

# **CUSTOMER RETENTION CASE STUDY**

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INTERNSHIP BATCH: **19**

## **ACKNOWLEDGEMENT:**

It is not possible to prepare a project without the assistance and encouragement of other people. This one is certainly no exception. I would like to extend my sincere thanks to all of them.

I would like to extend the deep sense of thanks and gratitude to the research papers and scholarly articles that are helped me to complete this project successfully.

## **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.

## **PROBLEM DEFINITION:**

Customer segmentation is a process where we divide the consumer base of the company into subgroups. We need to generate the subgroups by using some specific characteristics so that the company sells more products with less

marketing expenditure. Before moving forward, we need to understand the basics, for example, what do I mean by customer base? What do I mean by segment? How do we generate the consumer subgroup? What are the characteristics that we consider while we are segmenting the consumers? Let's answers these questions one by one.

Basically, the consumer base of any company consists of two types of consumers:

1. Existing consumers
2. Potential consumers

Generally, we need to categorize our consumer base into subgroups. These subgroups are called segments. We need to create the groups in such a way that each subgroup of customers has some shared characteristics. Example

Suppose a company is selling baby products. Then, it needs to come up with a consumer segment (consumer subgroup) that includes the consumers who want to buy the baby products. We can build the first segment (subgroup) with the help of a simple criterion. We will include consumers who have one baby in their family and bought a baby product in the last month. Now, the company launches a baby product that is too costly or premium. In that case, we can further divide the first subgroup into monthly income and socio-economic status. Based on these new criteria, we can generate the second subgroup of consumers. The company will target the consumers of the second subgroup for the costly and premium products, and for general products, the company will target consumers who are part of the first subgroup.

When we have different segments, we can design a customized marketing strategy as well as customized products that suit the customer of the particular segment. This segment-wise marketing will help the company sell more products with lower marketing expenses. Thus, the company will make more profit. This is the main reason why companies use customer segmentation analysis nowadays. Customer segmentation is used among other domain such as the retail domain, finance domain, and in customer relationship management (CRM)-based products.

### **Data Sources and their formats.**

The source data for this project is based on a E-retail factors for customer activation and retention: A case study from Indian e-commerce customers. The data is provided in the CSV file.

## **Hardware and software requirements and tools used:**

### **Hardware requirements:**

**PROCESSOR:** Intel(R) Core(TM) i3 CPU

**MONITOR** : Any display unit

**HARD DISK** : 240GB SSD

**RAM** : 8.00GB

### **Software requirements:**

**OPERATING SYSTEM:** Windows 10 Pro

**FRONT END** : Jupyter Notebook (Anaconda3)

**BACK END** : Excel 2013

### ***Tools Used:***

- 1) Pandas Library
- 2) Numpy Library
- 3) Seaborn Library
- 4) Matplotlib

## **Exploratory Data Analysis:**

The key to success in an organisation is the ability to attract and retain top talents. It is vital for the Customer Retention case study project to identify the factors that keep employees and those who the first stage of this analysis is to describe the dataset, understand the meaning of each variable, detect possible patterns and perform the necessary adjustments to ensure that the data will be proceeded correctly during the Machine Learning process. Each prompt them to leave. Organisations could do more to prevent the loss of good people.

The dataset contains the following features:

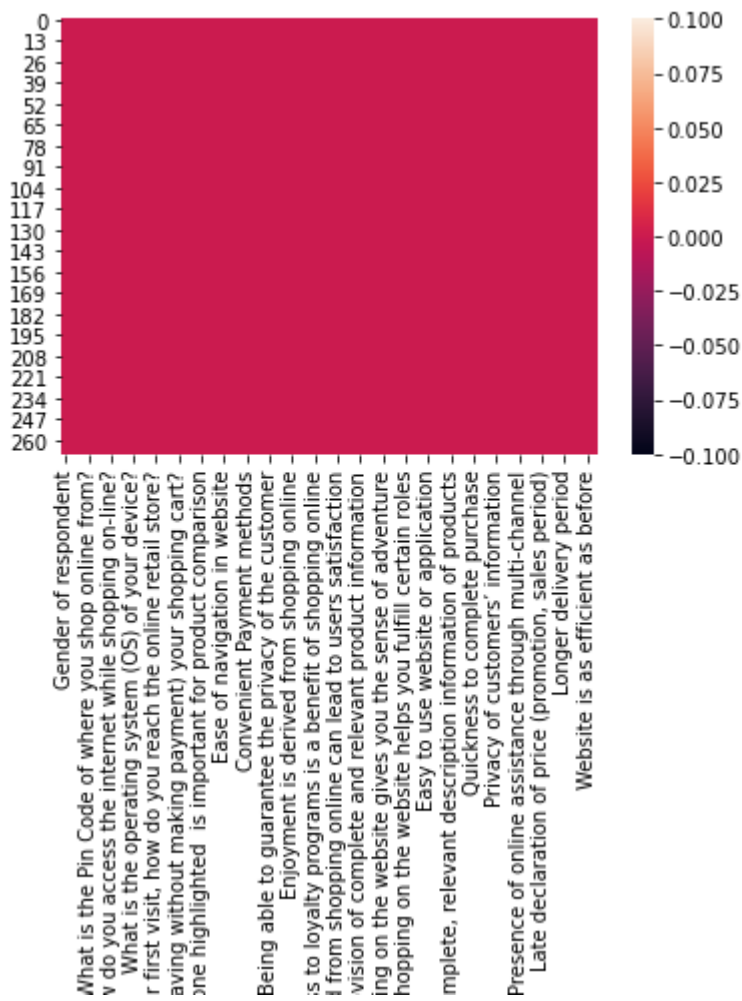
'Gender of respondent',  
'How old are you?',  
'Which city do you shop online from?',  
'What is the Pin Code of where you shop online from?',  
'Since How Long You are Shopping Online ?',  
'How many times you have made an online purchase in the past year?',  
'How do you access the internet while shopping on-line?',  
'Which device do you use to access the online shopping?',  
'What is the screen size of your mobile device?',  
'What is the operating system (OS) of your device?',  
'What browser do you run on your device to access the website?',  
'Which channel did you follow to arrive at your favorite online store for the first time?',  
'After first visit, how do you reach the online retail store?',  
'How much time do you explore the e- retail store before making a purchase decision?',  
'What is your preferred payment Option?',  
'How frequently do you abandon (selecting an items and leaving without making payment) your shopping cart?',  
'Why did you abandon the “Bag”, “Shopping Cart”?',  
'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',  
'Complete information on listed seller and product being offered is important for purchase decision.',  
'All relevant information on listed products must be stated clearly',  
'Ease of navigation in website', 'Loading and processing speed',  
'User friendly Interface of the website', 'Convenient Payment methods',  
'Trust that the online retail store will fulfill its part of the transaction at the stipulated time',  
'Empathy (readiness to assist with queries) towards the customers',  
'Being able to guarantee the privacy of the customer',  
'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',  
'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 derived from shopping online can lead to users satisfaction',  
 'User satisfaction cannot exist without trust',  
 'Offering a wide variety of listed product in several category',  
 'Provision of complete and relevant product information',  
 'Monetary savings',  
 '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',  
 'From the following, tick any (or all) of the online retailers you have  
 shopped from;',  
 'Easy to use website or application',  
 'Visual appealing web-page layout', 'Wild variety of product on offer',  
 'Complete, relevant description information of products',  
 'Fast loading website speed of website and application',  
 'Reliability of the website or application',  
 'Quickness to complete purchase',  
 'Availability of several payment options', 'Speedy order delivery',  
 'Privacy of customers' information',  
 'Security of customer financial information',  
 'Perceived Trustworthiness',  
 'Presence of online assistance through multi-channel',  
 'Longer time to get logged in (promotion, sales period)',  
 'Longer time in displaying graphics and photos (promotion, sales period)',  
 'Late declaration of price (promotion, sales period)',  
 'Longer page loading time (promotion, sales period)',  
 'Limited mode of payment on most products (promotion, sales period)',  
 'Longer delivery period', 'Change in website/Application design',  
 'Frequent disruption when moving from one page to another',  
 'Website is as efficient as before',  
 'Which of the Indian online retailer would you recommend to a friend?'

