

PROJECT REPORT

on

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

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INTRODUCTION

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.

DATA SOURCE

The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

OBJECTIVE

We are going to analyse the given data and check the factors that increase customers in online shopping.

I have used jupyter notebook for data analysis.

DATA ANALYSIS

The given dataset has 269 rows and 71 columns. The names of the columns are:

- '1 Gender of respondent',
- '2 How old are you? ',
- '3 Which city do you shop online from?',
- '4 What is the Pin Code of where you shop online from?',
- '5 Since How Long You are Shopping Online ?',
- '6 How many times you have made an online purchase in the past ye
ar?',
- '7 How do you access the internet while shopping on-line?',
- '8 Which device do you use to access the online shopping?',
- '9 What is the screen size of your mobile device? ',
- '10 What is the operating system (OS) of your device?
- '11 What browser do you run on your device to access the website
- '12 Which channel did you follow to arrive at your favorite
online store for the first time?
- '13 After first visit, how do you reach the online retail store?
- '14 How much time do you explore the e- retail store before making a purc
hase decision?
- '15 What is your preferred payment Option?
- '16 How frequently do you abandon (selecting an items and leaving withou
t making payment) your shopping cart?
- '17 Why did you abandon the “Bag”, “Shopping Cart”?
- '18 The content on the website must be easy to read and
understand',
- '19 Information on similar product to the one highlighted is important for
product comparison',
- '20 Complete information on listed seller and product being offered is impo
rtant for purchase decision.',
- '21 All relevant information on listed products must be stated clearly',
- '22 Ease of navigation in website', '23 Loading and processing speed',
- '24 User friendly Interface of the website',
- '25 Convenient Payment methods',
- '26 Trust that the online retail store will fulfill its part of the transaction at t
he stipulated time',
- '27 Empathy (readiness to assist with queries) towards the
customers',
- '28 Being able to guarantee the privacy of the customer',
- '29 Responsiveness, availability of several communication
channels (email, online rep, twitter, phone etc.)',
- '30 Online shopping gives monetary benefit and discounts',
- '31 Enjoyment is derived from shopping online',

'32 Shopping online is convenient and flexible',

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

'34 Gaining access to loyalty programs is a benefit of shopping online',

'35 Displaying quality Information on the website improves satisfaction of customers',

'36 User derive satisfaction while shopping on a good quality website or application',

'37 Net Benefit derived from shopping online can lead to users satisfaction',

'38 User satisfaction cannot exist without trust',

'39 Offering a wide variety of listed product in several category',

'40 Provision of complete and relevant product information',

'41 Monetary savings',

'42 The Convenience of patronizing the online retailer',

'43 Shopping on the website gives you the sense of adventure',

'44 Shopping on your preferred e-tailer enhances your social status',

'45 You feel gratification shopping on your favorite e-tailer',

'46 Shopping on the website helps you fulfill certain roles',

'47 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

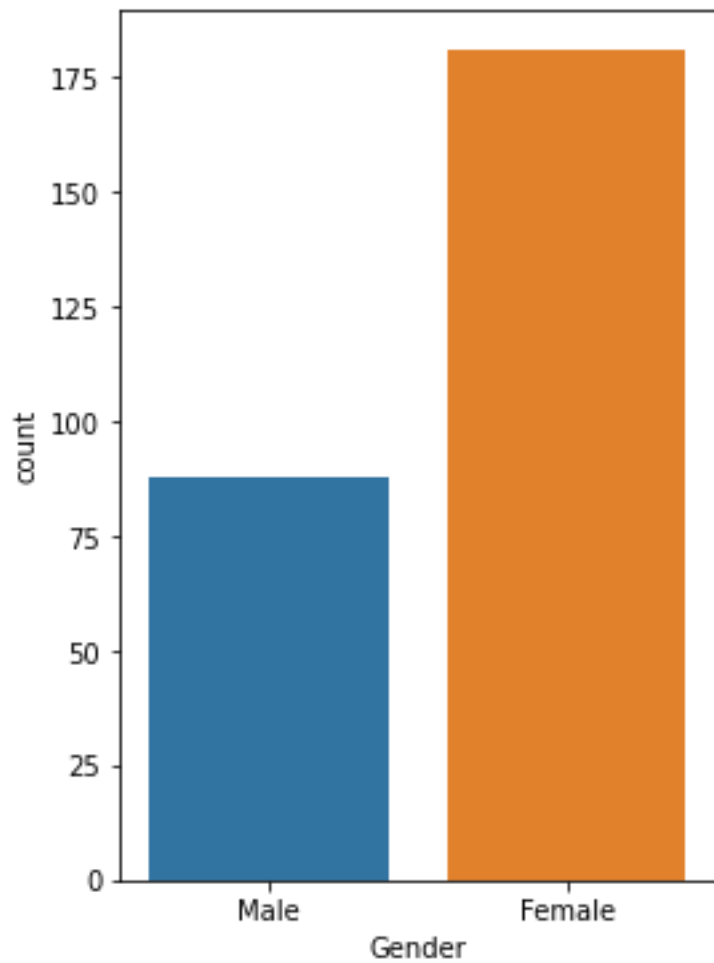
period)',
'Longer delivery period', 'Change in website/Application design'
'Frequent disruption when moving from one page to another',
'Website is as efficient as before',
'Which of the Indian online retailer would you recommend to a friend?'

I have changed names of the columns for convenience in data analysis. After this, I have checked for missing values and found that the data has no missing values.

