# Introduction

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

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# Objective

- We would like to analyse the factors on which customer retention depends for online shopping.

- The data set will be loaded and various libraries will be used for analysis.

# Problem Statement

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.

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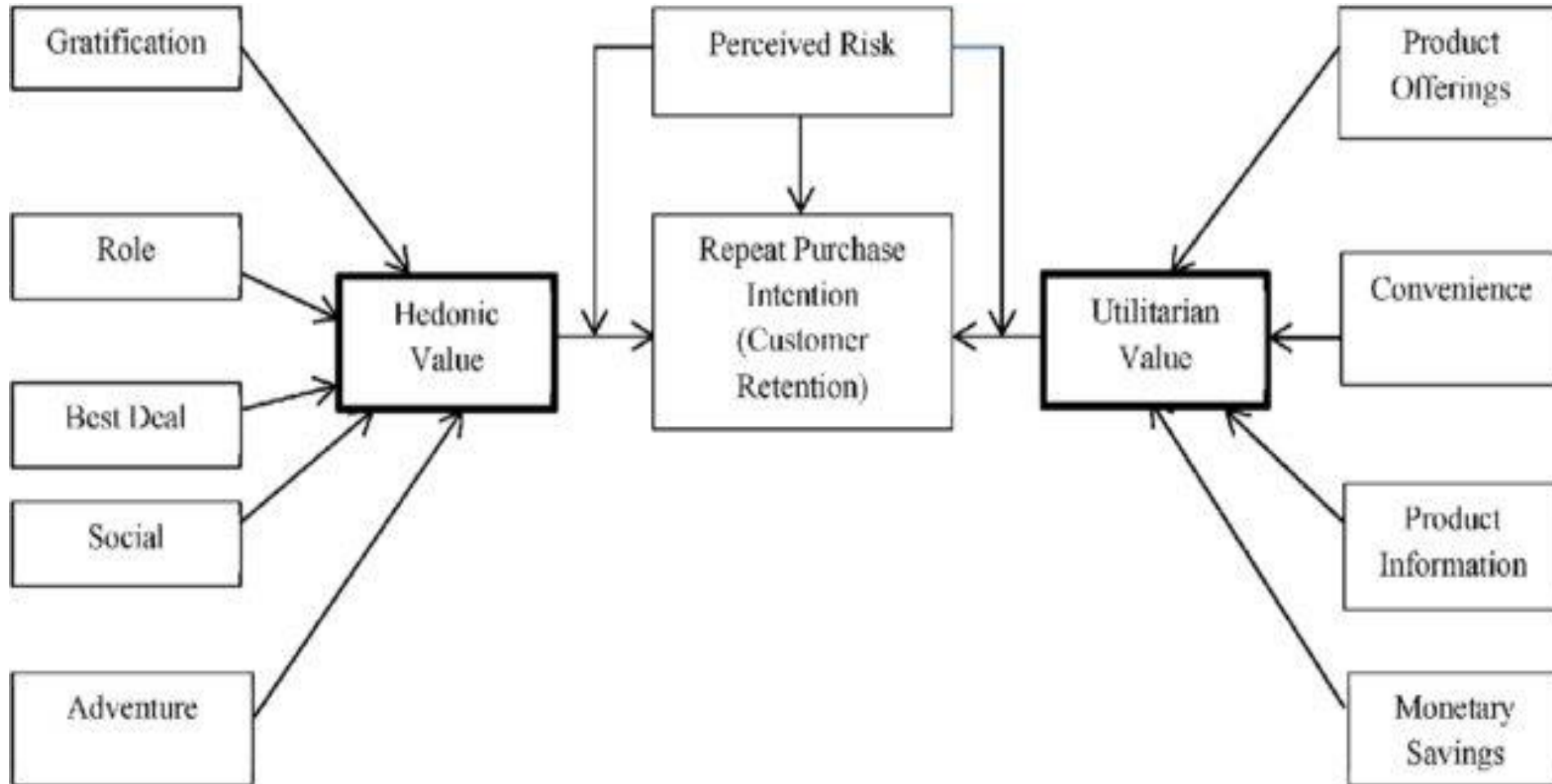
# Summary of Analysis :

- Survey was done and a dataset was provided containing the details of the participants of a survey, along with their online shopping experiences, preferences, and opinions regarding various e-commerce websites.

- The Dataset was first checked for null values, and then the various feature columns were analyzed.

- Exploratory Data analysis was conducted to investigate the relationship between the columns, using various visualization techniques.

# About the Dataset:

- The given dataset consists of 71 columns and 269 rows
- 'Which of the Indian online retailer would you recommend to a friend?' is the customer retention because it represents a customer's loyalty to a website.

# Project design



Gratification → Hedonic Value

Role → Hedonic Value

Best Deal → Hedonic Value

Social → Hedonic Value

Adventure → Hedonic Value

Hedonic Value → Repeat Purchase Intention (Customer Retention)

Perceived Risk → Repeat Purchase Intention (Customer Retention)

Repeat Purchase Intention (Customer Retention)

Utilitarian Value → Repeat Purchase Intention (Customer Retention)

Product Offerings → Utilitarian Value

Convenience → Utilitarian Value

Product Information → Utilitarian Value

Monetary Savings → Utilitarian Value

# Experimental analysis

- According to studies it is observed that repeat customer purchase resulting from a long standing loyalty positively affects an e-retailer growth and profitability.

- The motivation level of a Customer to shop from an e-retail vendor depends on various factors. They can be psychologically categorized into two broad categories:

(a)  Hedonistic (b) Utilitarian shopping values.

- Hedonistic values represent the excitement, and pleasurable experiences derived from shopping online.

- Utilitarian shopping values are those related to the level of fulfillment as a result of being able to achieve the shopping goals.

- Aside from Hedonic and Utilitarian values, certain perceived risks also influence the purchase decision of an online customer and therefore, these risks are also a crucial factor in determining the loyalty of a customer to an e-commerce brand.

- Because  of temporal and spatial separation between the sellers and buyers, online shopping has a more pronounced perception of risk than the traditional physical shopping store.

