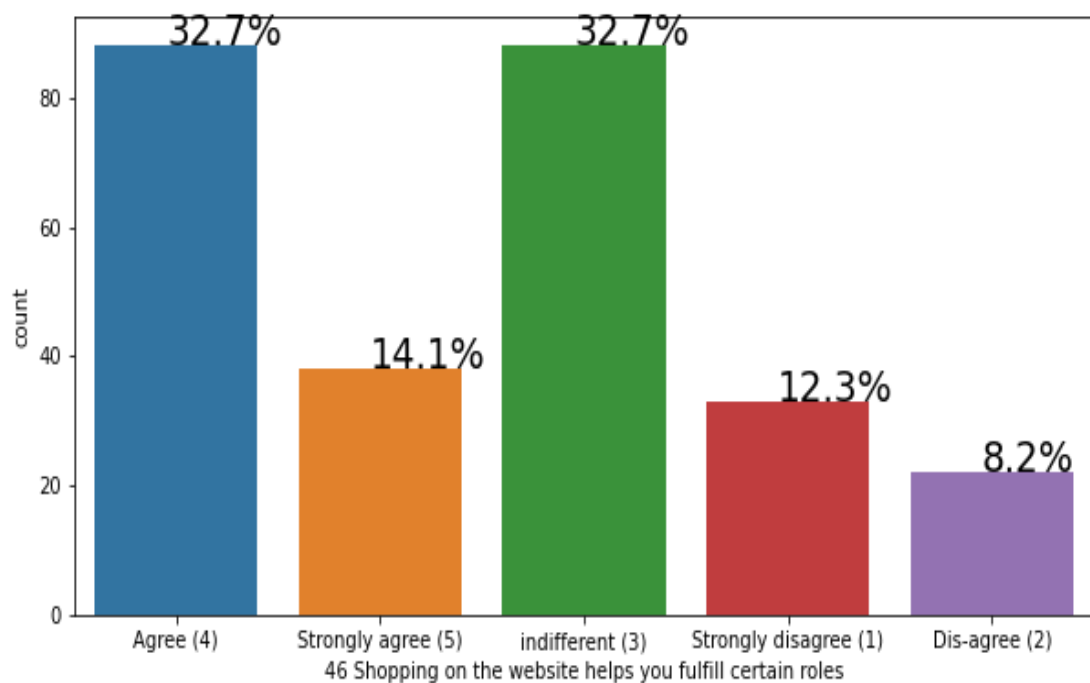
Value for money as a feature:
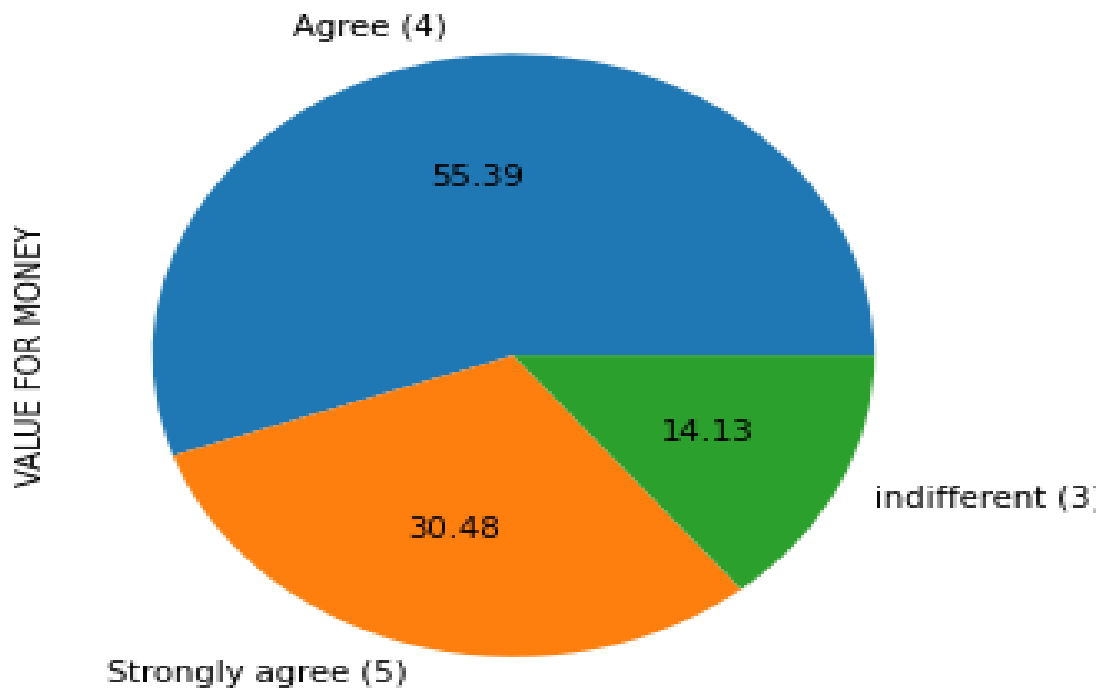
A price discount is a very prevalent marketing strategy to attract consumers by providing an extra value or incentive, which encourages consumers to purchase the promoted products immediately. In marketing research, theoretical models have been developed to investigate the relationship between price and customers' perceptions of products, and two well-known models in the pricing literature are the price–quality–value model (Monroe and Krishnan 1985) and the means-end model (Zeithaml 1988).