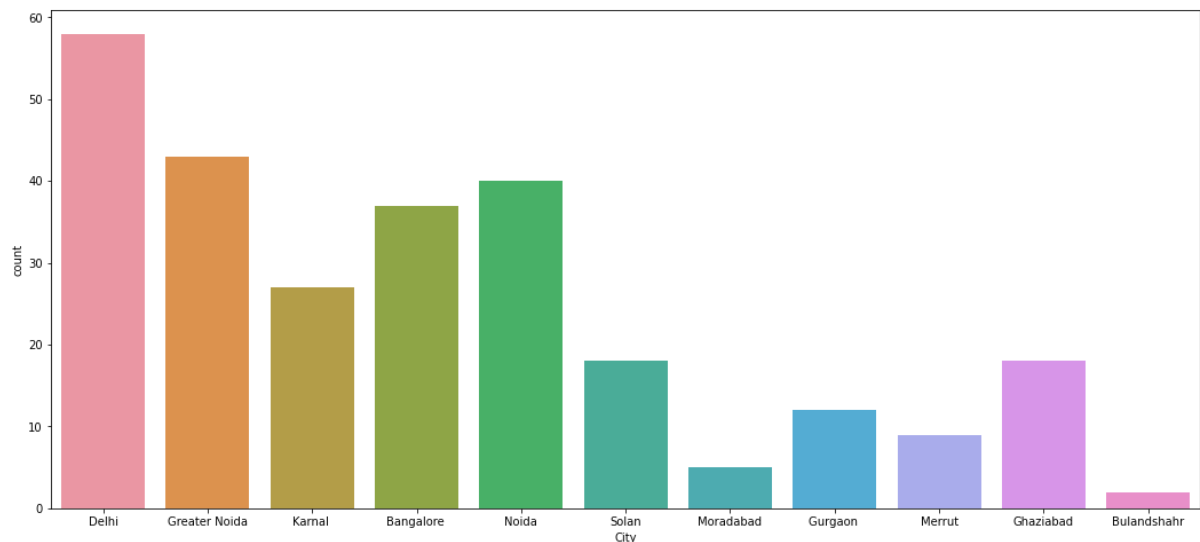
Now, let us analyse the columns of the dataset.

I checked the Gender column and see that there are 181 Females and 88 Males in the surveyed dataset.

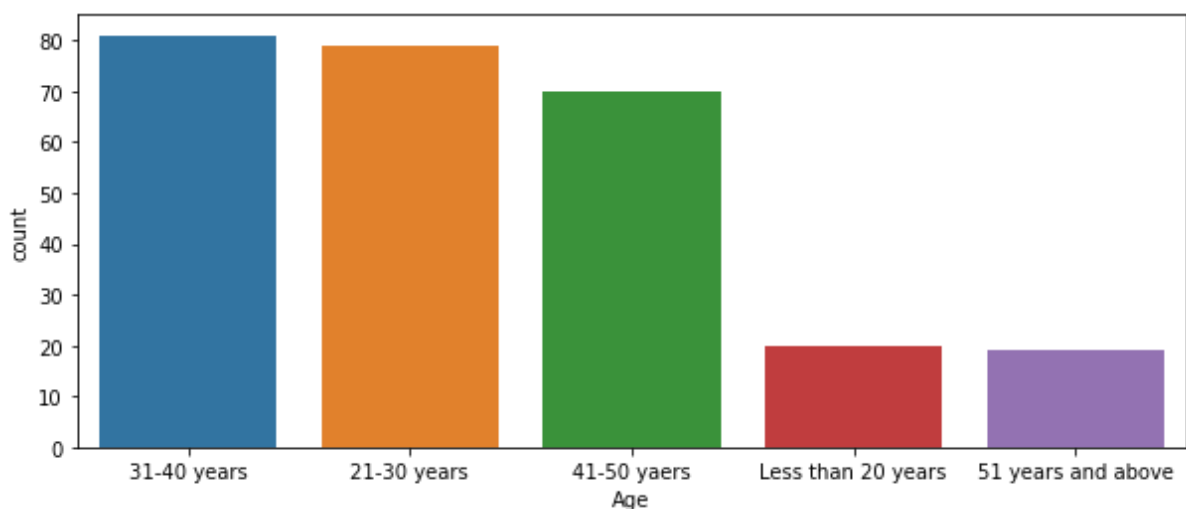
The below bargraph shows the gender distribution.



The below bargraph shows the number of customers from the various cities. We can see that the customers in the dataset belongs to Delhi, Greater Noida, Kamal, Bangalore, Noida, Solan City, Moinabad, Gurgoan, Merut, Ghaziabad, Bulandshahr.

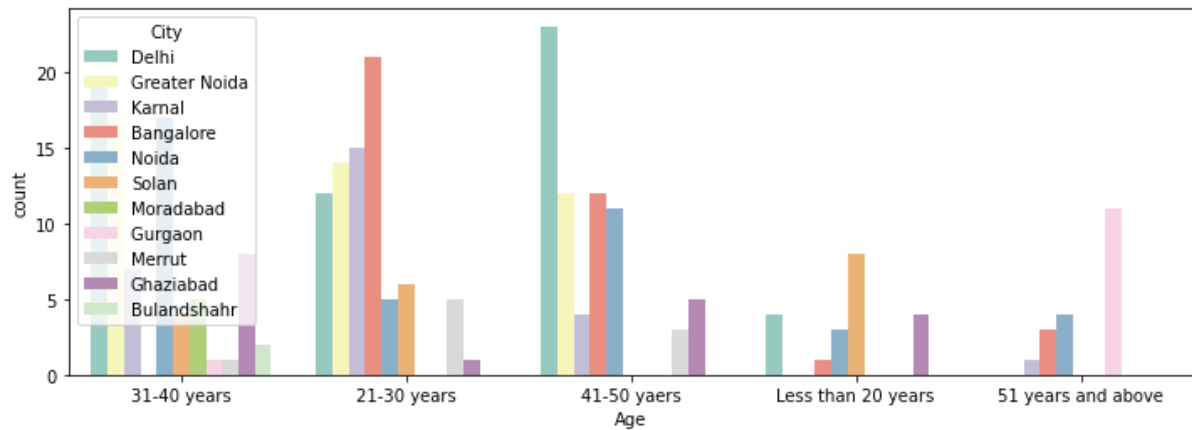


We can see that the customers are highest and almost equal in the Age groups 31-40 years and 21-30 years. It is followed by 41-50 years, less than 20 years and 51 years and above Age groups.