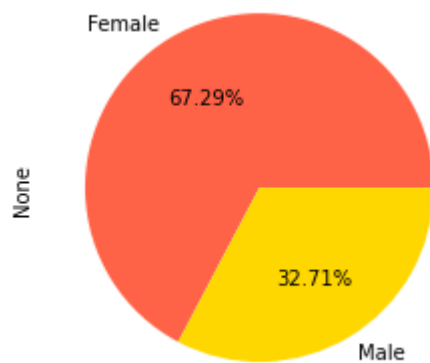
Thus the dataset consists **269 rows** and **71 columns** in which are all of **categorical datatype**.

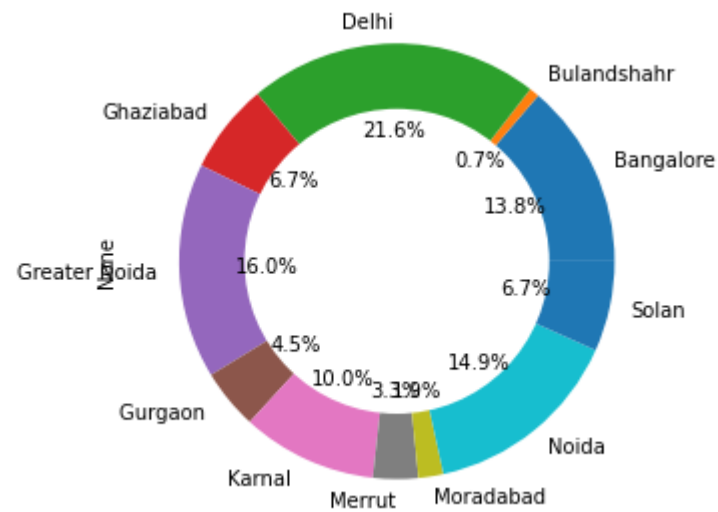
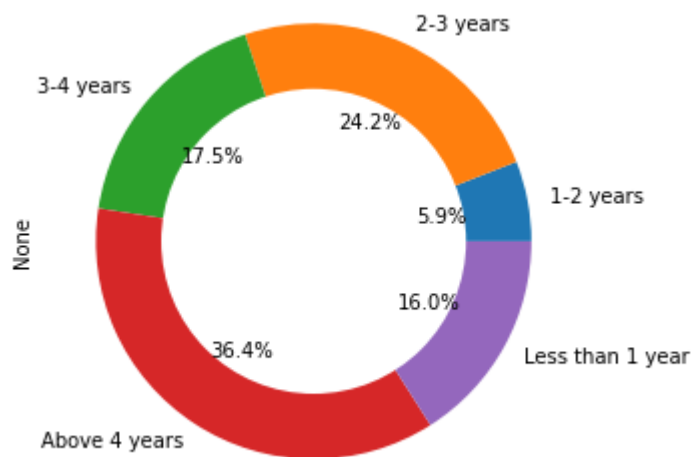
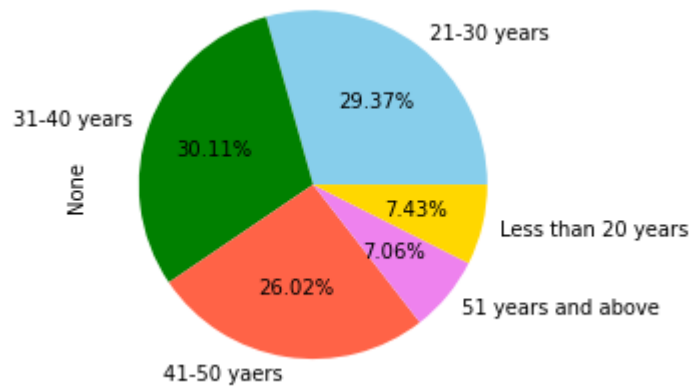
Let us proceed to analyze the data by visualising and analysing the obtained graphs.