# Exploratory Data Analysis

- The individual columns of the dataset were first analyzed to study their composition and then, with reference to the diagram and the theoretical background of the case study, the relationships between various columns were understood through data visualization matplotlib and seaborn and various libraries.
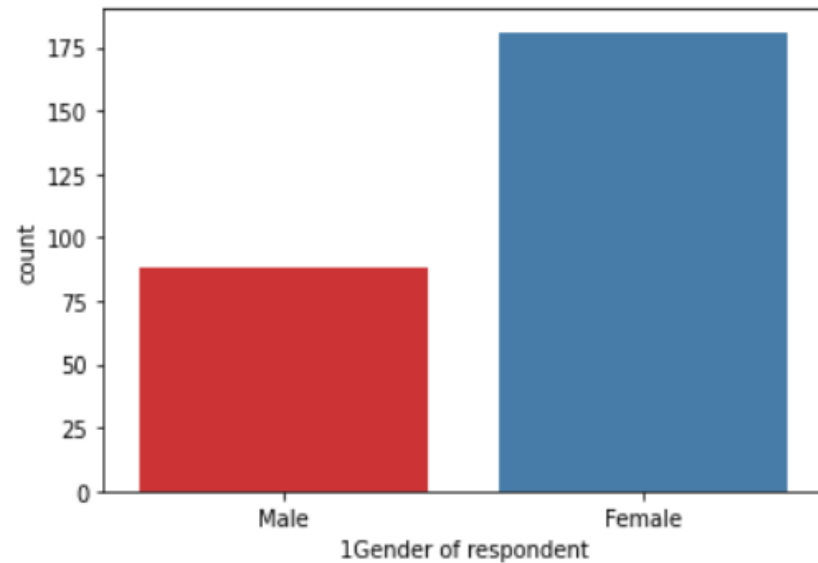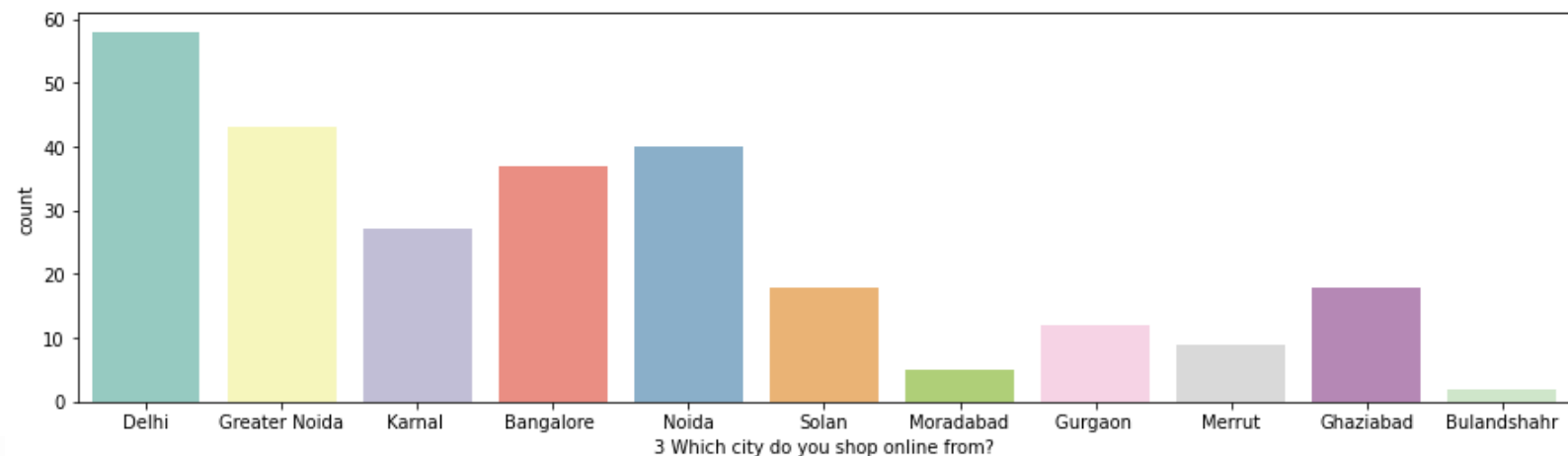
# Selecting the target column

If I recommend something to someone I must like it and more likely I will revisit or shop from the same site. Hence taget column must be:

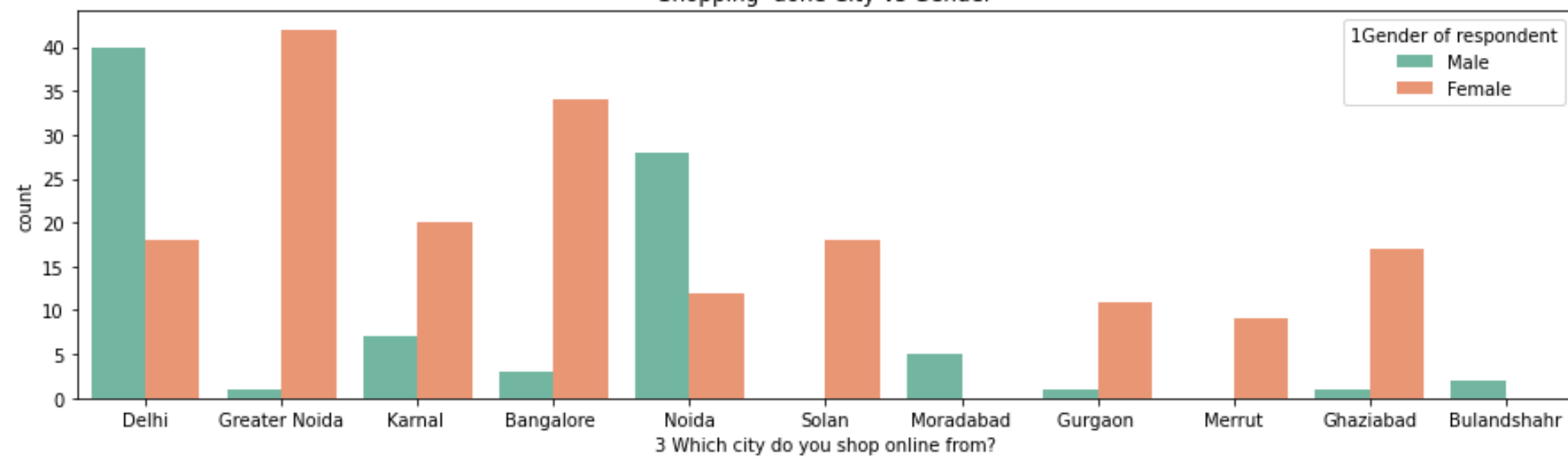Which of the Indian online retailer would you recommend to a friend?
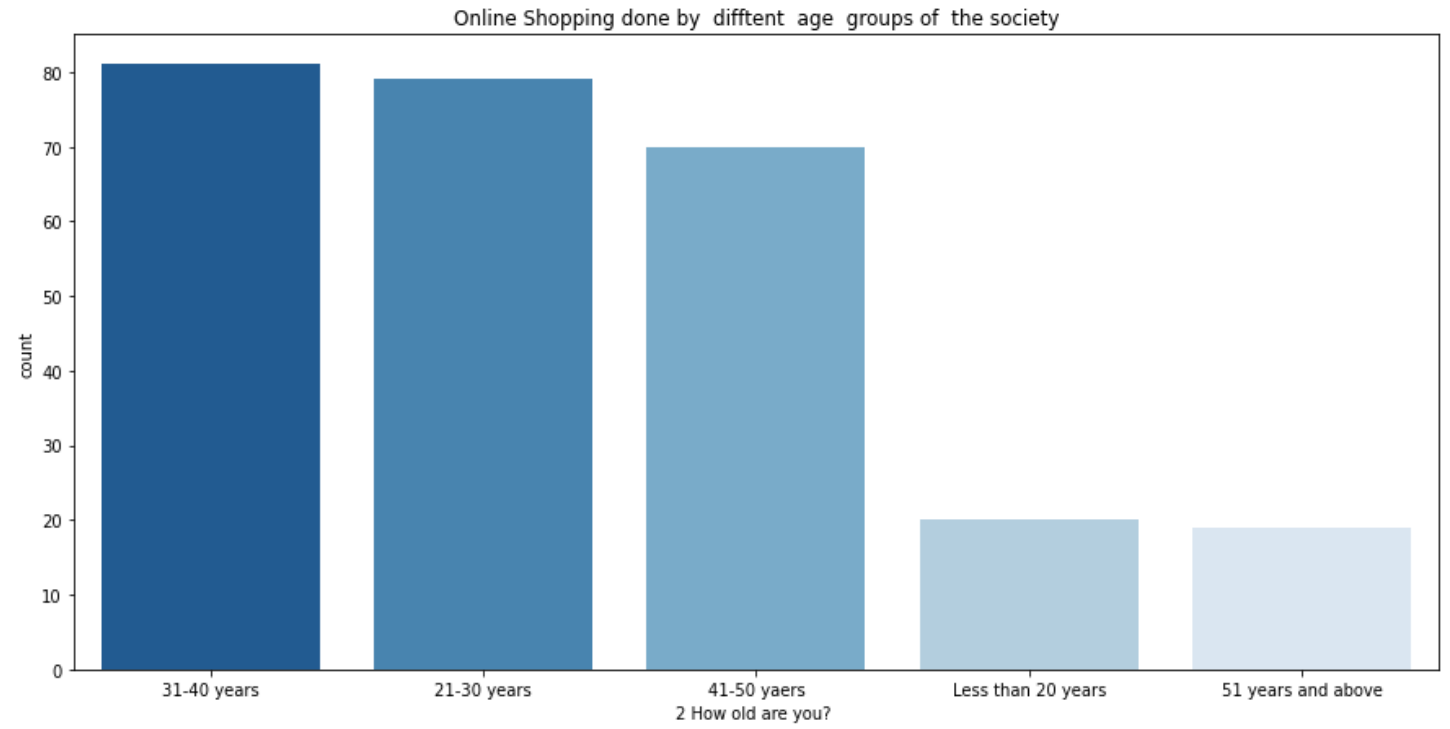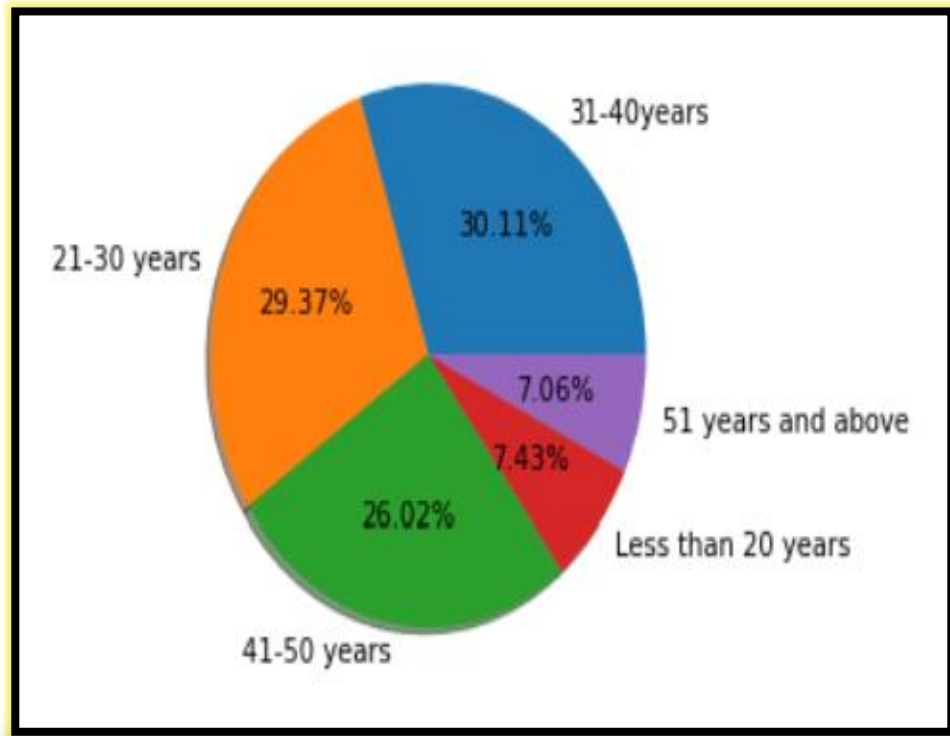
# Consumer Distribution