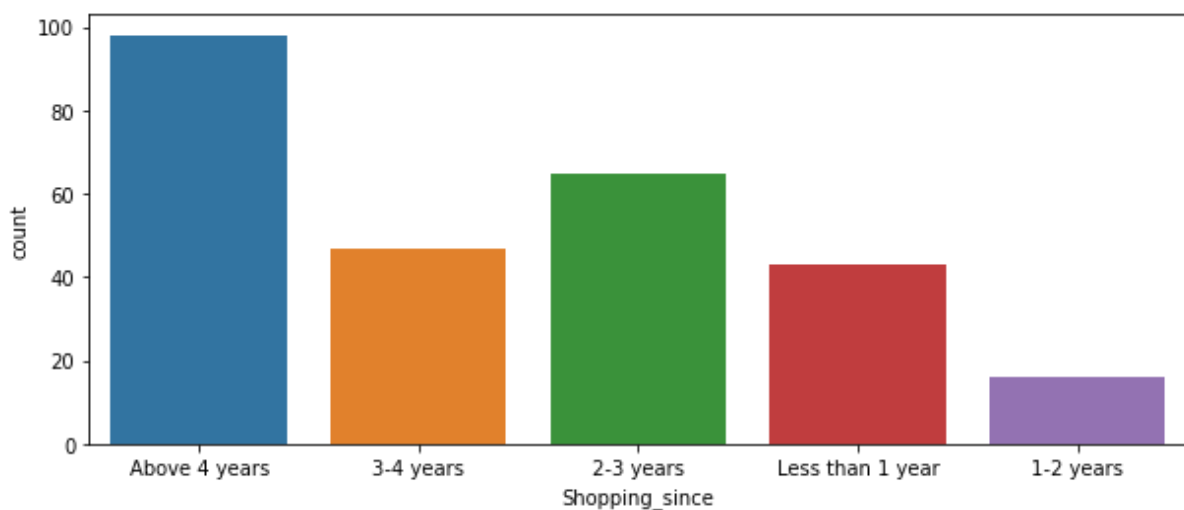


We can see that a large number of surveyed people between the Age group 31-40 years and 41-50 years from Delhi are using e-Commerce sites. Bangalore has the highest number of e-Commerce sites users in the Age group 21-30

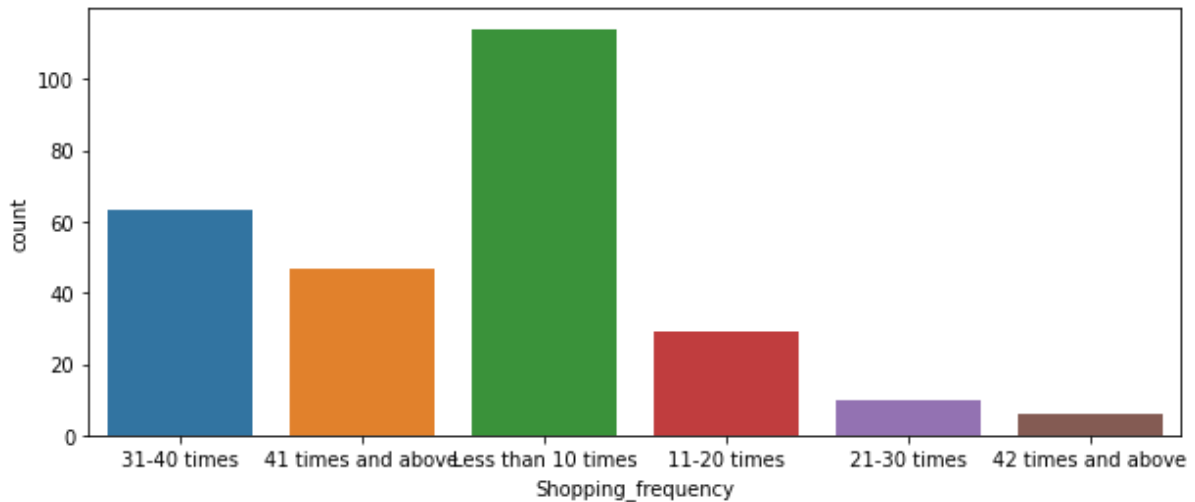
years. Solan has the highest number of users in the Age Group Less than 20 years. In the Age group 51 years and above, Gurgaon has highest number of users when compared to the other cities in the dataset.



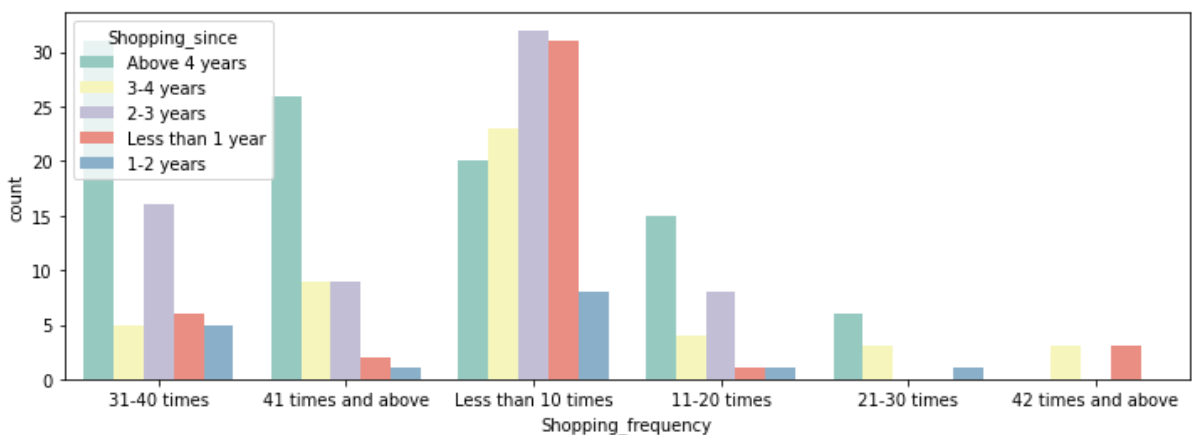
The customers who are shopping since 4 years and above are highest followed by 2-3 years, 3-4 years while customers shopping since 1-2 years being the least.