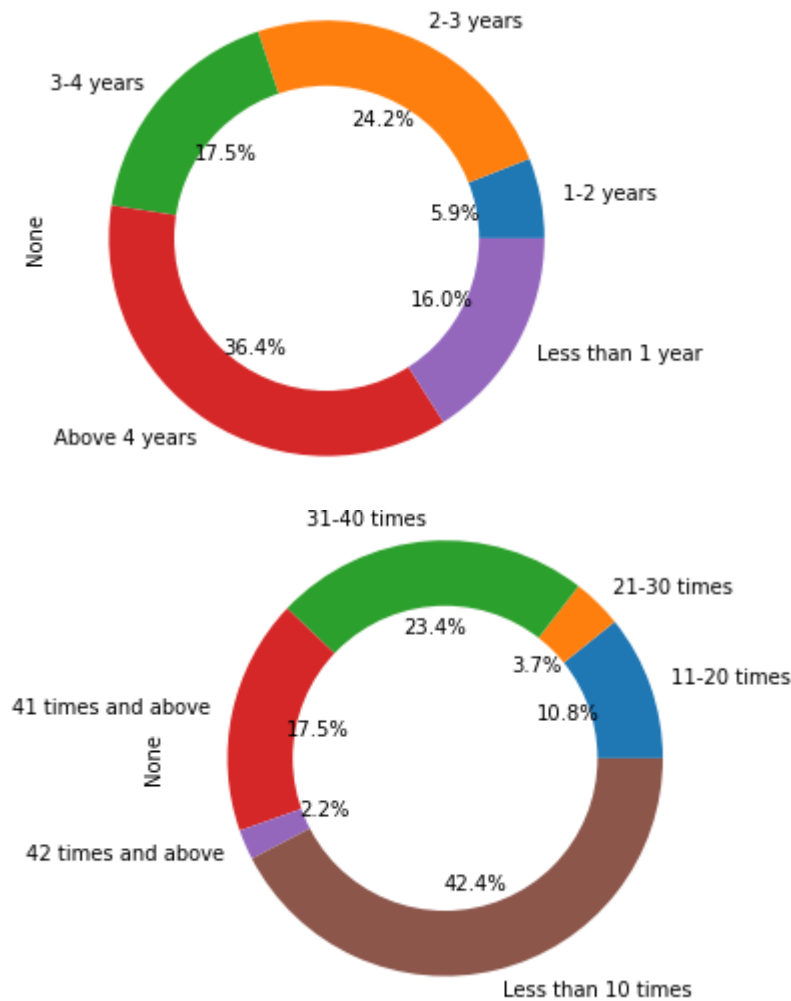
Since the dataset contains no null values no need to clean the data. We can see this using heatmap.



Let us analyse the data by visualizing in different ways.





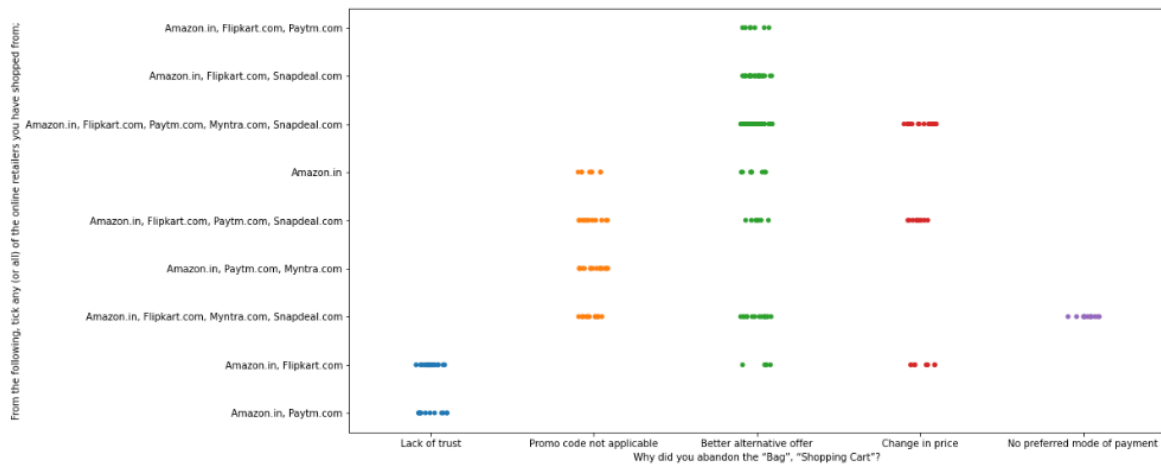


### Analysed points:

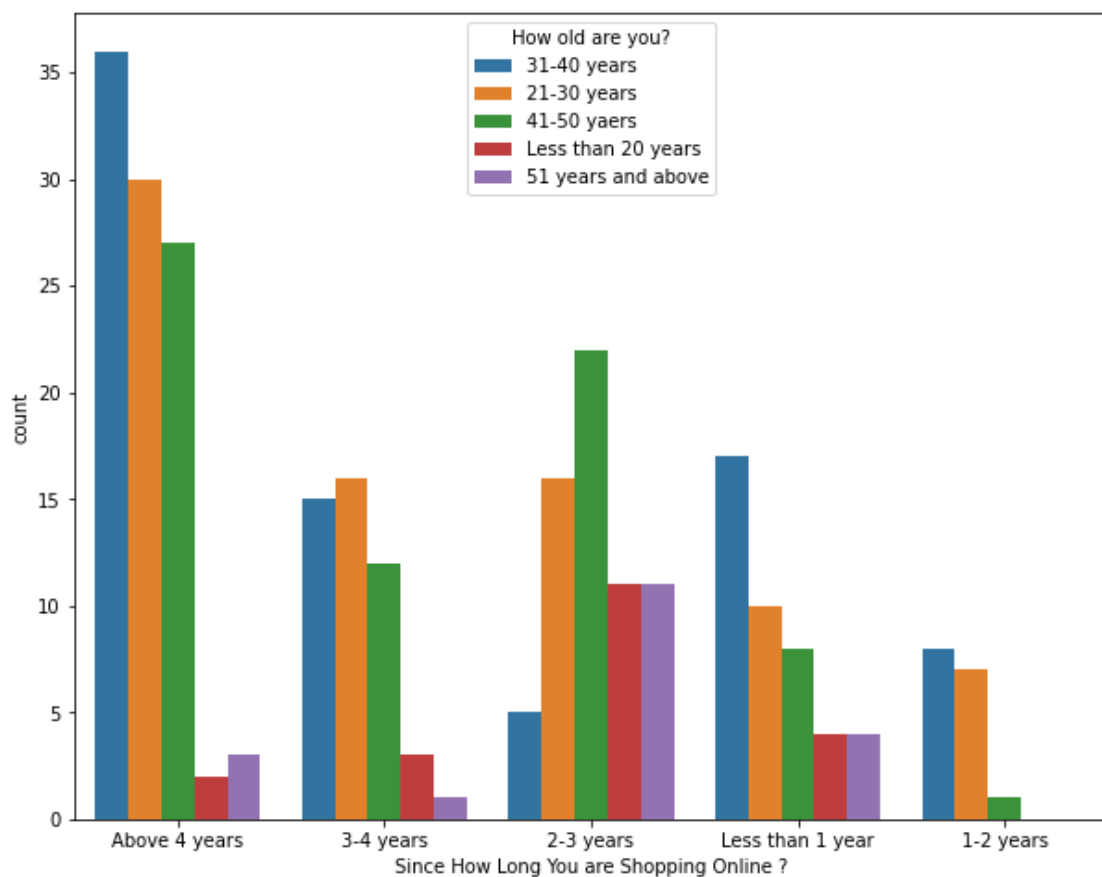
As we have analysed some of the personal data of the customers and the observation is as follows:

1. Most of the participants in this survey are females, almost more than double that of male.
2. The people belonging to age group 31-40 years are more when compared to other age groups followed by 21-30 years. And 51 years and above are the least ones.
3. Most people who shop online are from Delhi followed by Noida and Bengaluru ranked the next in the list.
4. People who are shopping for more than 4 years are highest in rate.
5. Majority of people shop online only 10 times a year and who buys 42 times and more than that are very less in number.