- Columns which contained details regarding the demographics of the participants (age, gender, location) were visualized and analyzed.
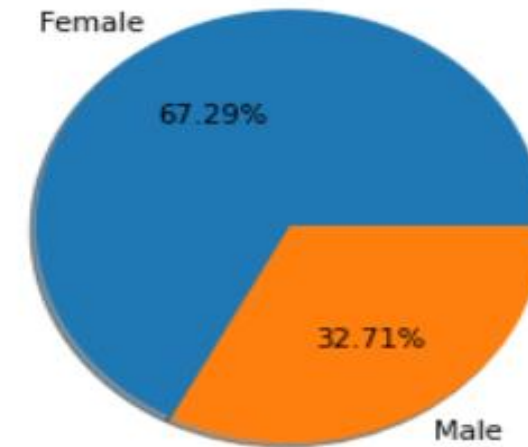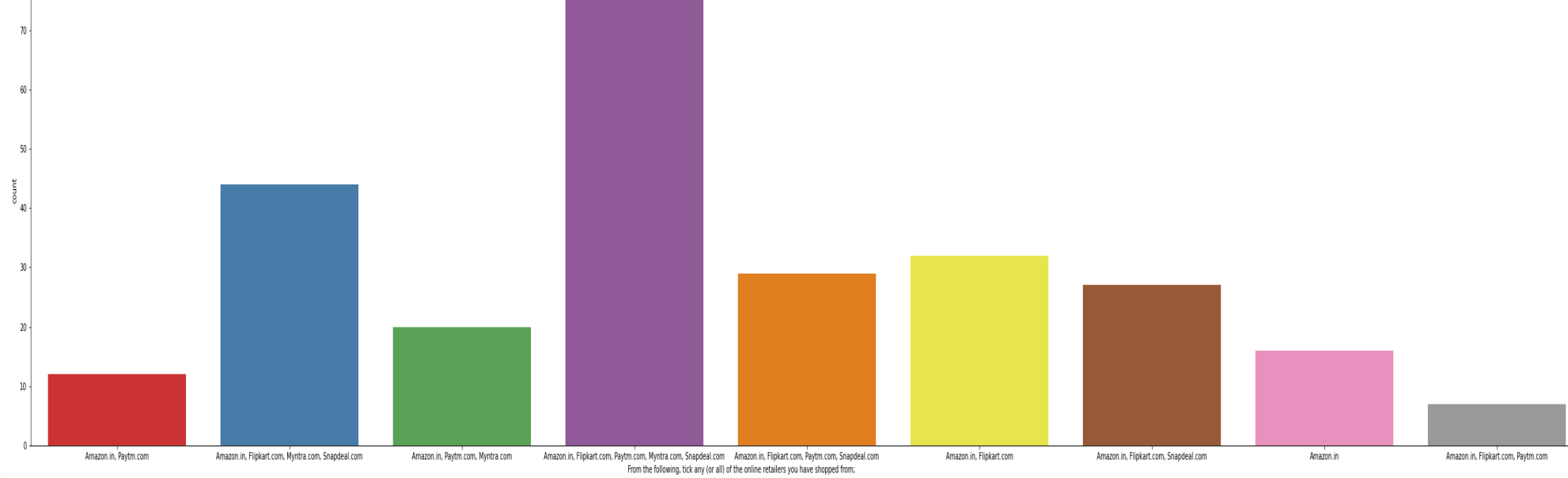
Shopping done City vs Gender

Online Shopping done by difftent age groups of the society

**count** (y-axis, ranging from 0 to 70)

| Category | Count |
| --- | --- |
| Amazon.in, Paytm.com | 12 |
| Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com | 44 |
| Amazon.in, Paytm.com, Myntra.com | 20 |
| Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com | 75 |
| Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com | 29 |
| Amazon.in, Flipkart.com | 32 |
| Amazon.in, Flipkart.com, Snapdeal.com | 27 |
| Amazon.in | 16 |
| Amazon.in, Flipkart.com, Paytm.com | 7 |

From the following, tick any (or all) of the online retailers you have shopped from;

It is observed that Amazon is the most popular E commerce website followed by Flipkart.

# Consumer Distribution

- Based on the above graphs it is observed that:

- Majority of the participants are female, comprising 67.29% of the total participants of the survey.

- Most of the participants hail from Delhi, Greater Noida, Noida, and Bangalore.

- Majority were Male of those who hailed from Delhi and Noida. While of those who hailed from Greater Noida, Bangalore and Karnal, Ghaziabad and Solan the majority were Female.