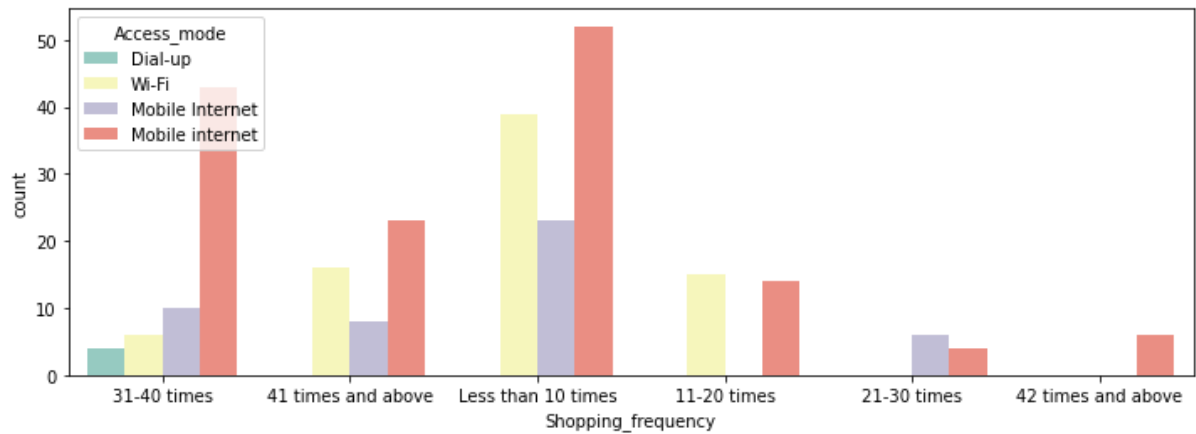
There are more customers who shopped less than 10 times followed by 31-40 times, 41 times and above while the customers who shopped 42 times and above being the least.



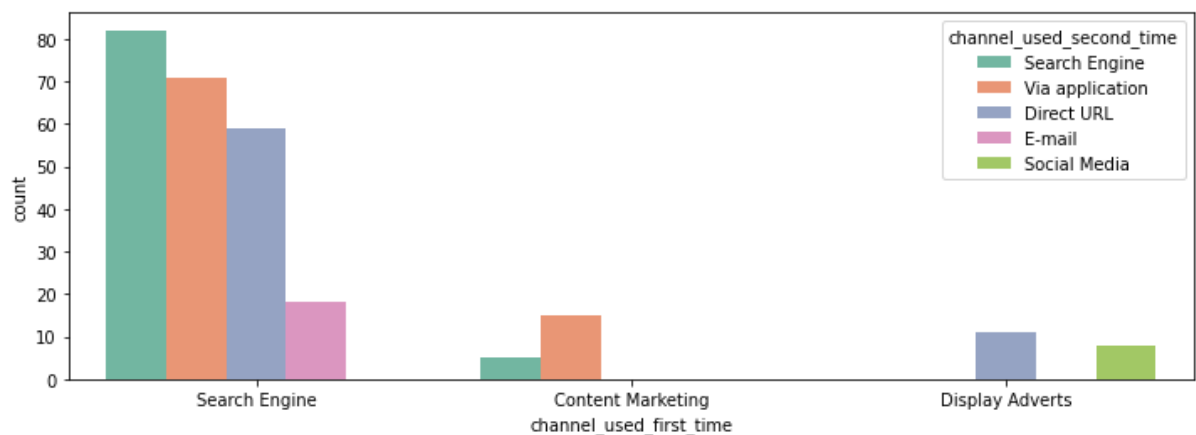
On comparing the shopping frequency with the shopping since, we can see that the customers who are shopping from above 4 years have shopping frequency of 41 times and above. It shows that the customers who are shopping from a long time are using the shopping sites frequently.



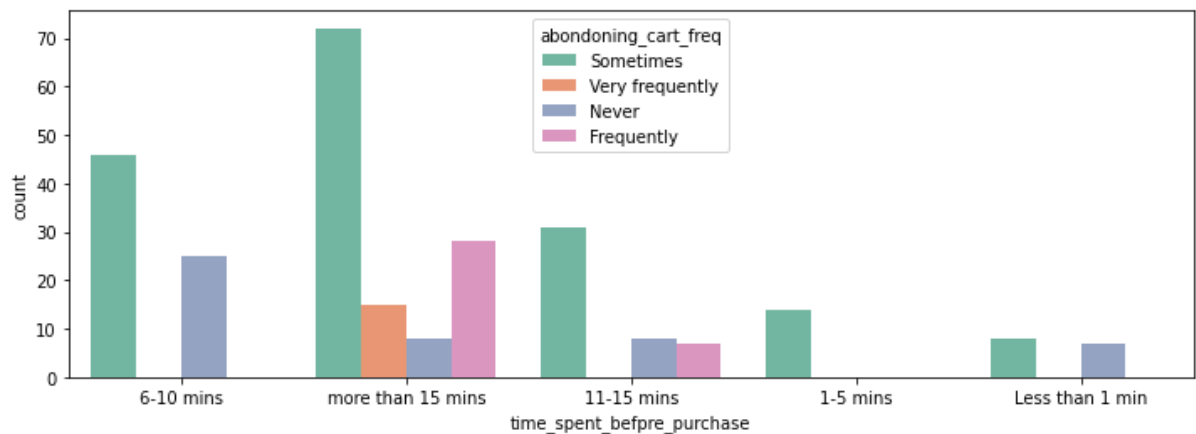
Comparing shopping frequency with the access mode for online shopping used.