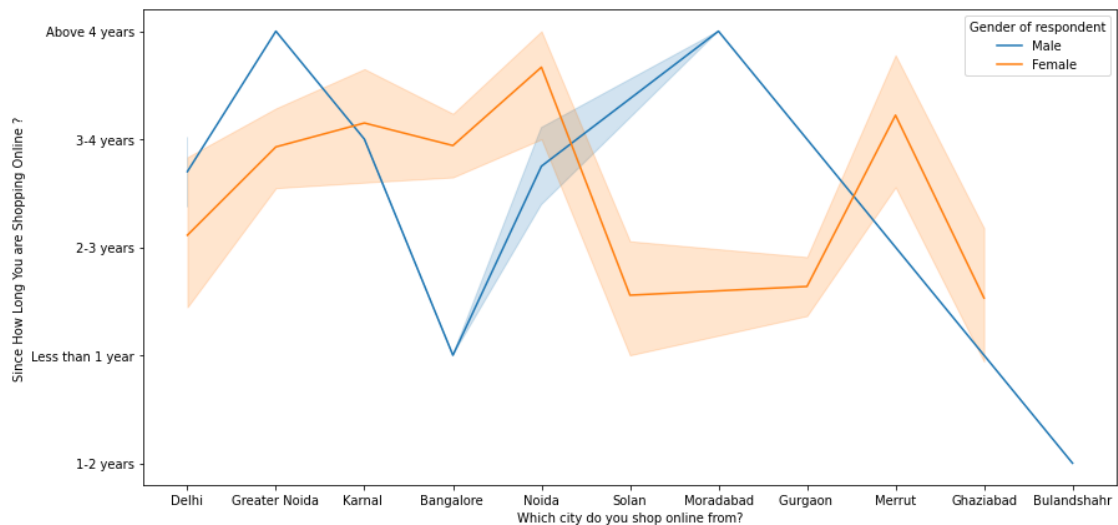


We can clearly see the most of time people abandon the bag is because they get a better alternative offer. There is a lack of trust seen in amazon, flipkart and paytm by some people.



Most of the people shopping above four years are belong to the age group 31-40 and least of them belong to less than 20 years followed by 51 years and above.

People shopping for one to two year are belongs to the age group 21 to 50 years. Less than 20 years and 51 years and above are excluded from this.



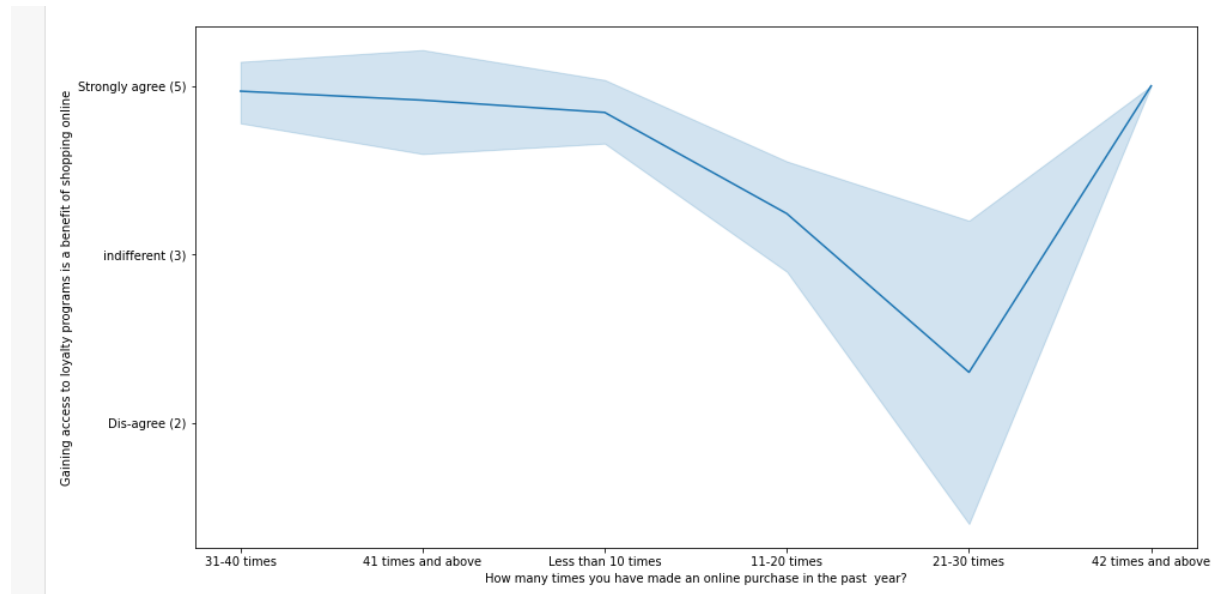
#### Males:

1. Most of the males who are shopping for more than 4 years are from Greater Noida city.
2. The density of shopping male is highest in Noida and Solan.
3. The males from Bangalore and Bulandshahr are purchasing for less than one year.

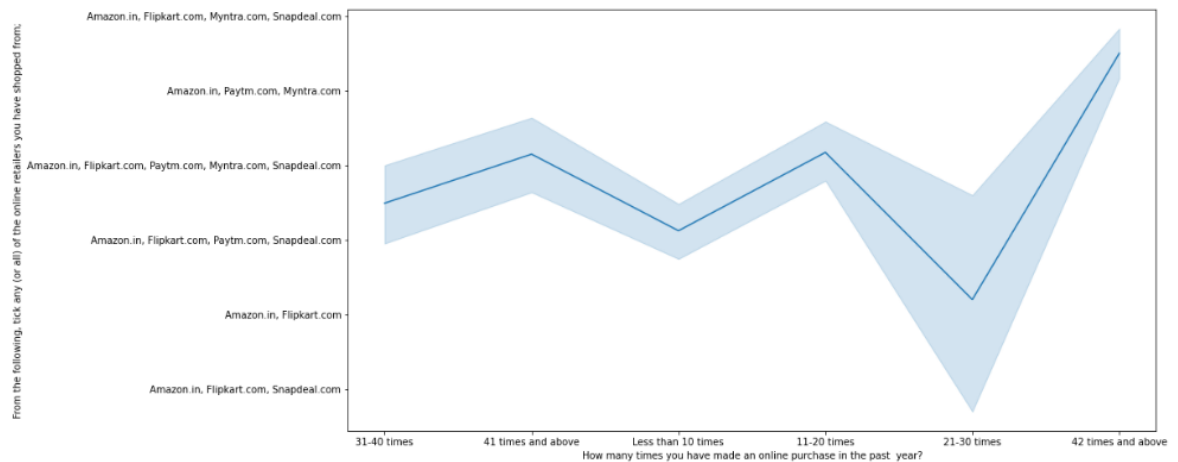
#### Females:

1. The density of females is more than that of male. However highest shopping females are found in the cities like Delhi, Karnal and Solan.