- The age distribution of the majority of the participants lies in the range of 21-40 years, with 59.48% of the total participants falling within that age range, while 26.02% of the participants belong to the age range of 41-50 years.
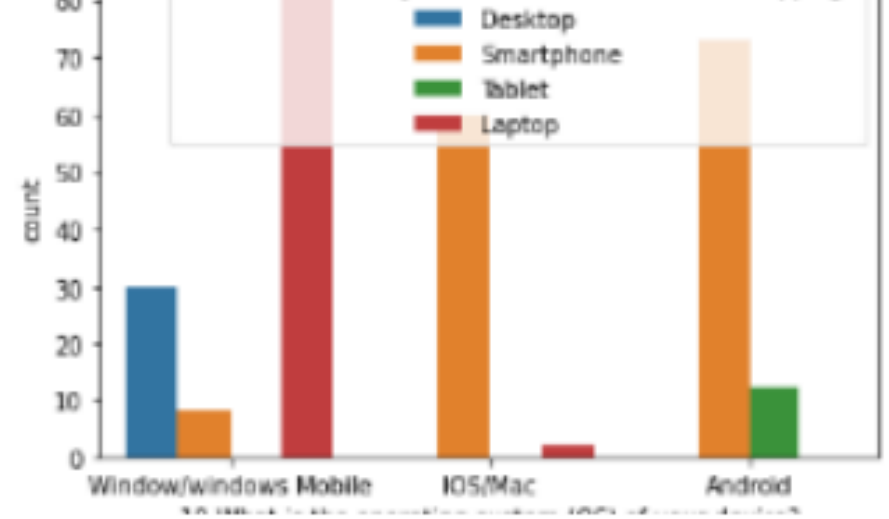
# Online shopping Timeline
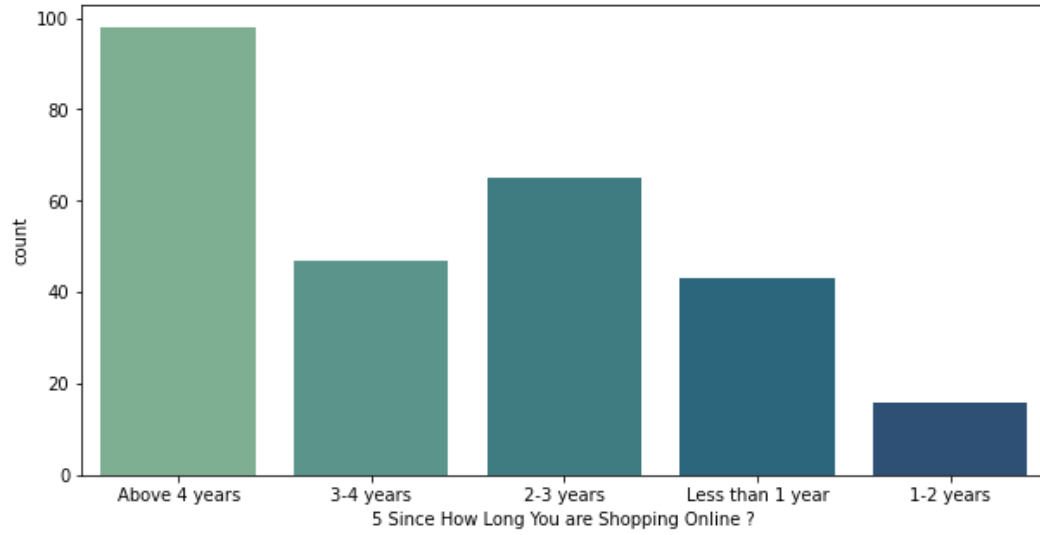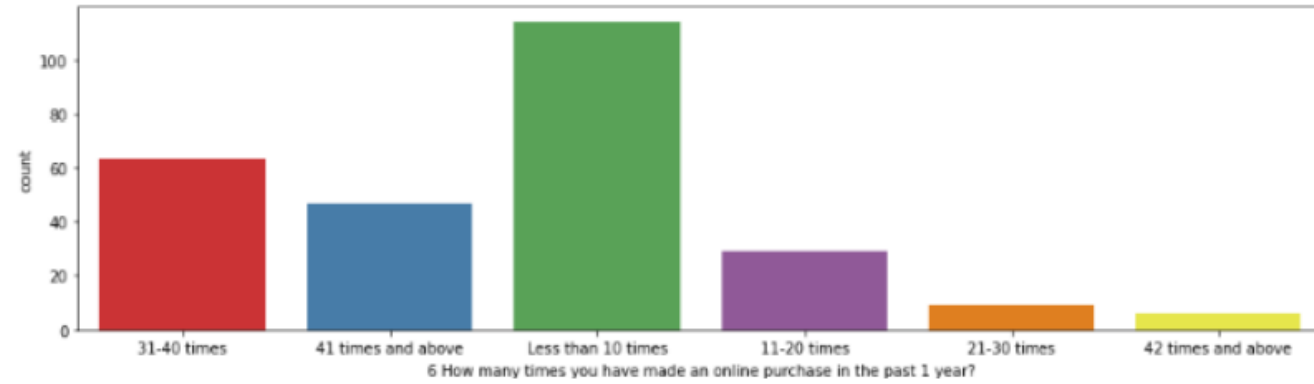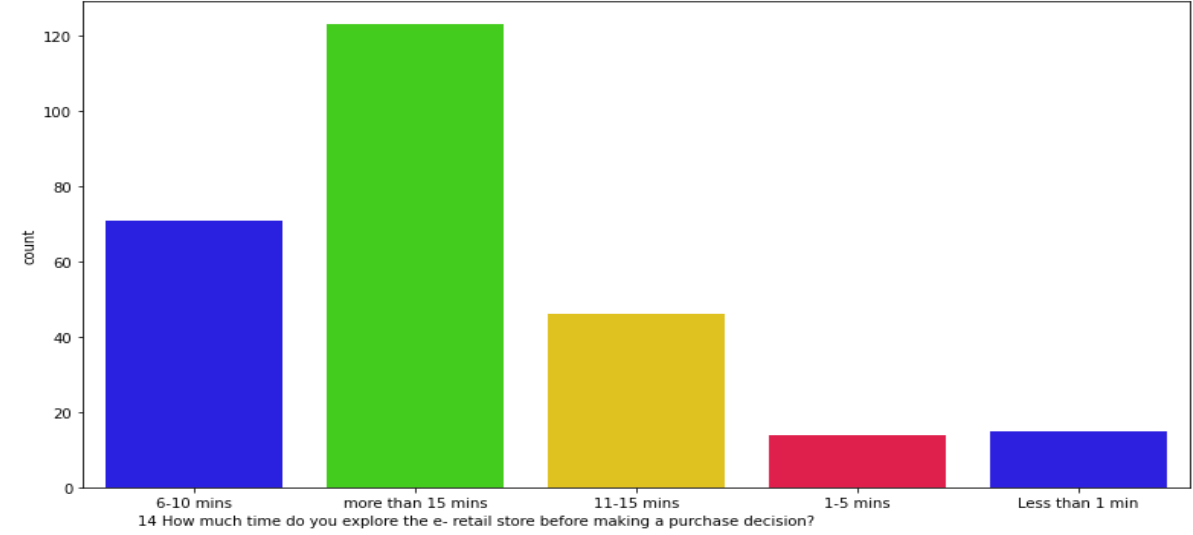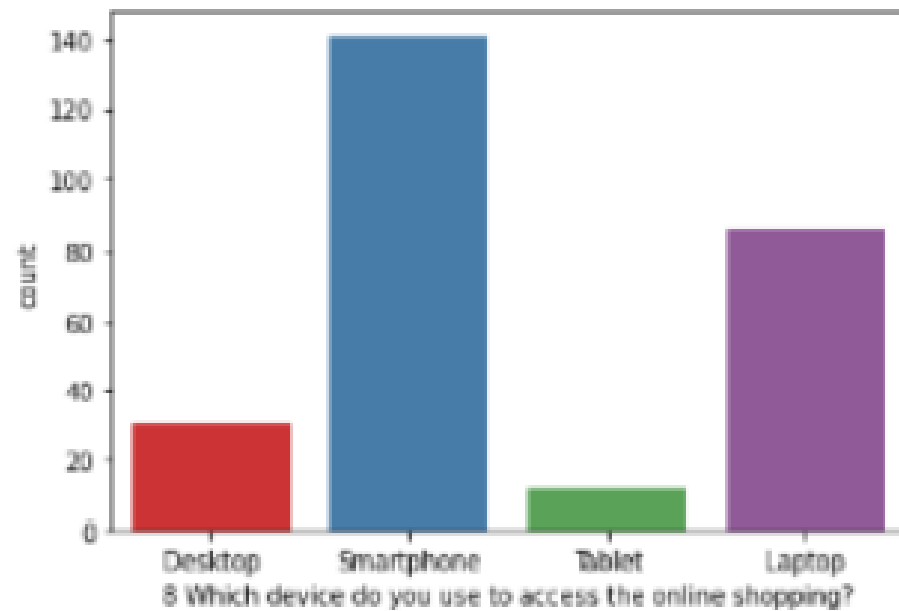
8 Which device do you use to access the online shopping?