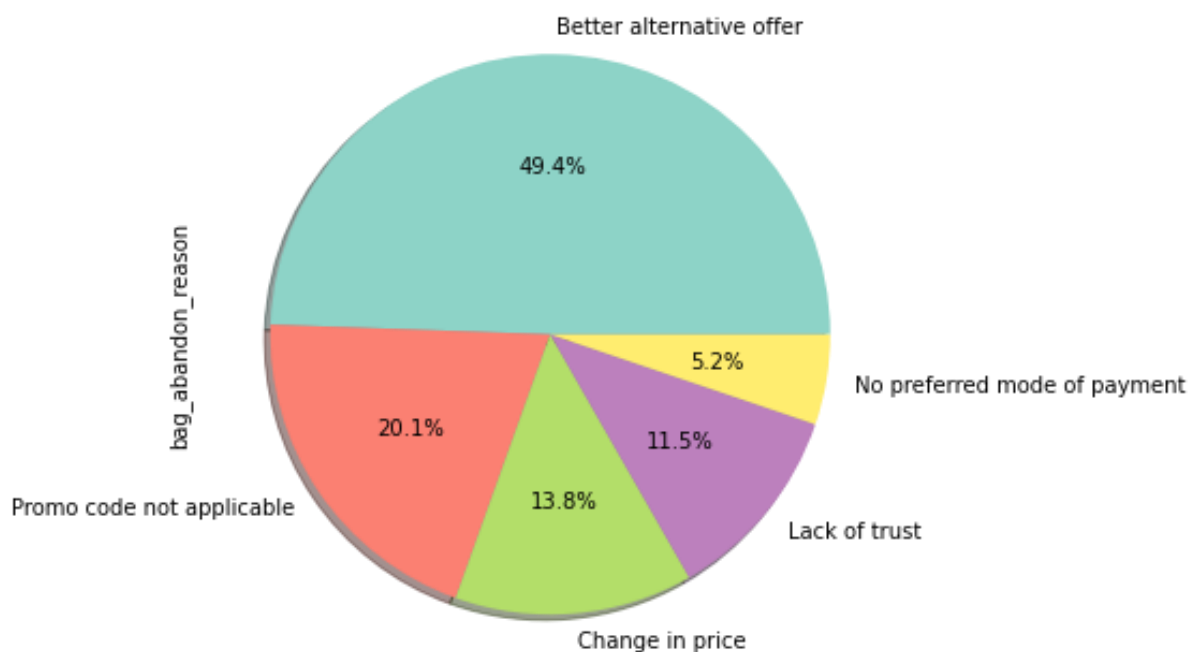
Comparing the channel used for shopping for the first time and the channel used for the second time



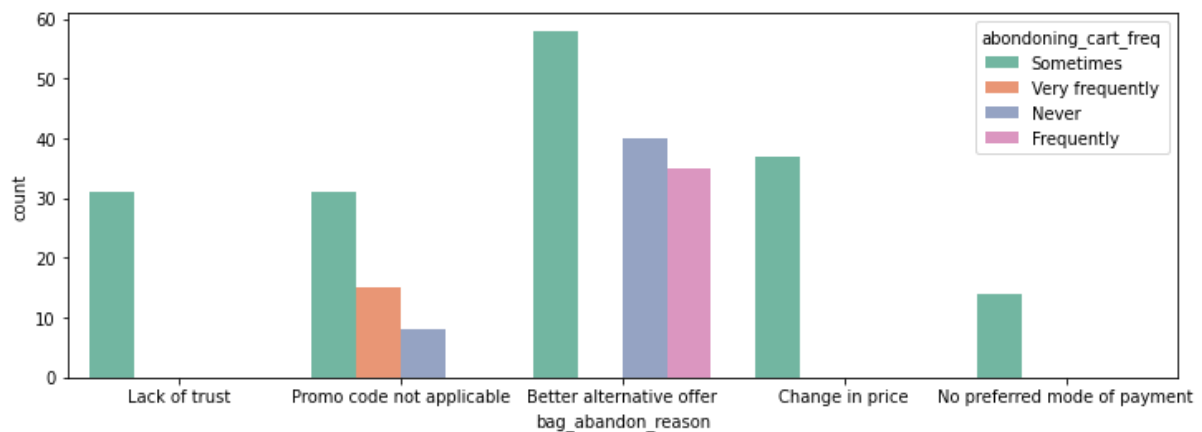
We can see how the time spent before purchase is related to abandoning the cart frequency.



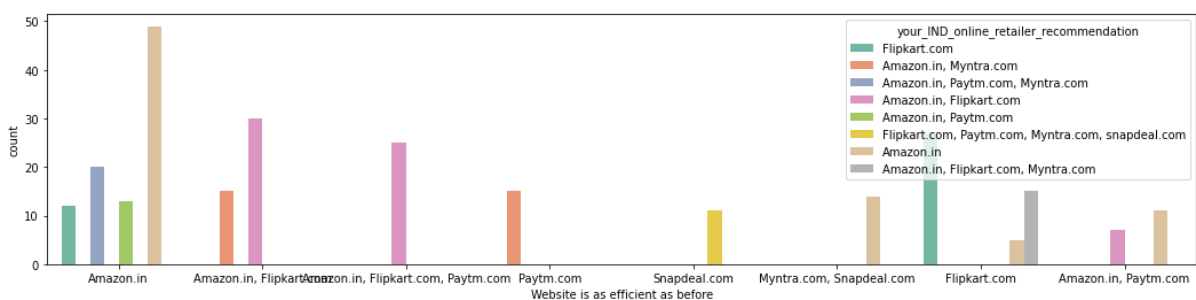
We can see that 49.4% of the bag abandon reason is due to the better alternative offer. It is followed by Promo code not available, Change in Price, lack of trust and No preferred mode of payment.