2. The females who are shopping for 3 to 4 years are belong to Noida and Merrut cities.

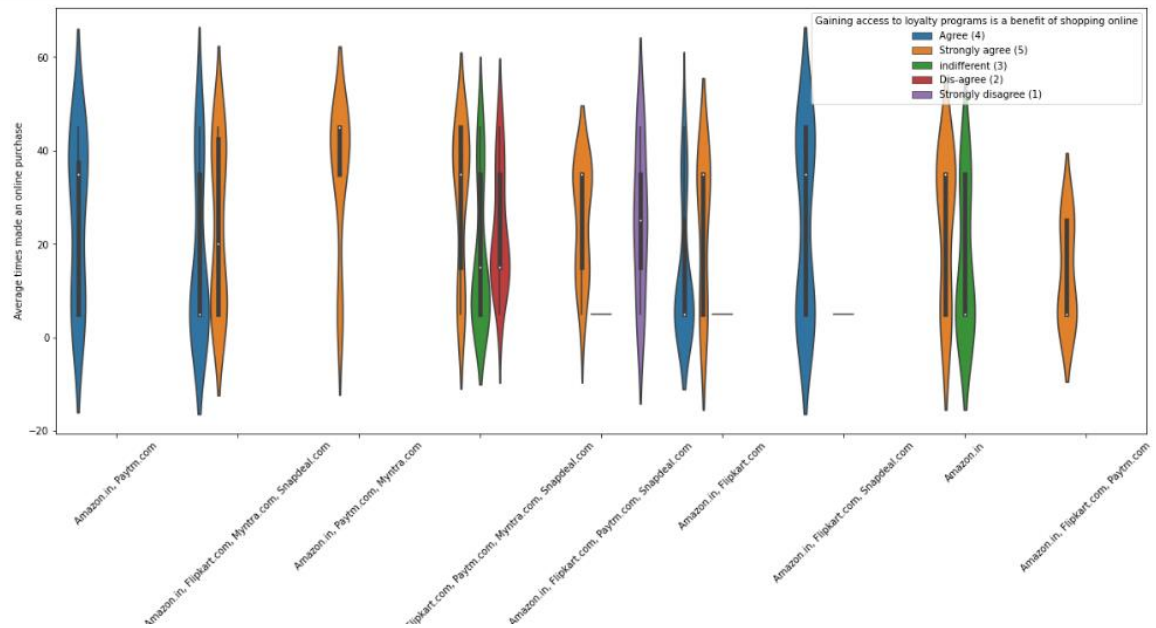


The People who purchase almost 31 to 40 times are loyal to the service or that online portal and those who are buying 21 to 30 years disagree with this.



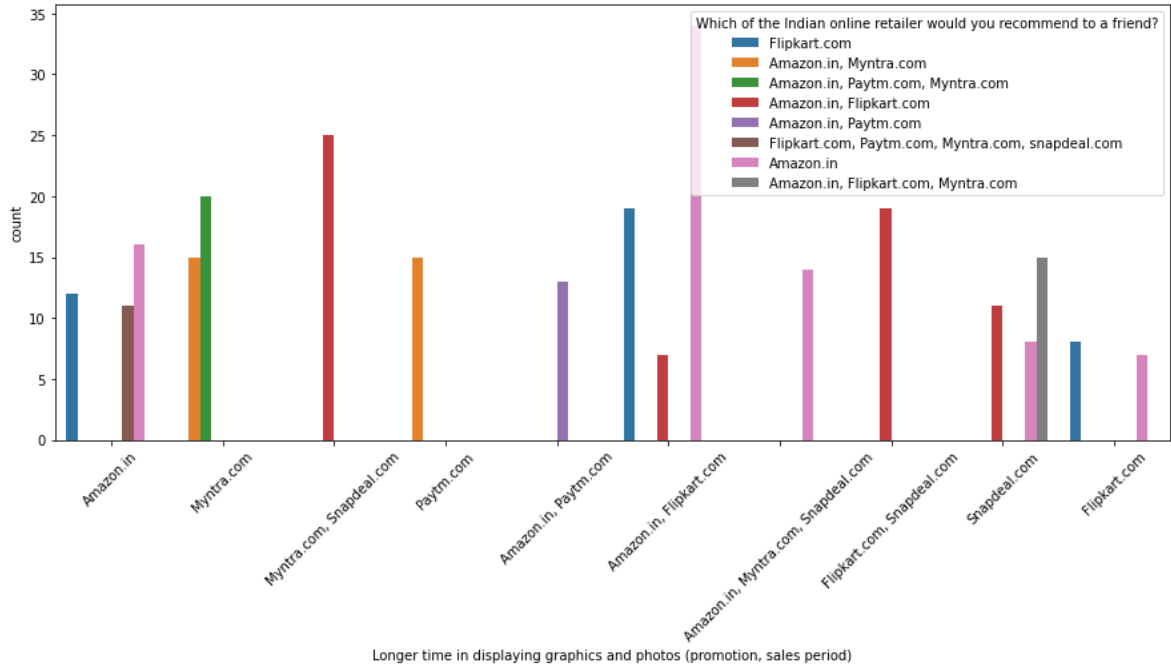
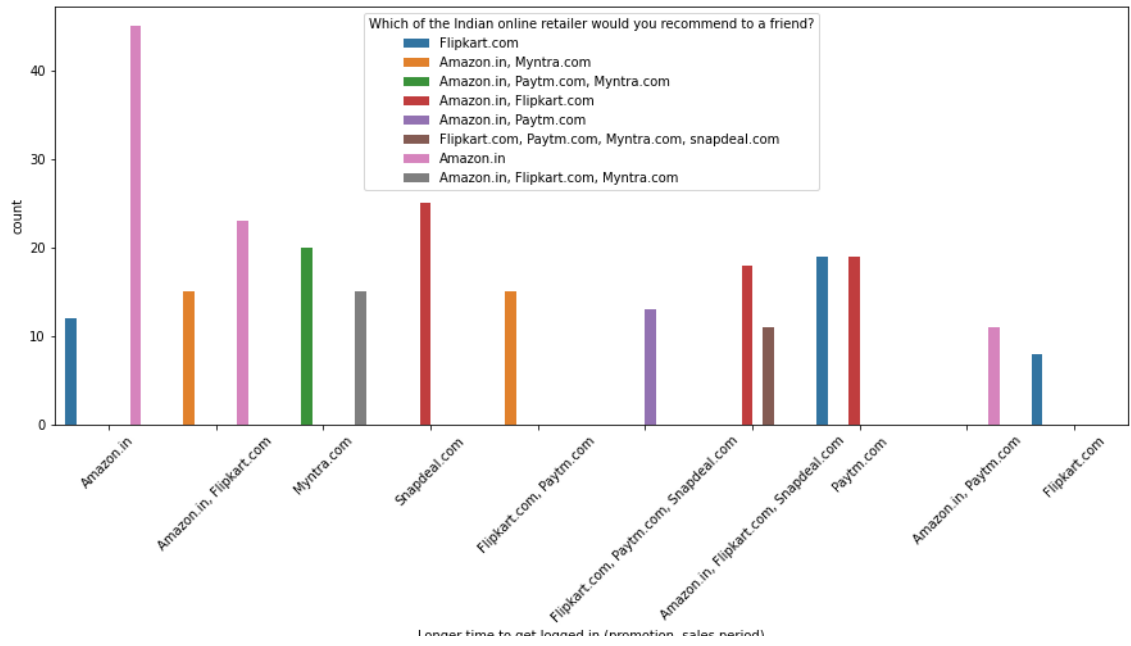
Heavy shoppers who shop more than 41 times a year shop from all the online brands, some of the people who shop from 32-40 and less than 10 times a year seem to exclude myntra. People shop from Amazon and flipkart whatever be the cases.