# Online shopping Timeline

- Majority of the consumers have been shopping for over 4 years and have made less than 10 purchases in the last 1 year.

- Smartphone and mobile internet are the most popular means of accessing ecommerce websites, with most common screen size being 5.5 inches or greater.

- Windows operating system is the most popular on Laptop/Desktop devices while android is the most popular OS on smartphone devices followed by iOS.

- Google Chrome is the most popular web Browser, especially on portable devices, followed by Safari.

- Search Engine is the most common means of arriving at the E commerce websites, followed by  Application and Direct URL.

- Most consumers spend over 15 mins browsing an e-commerce website before making a purchase decision.

# Consumer Hesitation

- Various factors/reasons which contributed to consumers' hesitation to complete a purchase online were analyzed from the data provided under the columns of the dataframe.
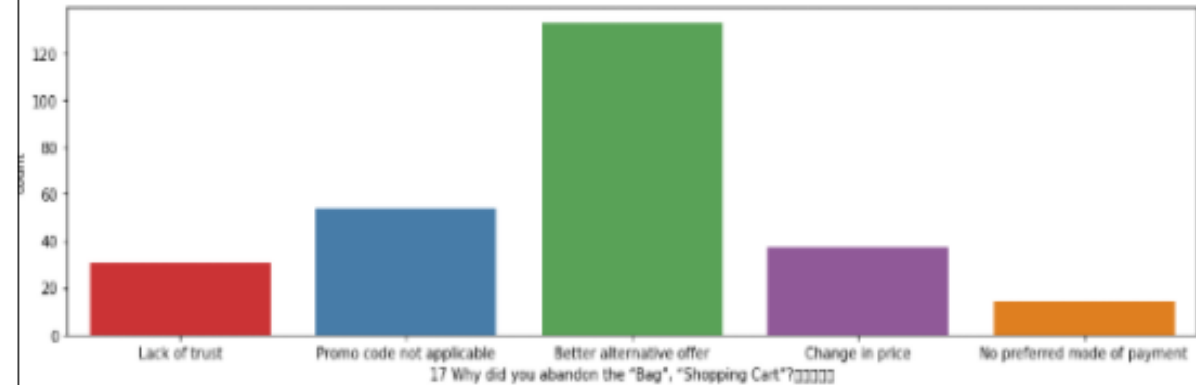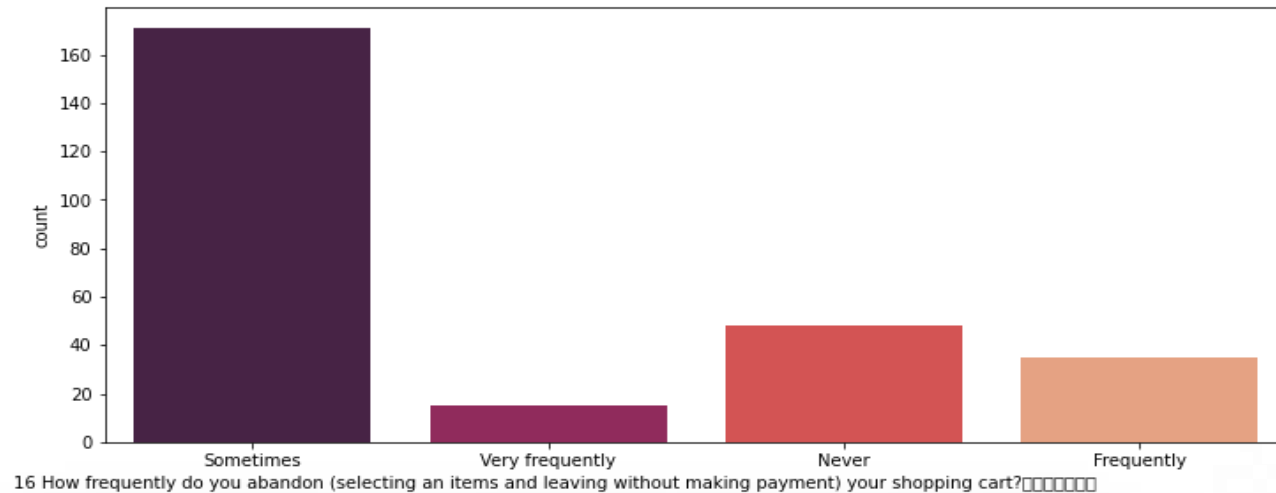
# Consumer Hesitation

- Based on the above graphs it is observed that:

- Consumers sometimes abandon items  in shopping cart.
- Finding a better alternative offer is the most common reason behind why consumers abandon items on a particular e commerce website.

# Consumer Thoughts on Website and it's Features

Analyzing the opinions of the participants on the various features of the e-commerce websites reveals that majority of the consumers strongly agree that:

- The content on the website must be easy to read and understand
- Information on similar product to the one highlighted  is important for product comparison
- There should be Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.)
- Online shopping gives monetary benefit and discounts
- Enjoyment is derived from shopping online

- Shopping online is convenient and flexible

- Return and replacement policy of the e-tailer is important for purchase decision

- The Convenience of patronizing the online retailer
- Shopping on the website gives you the sense of adventure
- Shopping on your preferred e-tailer enhances your social status
- You feel gratification shopping on your favorite e-tailer
- Shopping on the website helps you fulfill certain roles
- Getting value for money spent is important

- Convenient Payment methods should be available.
- There is trust in the online retail store fulfilling its part of the transaction at the stipulated time
- There should be Empathy (readiness to assist with queries) towards the customers
- Online retail store should be able to guarantee the privacy of the customer
- Complete information on listed seller and product being offered is important for purchase decision
- All relevant information on listed products must be stated clearly
- Navigation in website should be easy
- Loading and processing should be quick
- Interface of the website must be user friendly

- Gaining access to loyalty programs is a benefit of shopping online

- Displaying quality Information on the website improves satisfaction of customers
- User derive satisfaction while shopping on a good quality website or application
- Net Benefit is derived from shopping online can lead to users satisfaction
- User satisfaction cannot exist without trust
- E commerce websites must Offer a wide variety of listed product in several category
- There should be Provision of complete and relevant product information
- Monetary savings must be considerable

# Consumer Ecommerce Website preferences and opinions

Analyzing the Preferences and opinions of the participants regarding the e-commerce websites reveals that:

- Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com are the most popular e-commerce websites.

- Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com are the easiest to use websites and applications

- Amazon.in and Flipkart.com have the most visually appealing web-page layout.

- Amazon.in and Flipkart.com have the widest variety of products on offer.

- Amazon.in and Flipkart.com have the most complete, relevant description information of products.