The comparison between the reason for abandoning the cart and frequency of abandoning the cart shows that better alternative reason available is the frequent reason while the Promo code not available is never in some of the cases and it is sometimes in case of better alternative available. Lack of trust is also the reason in some cases and No preferred mode of payment is the reason in few cases.

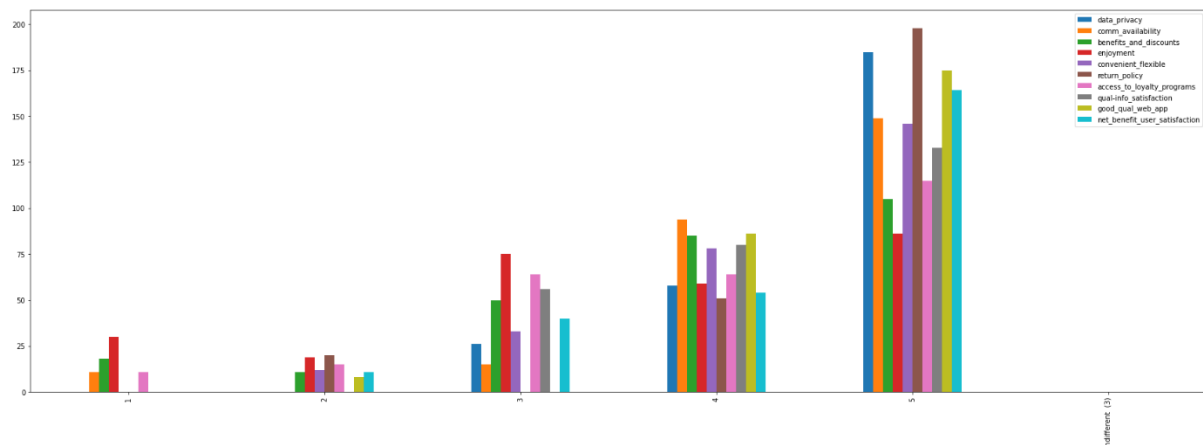
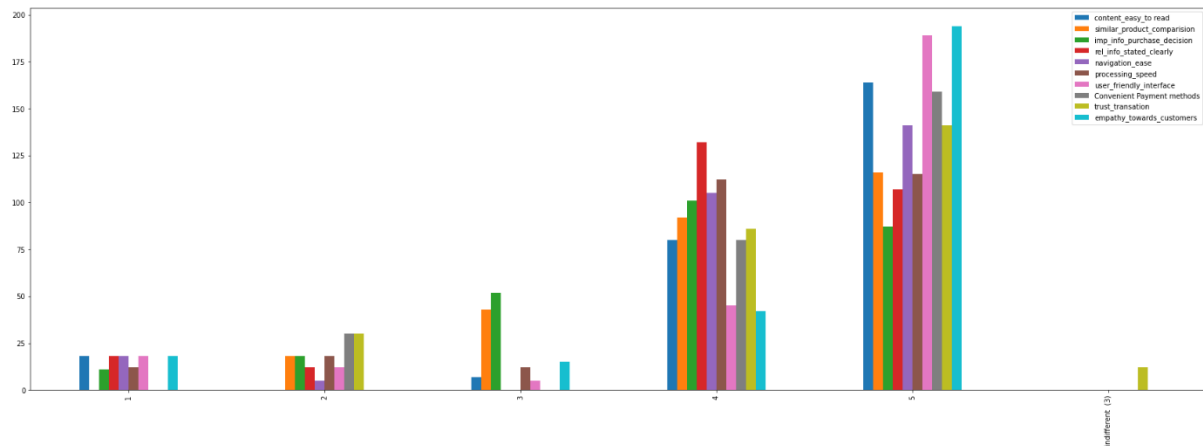


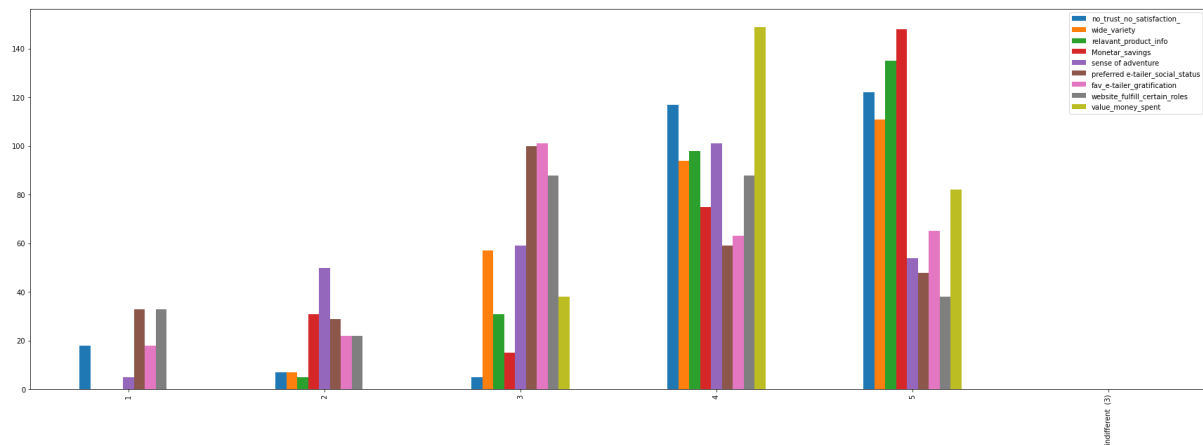
The below bargraph shows how the *website efficiency affects the recommendation*