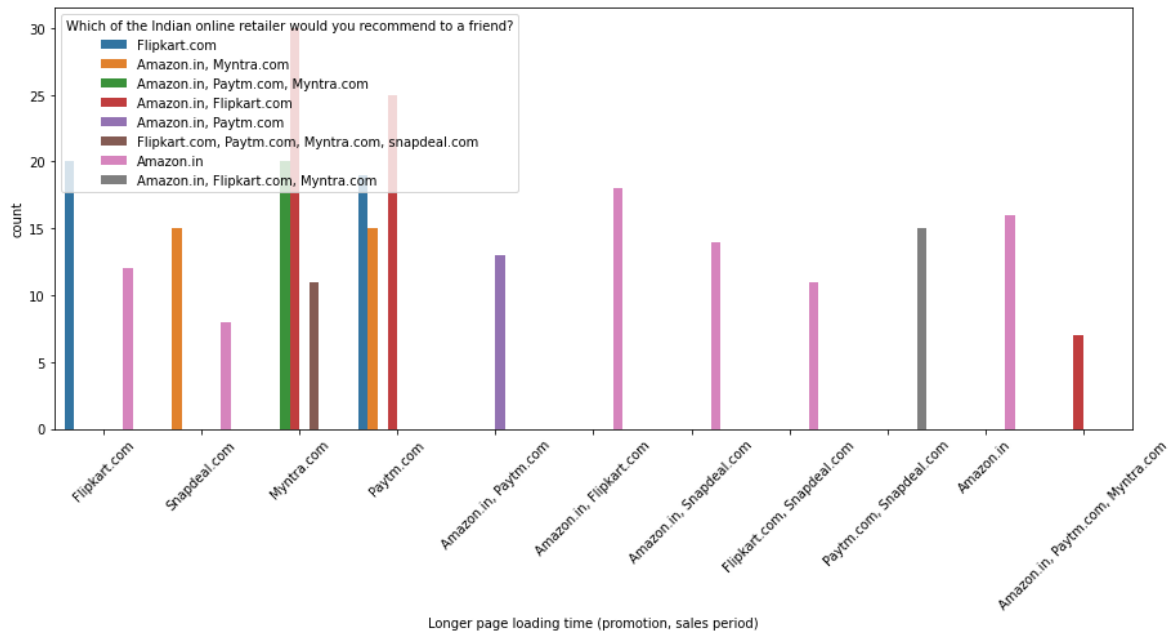
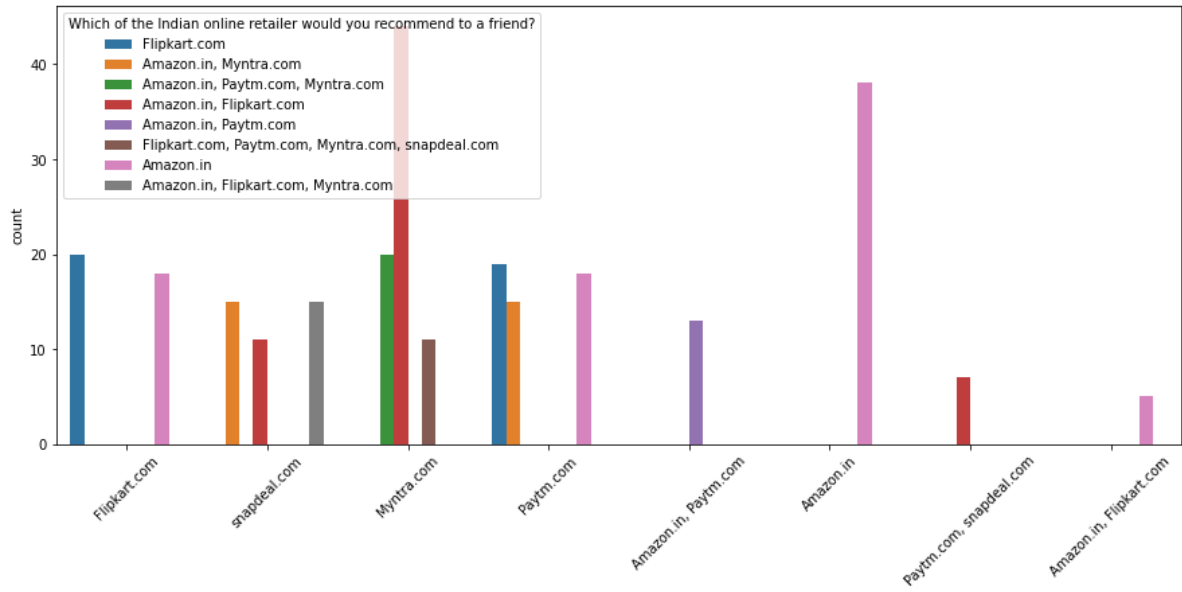
Here we have converted the number of times purchased to an average times purchased using dictionary.