The affective feeling, especially for apparel products, may have an important influence on consumers' perceptions of the product and the shopping experience (Clore et al. 2001). Chandon et al. (2000) found that price promotions were more effective when the benefits of the promotions were congruent with the type of products (i.e., hedonic vs. utilitarian products). When they purchase hedonic products, consumers prefer price promotions that come with the hedonic benefits to price promotions that come with the utilitarian benefits. In other words, the affective effect of promotion is particularly important for hedonic products. Unlike many other product categories, apparel products have a high hedonic value (Kim and Forsythe 2007; Kim and Hong 2011), which refers to the sense of pleasure associated with the product (Kaul 2007). In addition to the hedonic value of the product itself, consumers may also perceive a high hedonic shopping value associated with the price discount that they received when they shop for apparel (Jin et al. 2003). The affect created by price discounts (hereafter *product discount affect*) may play an important role in consumers' perceptions of apparel quality and value.

Visual appealing website and application

VISUAL APPEALING WEBSITE AND APPLICATION

Amazon.in, Flipkart.com 32.34
Amazon.in 16.36
None 5.20
Myntra.com, Snapdeal.com
Paytm.com, Myntra.com, Snapdeal.com 13.38
Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com 4.09
Amazon.in, Myntra.com 5.58
Amazon.in, Paytm.com, Myntra.com 7.43
Flipkart.com 4.46
Flipkart.com, Myntra.com 5.58
Myntra.com 5.58

Visual content, when used effectively, is powerful. It can help you inspire and encourage shoppers to engage, convert, and form a preference for your online retail store.

It is, therefore, crucial to have a mix of product videos, images, and user-generated content to showcase your product on the e-commerce store. Doing this can help you improve user experiences and convince visitors that your product is a must-have.

VISUAL CONTENT APPEALS TO USER:

The first impression a user has of your products can have a lasting impact on how they perceive your business. It is, therefore, important to set a good first impression.

If the visual content on your ecommerce store does not appeal to them, your target customers will not even consider buying. A poorly-