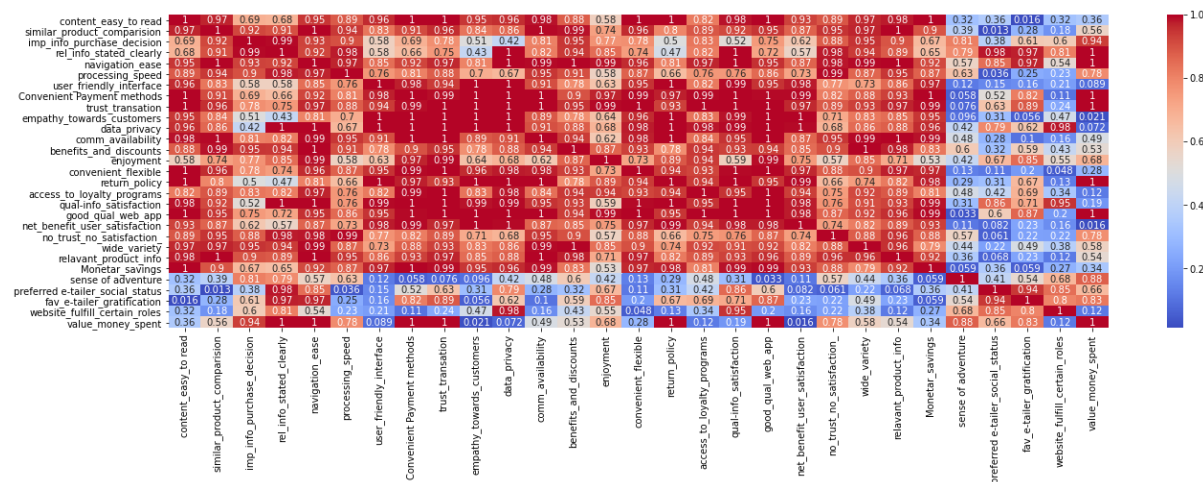
Now, I am going to check the opinions of the customers on various factors of online shopping. The opinions mentioned by them are 'Strongly agree (5)': 5, 'Agree (4)': 4, 'indifferent (3)': 3, 'Dis-agree (2)': 2, 'Strongly disagree (1)': 1

I have divided the columns of these opinions into three groups and plotted three bargraphs. The below three bargraphs shows the opinions frequency on various columns.



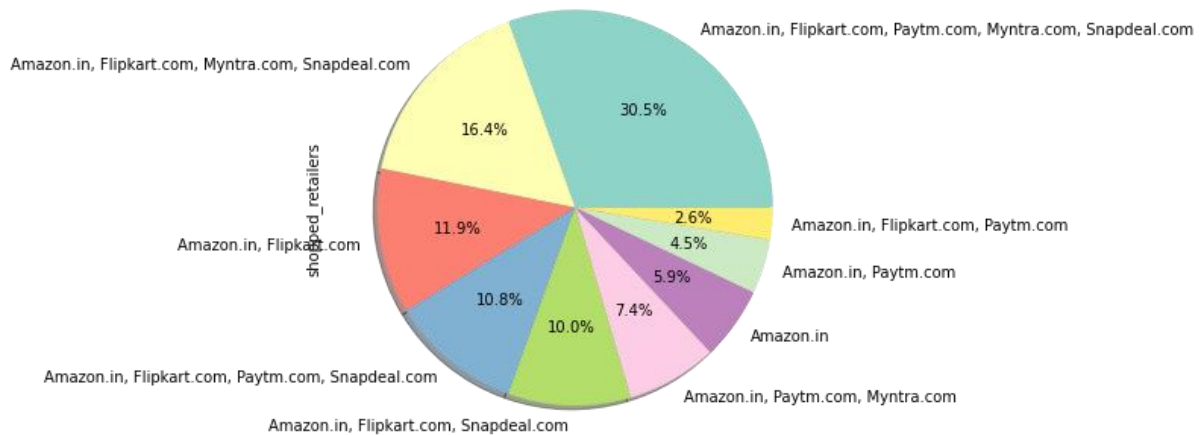


Correlation between the columns about customers opinions on online shopping

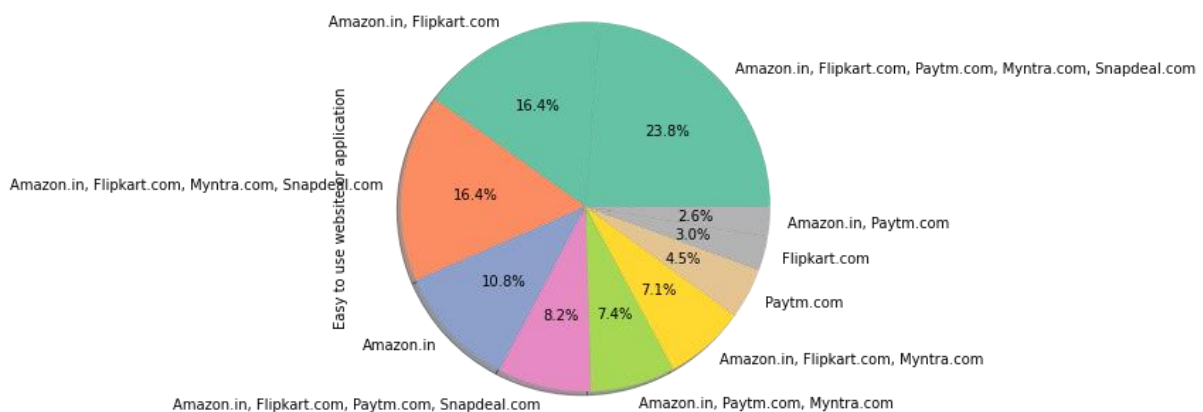


We can see that good quality of the website gives enjoyment to the customers as they have positive correlation of 0.99. Also, content easy to read and relevant product info also has high positive correlation. There are certain other factors which affect the shopping experience.