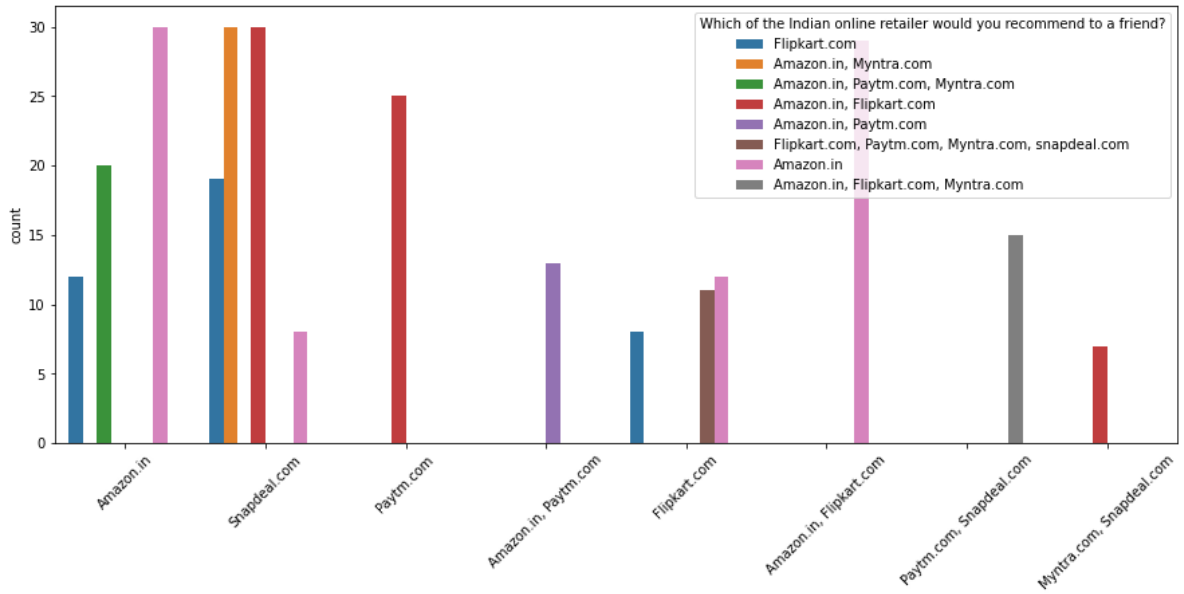


People who are shopping from amazon and paytm are most loyal. Flipkart and snapdeal also have this but people who shop almost everywhere disagree with this point.

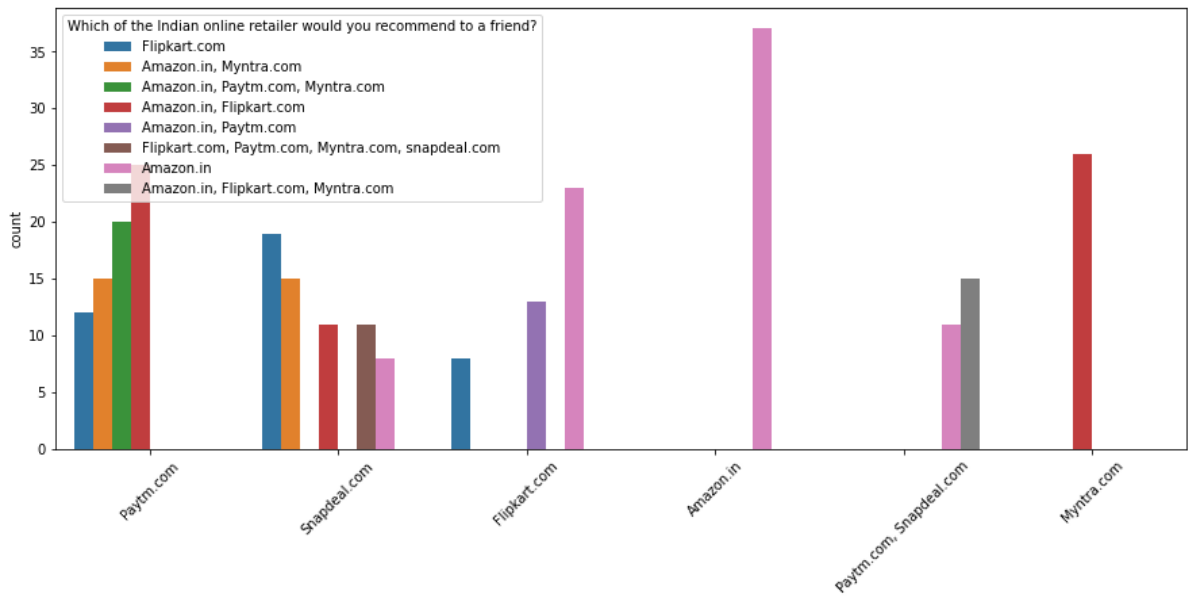
Now we proceed to analyse the loyalty of the customers towards the brand and we have made a list for some of the features that are required to check the loyalty and we have drawn some of the graphs as shown below.



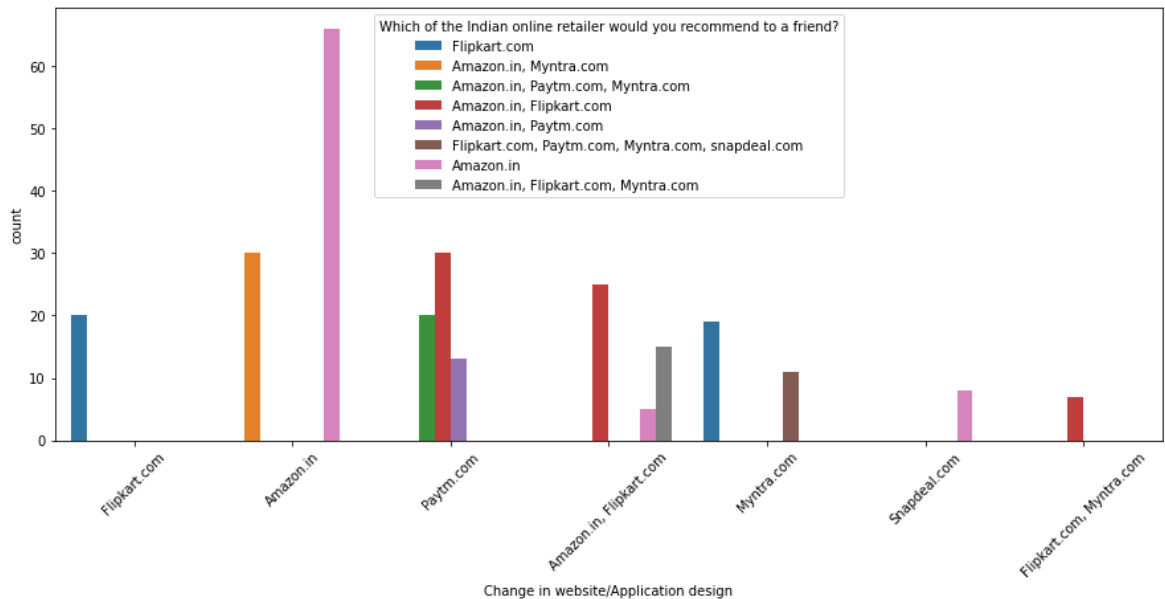




Limited mode of payment on most products (promotion, sales period)