designed ecommerce site can also make you look untrustworthy. You should build a beautiful website with attractive visuals that draw in your target audience and encourage them to engage with it. You can use professional design templates and customization options that most web development platforms offer. While you are designing your product pages, keep it simple. Do not use too many calls-to-action, paragraphs, or links. They dilute the potency of information you want your audience to see and the actions you want them to take.
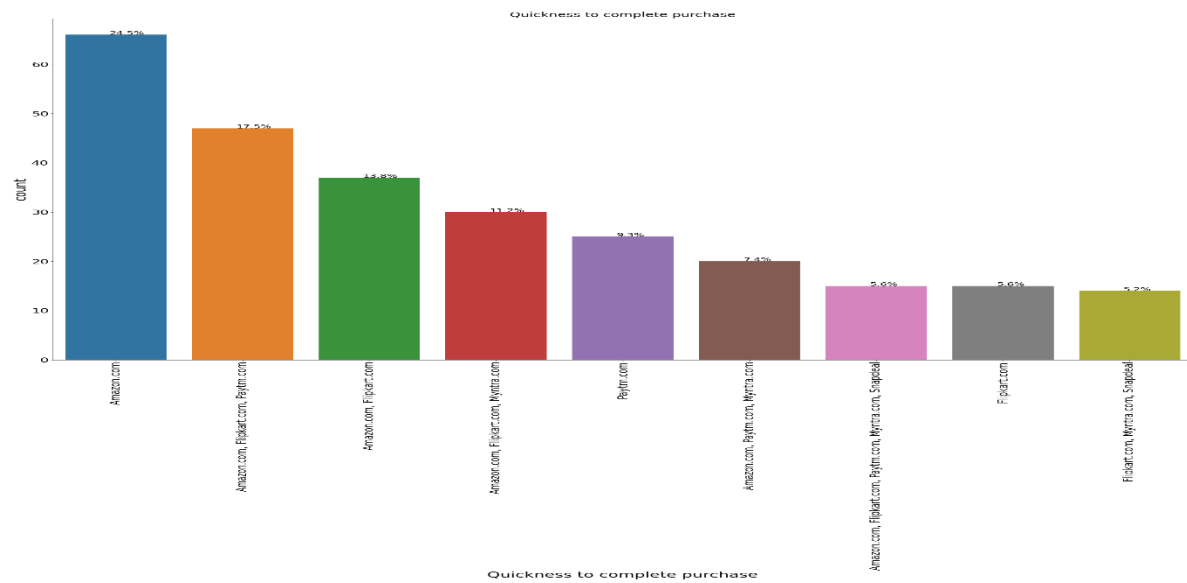
And how does attractive visual content help your online business?

It can increase credibility and trust with your target audience. Having attractive visuals can also help you increase engagement and sales.

VISUAL CONTENT BREAKS DOWN COMPLEX INFORMATION

OFTEN OFFERS SOCIAL PRROF
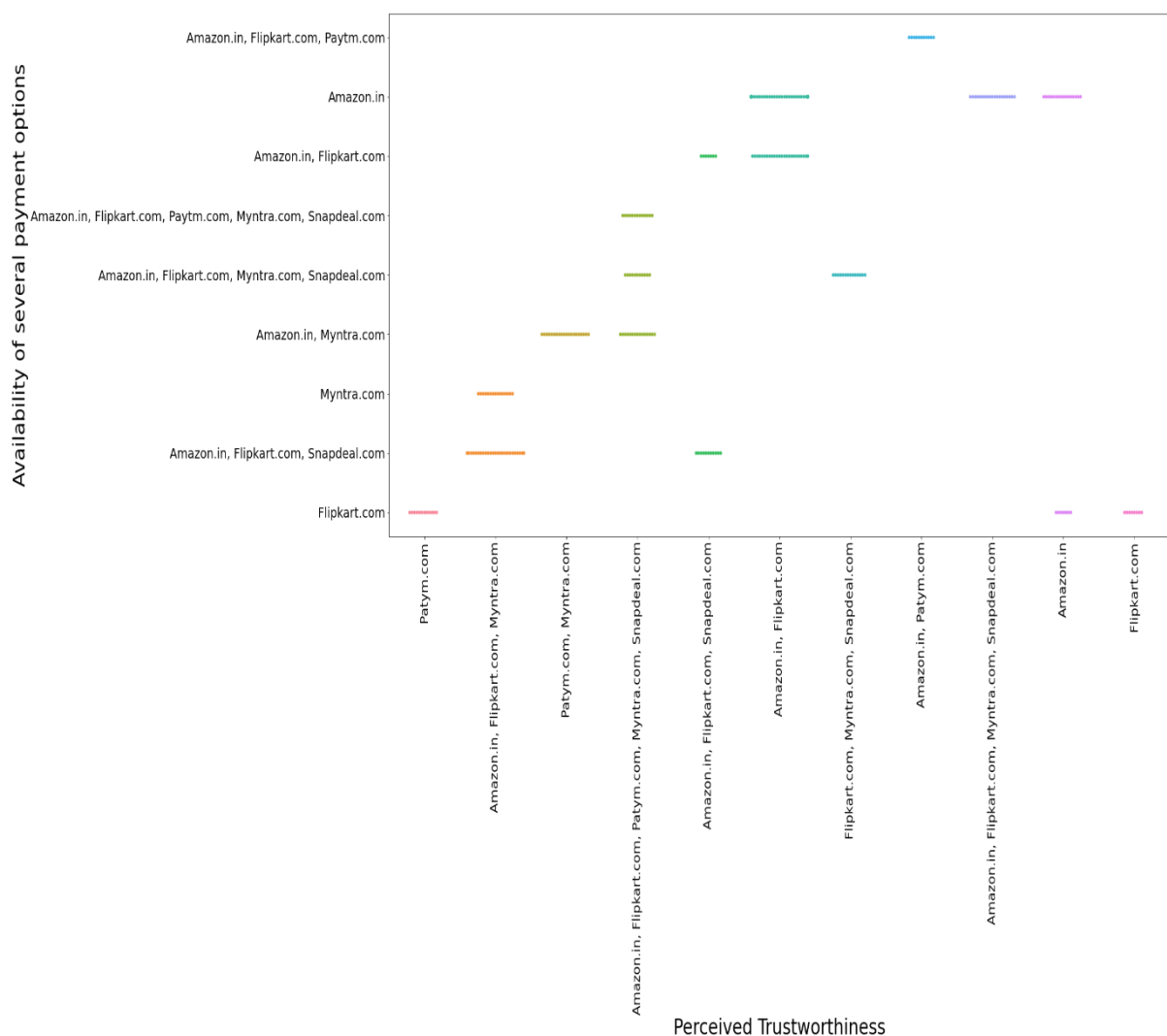
Quickiness to complete purchase:

It is important that brands understand what drives shoppers to the cart and keeps them coming back. Consumers should not have to make sacrifices for speed, just as retailers should not have to surrender the sale due to slow loading times on their site. Our findings show that the seamless, one-click experience consumers expect when shopping on social media is quickly becoming the norm for online purchases overall—making eCommerce brands that prioritize efficiency and speed well-positioned to win out in the busy holiday season, and beyond.

As post-pandemic consumer expectations continue to skyrocket, so too does their need for digital shopping speed. Nearly one-half of U.S. online shoppers now say it's more important for them to be able to buy something quickly than it is to have a large selection of items to choose from, according to the inaugural eCommerce Trends Report released by headless commerce solution, "Pack".

The report also illustrates the impact website speed and ease of use have on consumers' path to purchase and brand loyalty, with many shoppers saying they will turn to competitors if they cannot find what they need after one (fruitless) search, or if a site takes too long to load. Perhaps most surprising, almost one third of shoppers said they would be willing to wait up to three days longer to receive an item if they had an easier and faster shopping experience.

Plot describing relationship between "perceived trustworthiness" and "availability of several payment option:

Longer time in displaying graphics and photos:

Longer time in displaying graphics and photos (promotion, sales period)
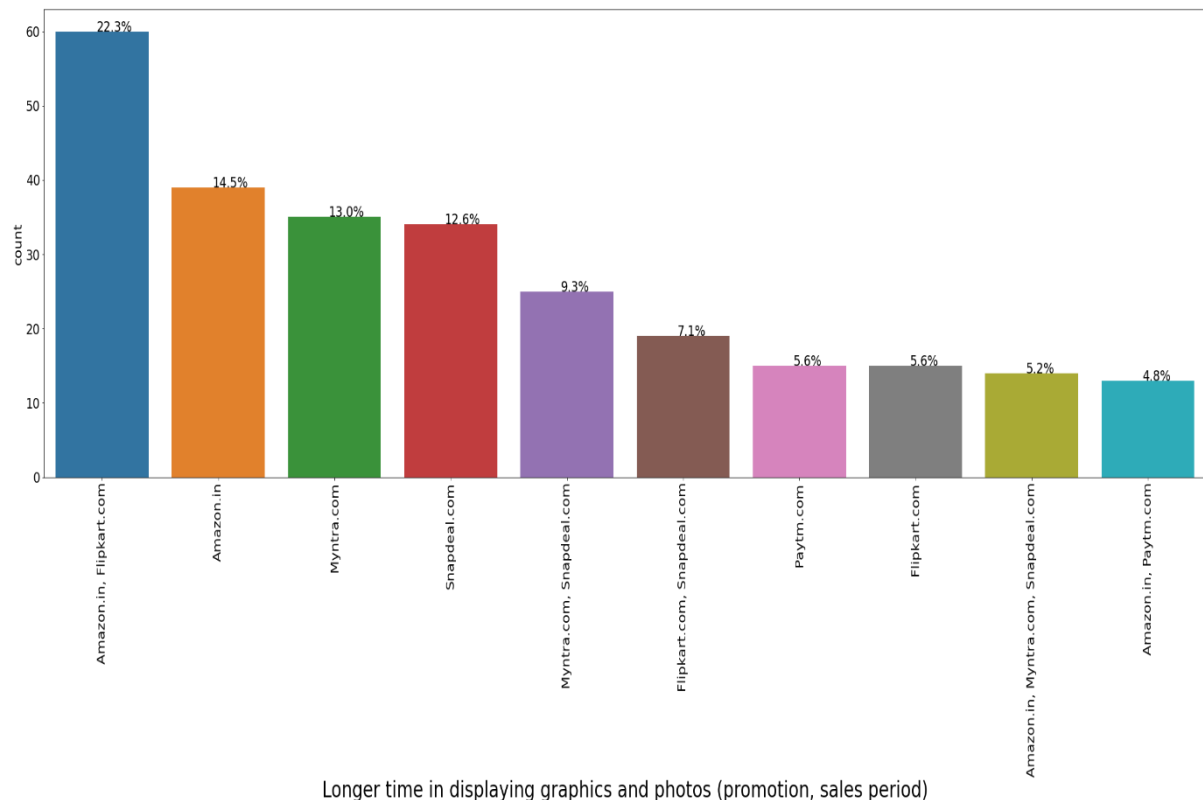