- Amazon.in,  and Paytm.com have the fastest loading speed while Flipkart is regarded by very few as being quick to load

# Consumer Ecommerce Website preferences and opinions

- Amazon.com, Flipkart.com, Paytm.com are considered quick to complete purchases.
- Amazon.in, Flipkart.com are regarded by most to have several payment options available
- Amazon.in is regarded to offer speedy order delivery by most.
- Amazon.in offers the most Privacy for customers' information.
- Amazon.in , followed by Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com provide the best security for customer financial information.
- Amazon.in is perceived to be the most trustworthy website by the majority of participants.
- Amazon.in, Flipkart.com, Myntra.com, Snapdeal have the highest presence of online assistance through multi-channel.
- Most people face longer time to get logged in during promotion, sales period on Amazon.in and Flipkart followed by Paytm and Myntra.

# Consumer Ecommerce Website preferences and opinions

- Amazon.in, Flipkart.com take the longest time displaying graphics and photos during promotion, sales period.

- Most people face Late declaration of price on Myntra and Paytm during promotion, sales period.

- Myntra and Paytm take the longest page loading time during promotion, sales period.

- Snapdeal.com and Amazon.in have the most limited modes of payment on most products during promotion, sales period.

- Paytm.com and Snapdeal.com have Longer delivery periods compared to others.

- Amazon.in and Paytm.com have had recent changes in website/Application design, as observed by the consumers.
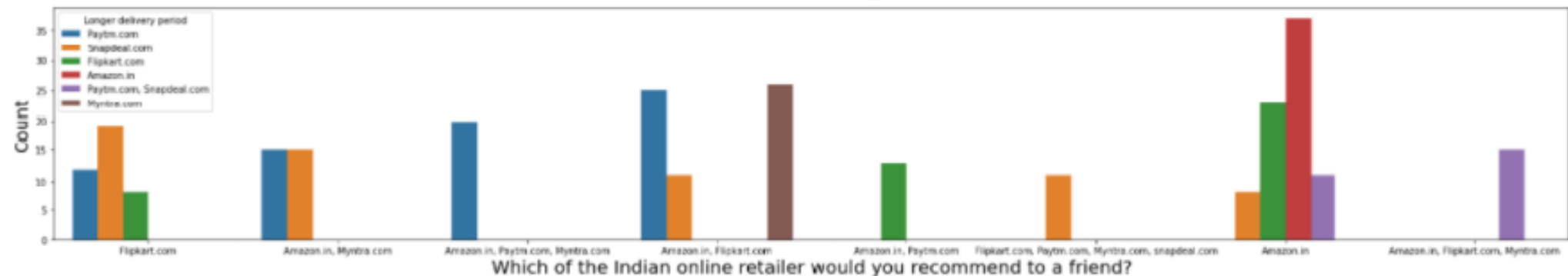
# Analyzing Relationship between Customer retention and Perceived Risks

- Columns that represent abandoning shopping carts on e commerce websites, reasons behind abandoning shopping carts,Longer delivery period,Website disruption,Customer Data security,Trustworthiness etc. represent perceived risks

- While the Column representing the recommended e commerce brands represents customer loyalty / retention.

- The relationships between the columns representing the perceived risks and the column representing Customer retention were visualized and observations were made.