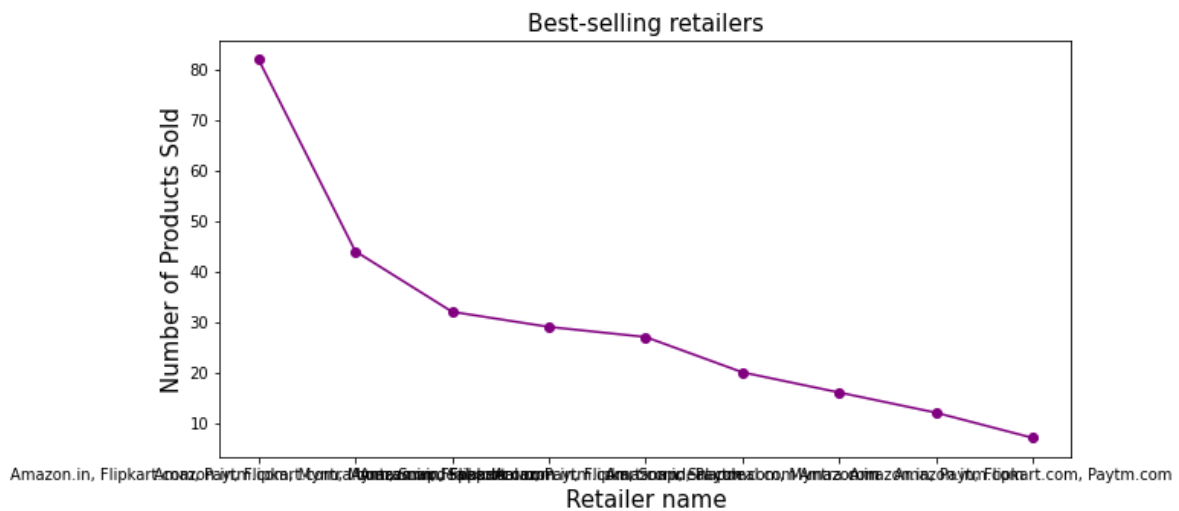


Longer delivery period



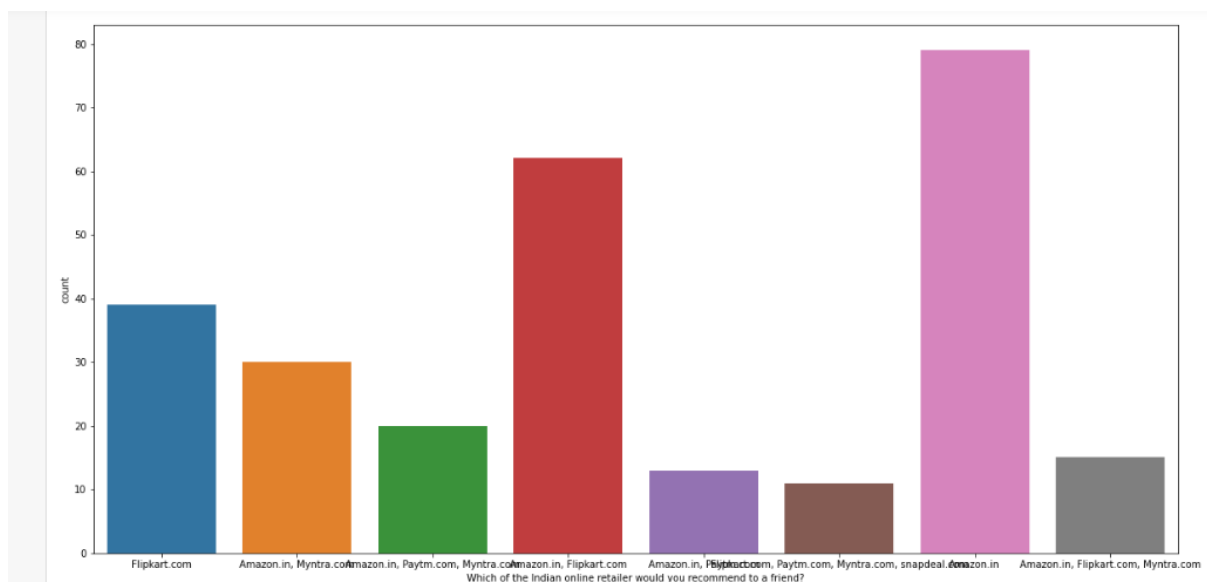
Change in website/Application design

Customers seem to be more loyal to amazon, fipkart and paytm as even though many of them have given negative remarks about them still they would recommend these platforms to their friend.



We can see that most of the products are sold in Amazon and flipkart as of this analysis they are the best-selling retailers.

Finally we have plotted the recommendation graph which predicts the most recommended online retailers.



So we can see that most of the customers use to recommend Amazon and flipkart followed by myntra and paytm to their friend.



## CONCLUSION:

The results of this study suggest the following outputs which might be useful for E-commerce websites to extend their business.

- 1) The cost product, the reliability of the E-commerce company and the return policies all play an equally important role in deciding the buying behaviour of online customers. The cost is an important factor as it was the basic criteria used by online retailers to attract customers. The return policies are important because in all retail customer does not get to feel the product. Thus, he/she wants to be sure that it will be possible to return the product if he/she does not like it in real.
- 2) All the websites are not equally preferred by online customers. **Amazon** was the most preferred followed by **Flipkart**. This can be explained easily by previous result that we got. These two companies are most trusted in the industry and hence, have a huge reliability. Also, these websites have the most lenient return policies as compared to others and also the time required to process a return is low for these.

## Limitations of this Work and Scope for Future work:

As explained above we have analysed the data in a several ways and there will be a least chance of having negative impact on any decisions made. Thus this does not have any adverse effect. It can be accessed by the companies to develop their business in future and also retain the good customers.