In a world of instant gratification, it is crucial for businesses to keep the customer experience moving with a fast-loading ecommerce website. Research shows that if an ecommerce site loads slower than expected, visitors are less likely to make a purchase. Often, the main culprits of a slow website are large, under-optimized images.

While image quality is certainly important for creating great product photography, image optimization is the real secret to building a successful online store. Learning how to optimize images can yield big rewards, from reducing site load times to enhancing your brand to attracting shoppers perusing Google images.

IMAGE OPTIMIZATION MAY HELP

Image optimization is about reducing the file size of your images as much as possible, without sacrificing quality, so your page load times remain low. It is also about image SEO—that is, getting your banner and product images to rank highly on Google and other image search engines.

Image optimization for web and mobile exists to make web pages load faster. They create a better browsing experience for shoppers. Should there be a mere two-second delay in your page speed, your bounce rate can increase by 103%. Google has suggested that site speed is one of the signals used by its algorithm to rank pages. Research from "Moz" shows that Google may specifically measure time to first byte when it considers page speed. A slow page means searches engines crawl fewer pages with their crawl budget, which can negatively affect your indexing.

## <u>Longer delivery periods plot:</u>
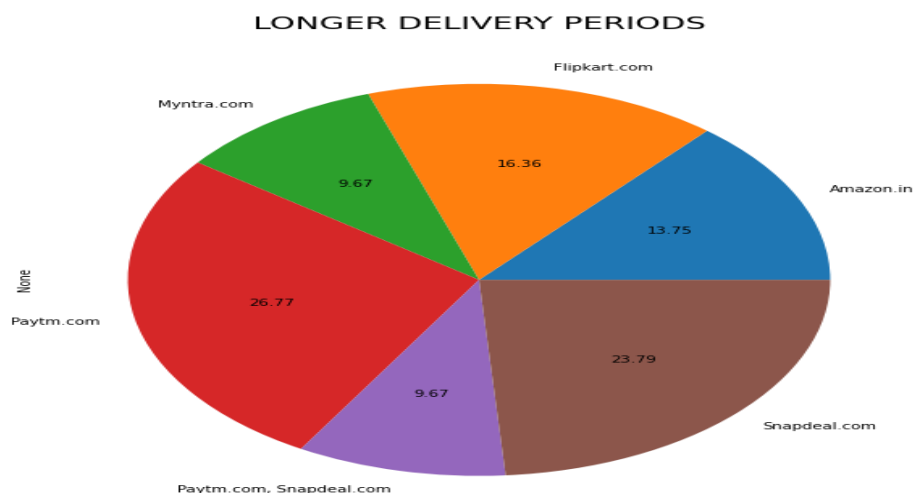
For e-commerce retailers, a successful sale is not considered complete once a customer finalizes their purchase during the checkout process. The process ends when the purchase arrives at the customer's home on time and in good condition. And if it arrives late, it could be the last purchase the customer makes.