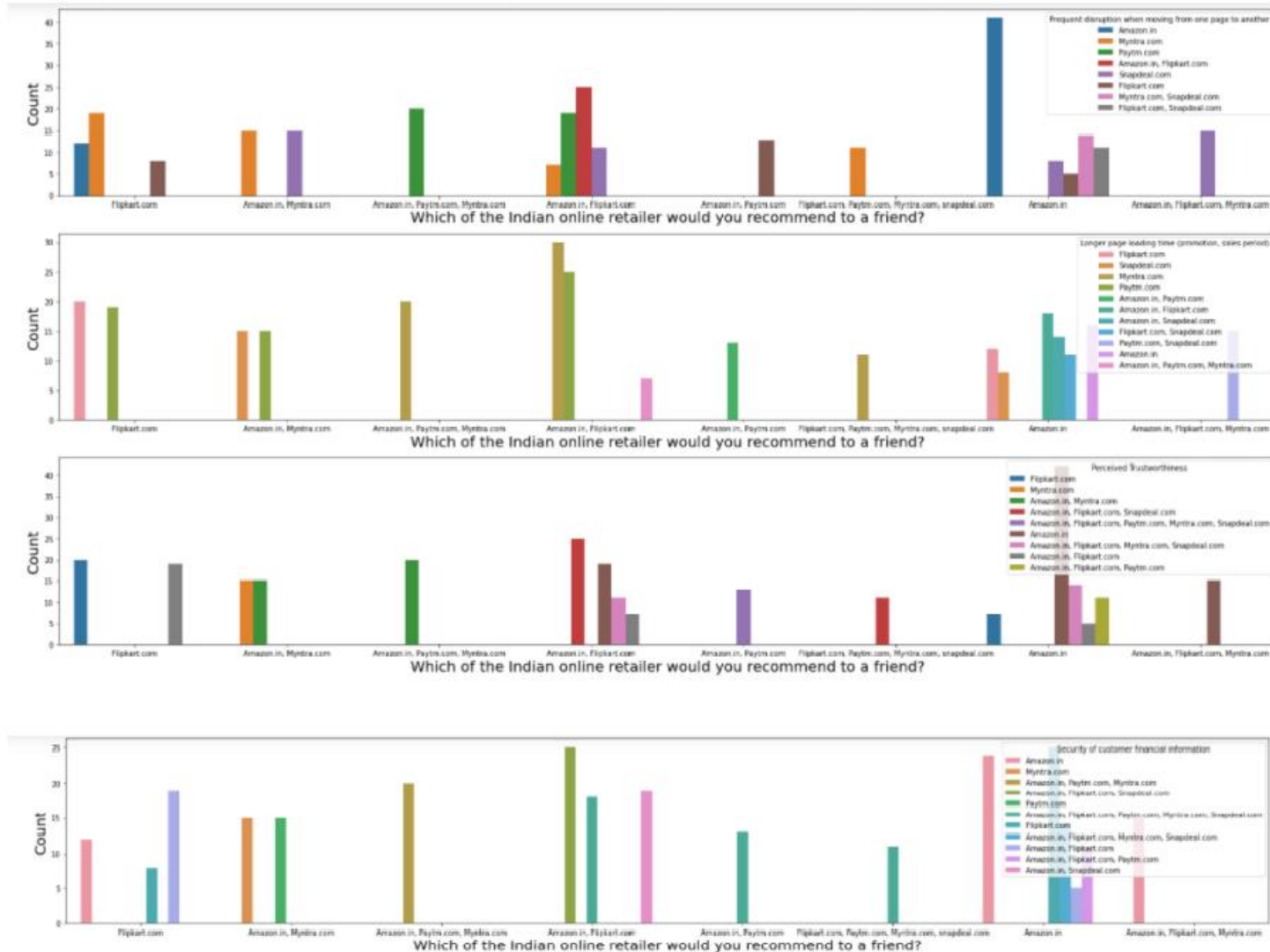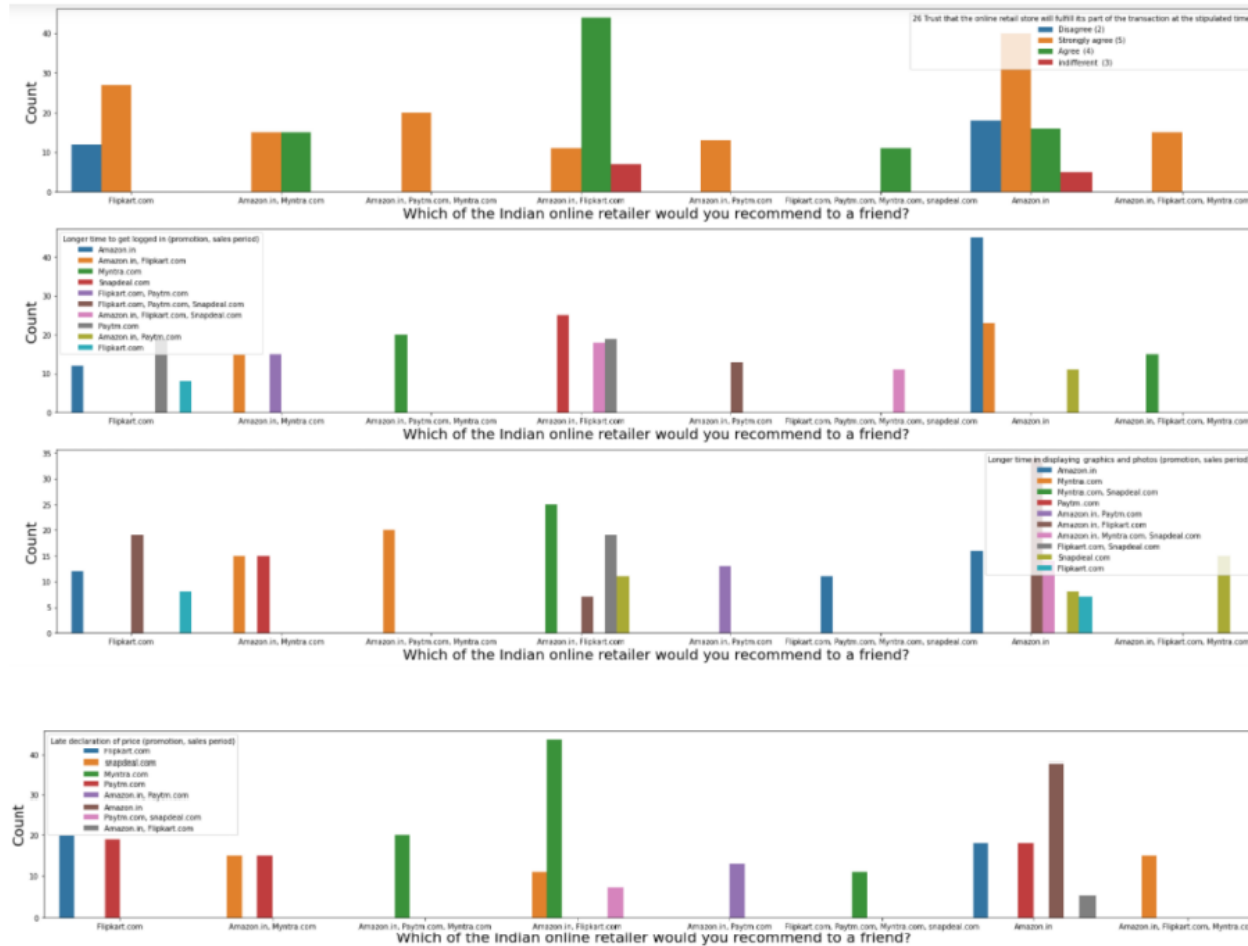# Relationship between Customer retention and Perceived Risks
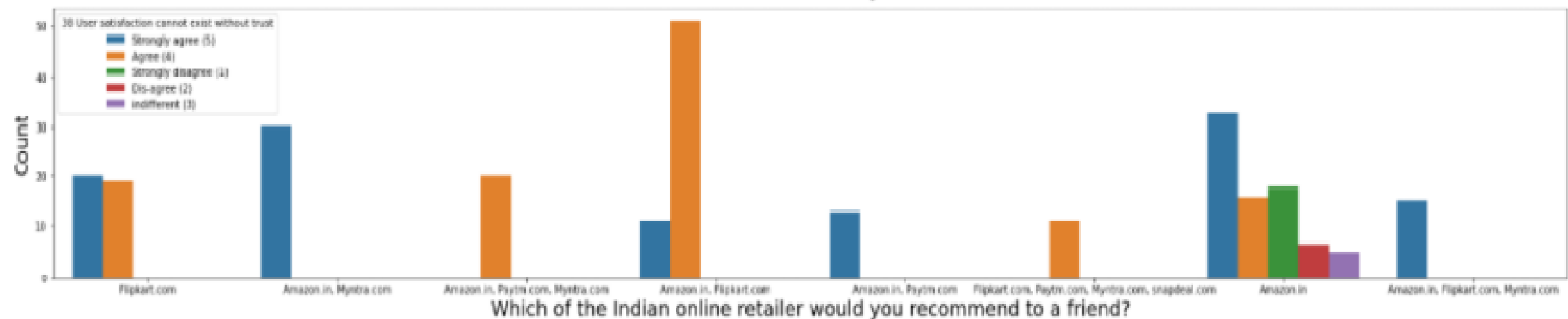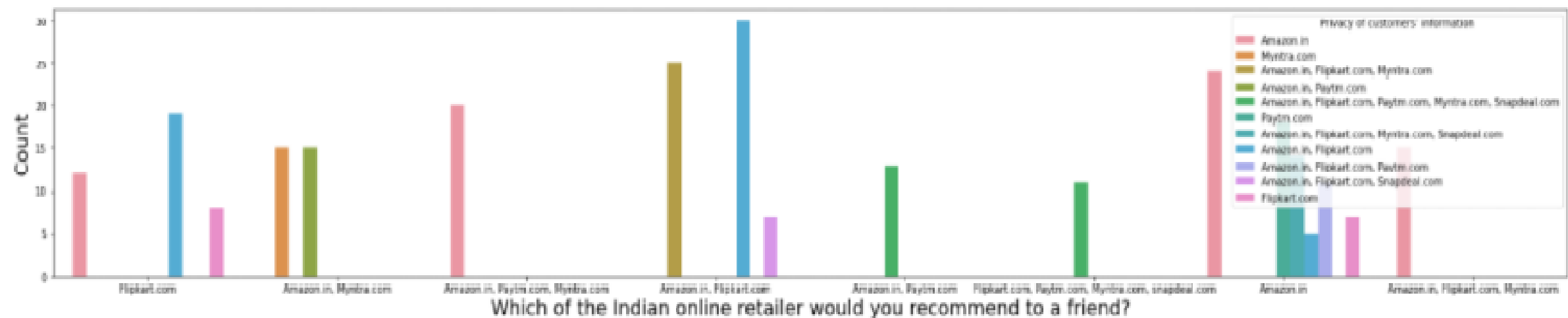
# Relationship between Customer retention and Perceived Risks

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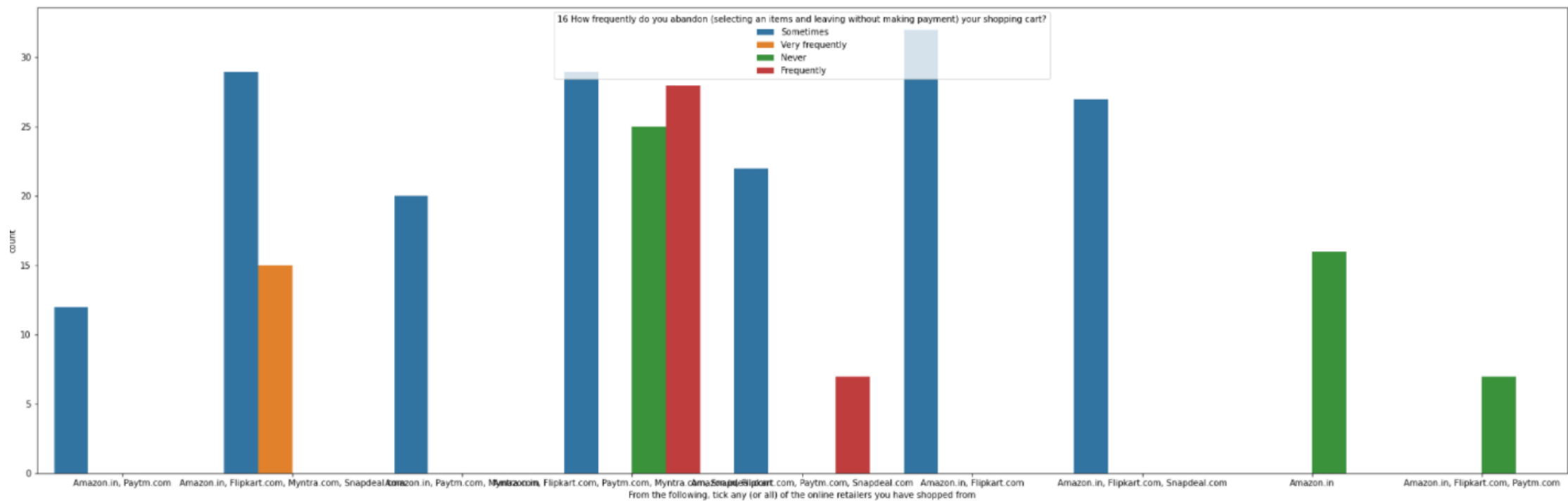# Relationship between Customer retention and Perceived Risks