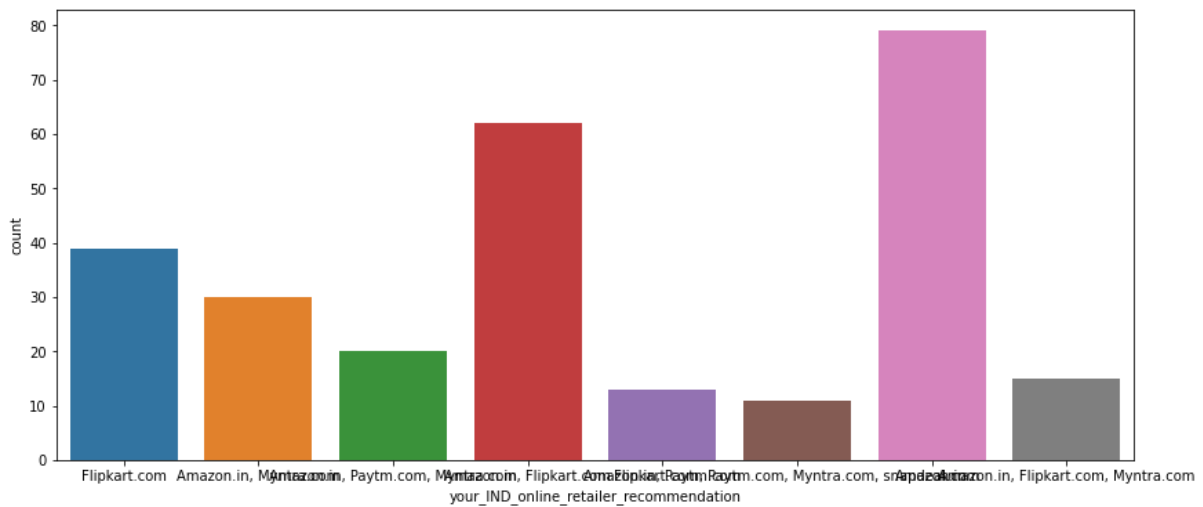
We can see the different online sites from which customers have shopped and the percentages from the below pie-chart.



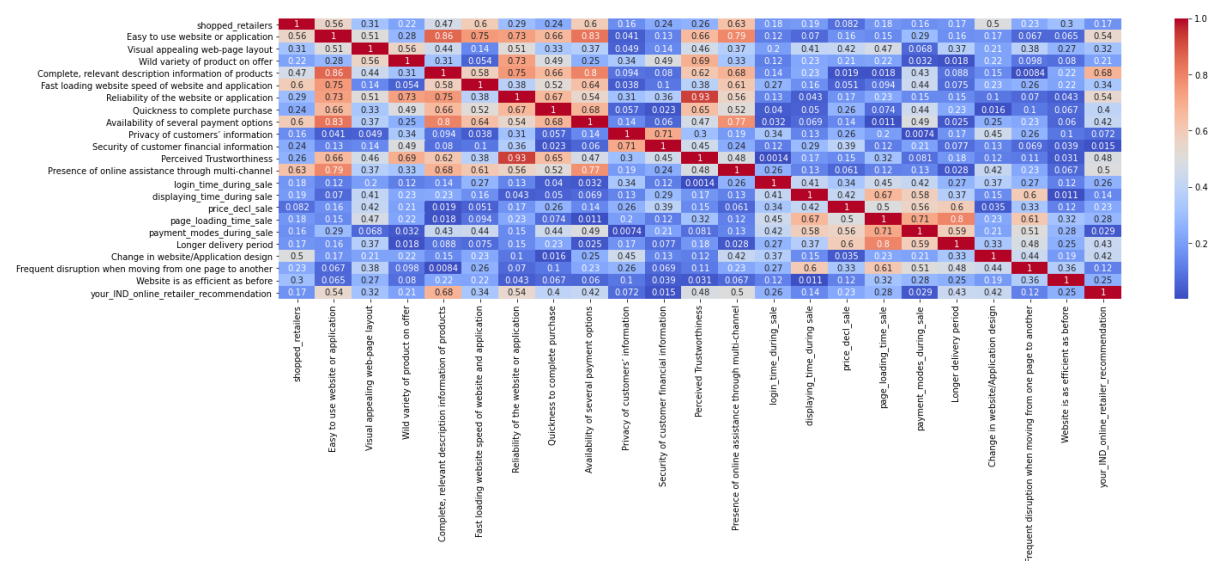
We can see which website/ App that was easy to use based on customer selected options from the below pie-chart.



Upon checking the count of various websites recommended by the customers, we can see that the Amazon.in is recommended by many customers followed by Amazon.in, Flipkart.com while Flipkart.com, Paytm.com, Myntra.com, snapdeal.com together being the least.



From the below heat map, we can see the correlation between the columns of customers opinions on various e-Commerce websites.



From the above correlation map, we can see that 'Complete, relevant

description information of products', 'Easy to use website or application', 'Reliability of the website or application', 'Perceived Trustworthiness', 'Website is as efficient as before', 'Visual appealing web-page layout', 'Wild variety of product on offer' affect the 'your_IND_online_retailer_recommendation'.

CONCLUSION

From the above analysis we can see that online stores should focus on the factors that are necessary for customer satisfaction. All the customers might not have same preference on the same factor however relevant information, Reliability of the website, efficiency of the website, service qualities like communication etc, prove to be the important factors necessary for online shopping users' satisfaction. So the e-Commerce industries should focus on these factors and provide user friendly interfaces and efficient services for customer retention.