One study found that 69% of consumers "are much less or less likely to shop with a retailer in the future if an item they purchased is not delivered within two days of the date promised."

While replacing these lost customers with new ones may seem like a simple solution, it's not necessarily a smart one financially. Acquiring a new customer can cost anywhere from five to 25 times more than retaining an existing customer (numbers vary by study and industry). Whether the actual number lies closer to the low or high end of that scale, retaining customers is best for your business.

The best way to understand the real impact late deliveries can have on customer retention is to learn a few important metrics, which can also be key to measuring your business's own success in keeping your customer base satisfied.

Most recommended Indian e-stores:

Which of the Indian online retailer would you recommend to a friend?
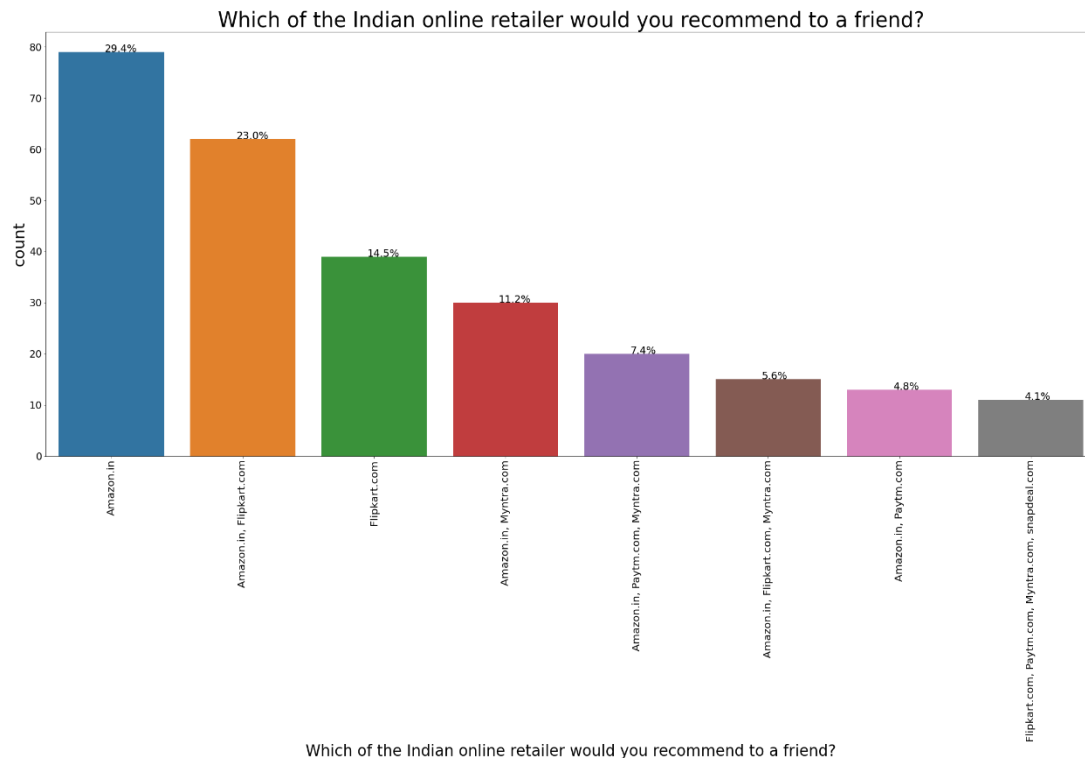
- We are assuming this as our target feature for modelling a ML model

Reason for choosing this:

- A customer will only recommend/suggest the store which he/she finds best, credible, trustworthy and value for money

- The customer is retained as well as he/she is activating new customers which is the best thing for any store

- WOM (word of mouth) marketing is one of the most powerful forms of advertising as 88% of consumers trust their friends' recommendations over traditional media.

- Companies can encourage WOM marketing by exceeding expectations on a product, providing good customer service, and giving exclusive information to consumers