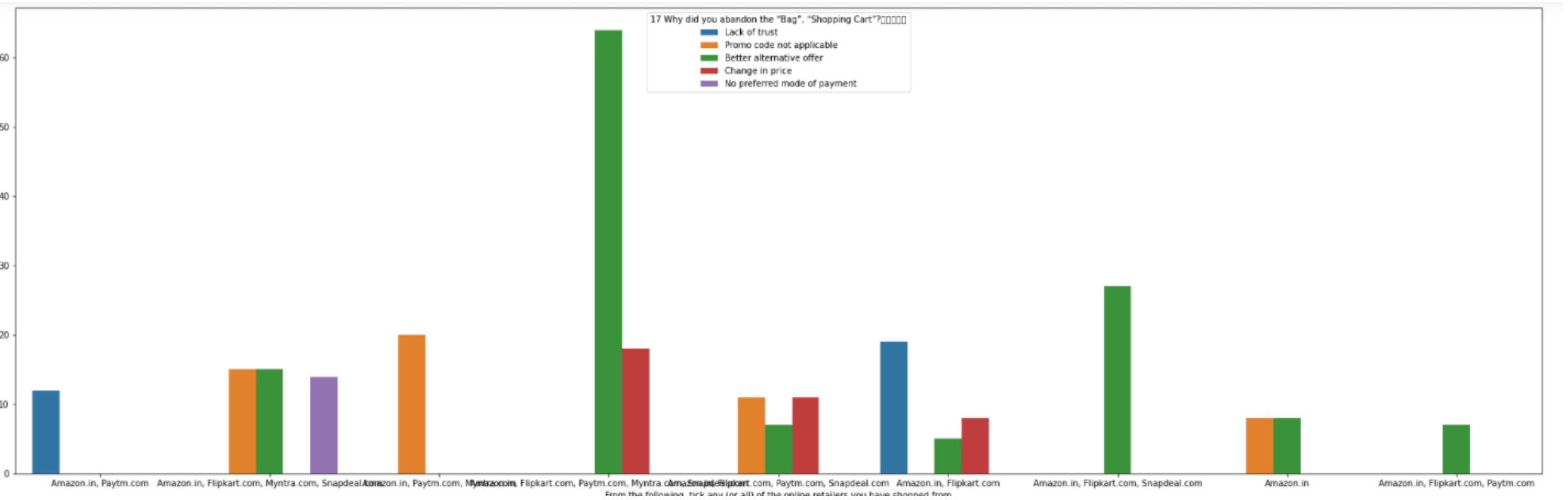# Relationship between Customer retention and Perceived Risks

- From the graphs above the following observations are made:

- Customers sometimes abandon their shopping carts on Amazon and Flipkart implying there is a low level of perceived risk for those websites. While some people frequently abandon their shopping carts on Amazon.in and Myntra.com and Paytm.com, which may indicate a higher level of perceived risk on those websites.

- Customers usually abandon their shopping carts on Amazon and Flipkart when they find a better alternative offer which implies that there is a greater importance for utilitarian value, While on Flipkart alone they mostly abandon due to lack of trust and on amazon alone, they abandon either due to Promo code not being applicable or Change in price.

- Customers face longest delivery Periods when they purchase on Amazon.in, followed by flipkart.com and paytm, however Amazon.in is still the most preferred shopping website.

- It is observed that those who prefer Flipkart.com , Paytm.com, Myntra.com and Snapdeal.com to Amazon.in do so because they face frequent disruption when moving from page to page on Amazon.in

- Customers face the longest time to get logged in on Amazon.in and Flipkart.com the most and yet, recommend those 2 websites the most.
- Customers prefer Amazon.in and Flipkart.com To Myntra.com and Snapdeal.com because Myntra and Snapdeal take longer to display graphics and photos during promotion and sales period.
- Customers prefer Amazon.in and Flipkart.com To Myntra.com and Snapdeal.com because Myntra and Snapdeal take too long to declare prices during promotion and sales period.

- Those who prefer Amazon.in and Flipkart.com face longer page loading time during promotion and sales period on snapdeal.com and myntra.com
- Amazon.in has the highest trustworthiness as perceived by most consumers.
- Amazon.in, Flipkart.com, Paytm.com have the highest security for customer financial information.
- Amazon.in, Flipkart.com, Paytm.com maintain the greatest privacy for customer information.
- Customers who believe that user satisfaction can't exist without trust recommend Amazon.in and Flipkart.com
- Those customers who recommend Amazon.in and Flipkart.com the most trust that online retail stores will fulfill their part of the transaction at the stipulated time.

# Calculated Risk on E Commerce Websites

- The relations between perceived risks and online e-commerce websites were visualized and observations were made.

17 Why did you abandon the "Bag", "Shopping Cart"?

Legend:
- Lack of trust
- Promo code not applicable
- Better alternative offer
- Change in price
- No preferred mode of payment

From the following, tick any (or all) of the online retailers you have shopped from

X-axis categories:
- Amazon.in, Paytm.com
- Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com
- Amazon.in, Paytm.com, Myntra.com
- Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com
- Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com
- Amazon.in, Flipkart.com
- Amazon.in, Flipkart.com, Snapdeal.com
- Amazon.in
- Amazon.in, Flipkart.com, Paytm.com

Most customers abandon their shopping carts on Amazon and Flipkart because of change in price or when they find a better deal elsewhere, whereas on Paytm , Myntra , Snapdeal etc. the reasons are varied but largely are due to lack of trust or absence of preferred mode of payment.

# Conclusion.

- From the above Exploratory Data Analysis, it is determined that for any website to retain customers, for the growth of its customer-base and to build and maintain a successful business, it is important that the E-tailers focus on enhancing customer experience in shopping on their websites, while ensuring that all of their particular hedonic and utilitarian needs are satisfied, while taking steps to minimise the perceived risks.

- Offering a huge variety of products, impeccable website design, user friendly interface, a huge variety of safe and convenient payment options, offering strong data security and privacy, helpful, empathetic support staff and impeccable customer service, optimized website processes that universally load in optimal time on all types of platforms and systems, faster delivery etc. are vital to ensure customer loyalty to the brand of the e-tailer Experienced customers, give great  importance to their experiences of previous purchases, which in turn speeds up the process of attaining their shopping goals.

- Repeat customer rate. Repeat customer rate is the backbone of customer retention. ...
- Purchase frequency.
- Average Order Value.
- Use customer accounts.
- Improve your customer support.
- Start a customer loyalty program.
- Send engaging emails to customers.
- Offer a discount or credit to return.