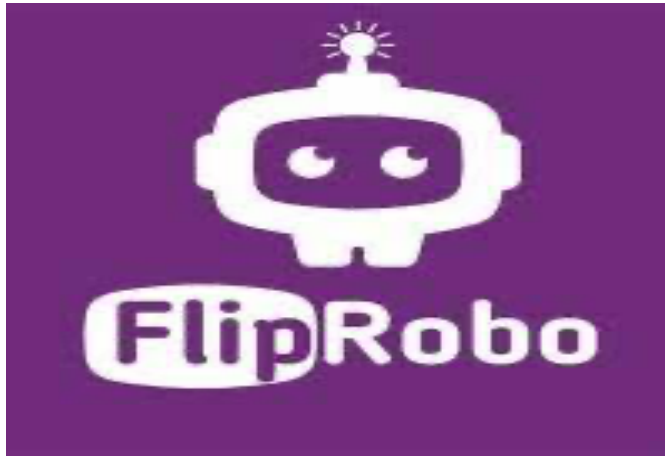


Name of The project:

**Project Report on Data Analysis
Of Customer Retention in the E-commerce Sector**

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



Submitted by:

Pratyush Raj

Fliprobo Sme:

Md. Kashif

Chap 1. Introduction

1. Business Problem Framing

Customer satisfaction has emerged as one of the most important factors that guarantee the success of online stores; it has been posited as a key stimulant of purchase or repurchase intentions and customer loyalty. A comprehensive review of the literature, theories, and models has 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 service quality, system quality, information quality, trust, and net benefit.

Customer retention strategies enable you to both provide and extract more value from your existing customer base. You want to ensure the customers you worked so hard to acquire stay with you, have a great customer experience, and continue to get value from your products. Therefore, knowing how to maximize the repurchase intention of Indian online consumers is vital for an online retailer in India to achieve its business goals. This may further lead to developing a general reference model for successful online retail business. The success of an online retail website depends on its system quality and how much consumer motivator values are derived through shopping from it.

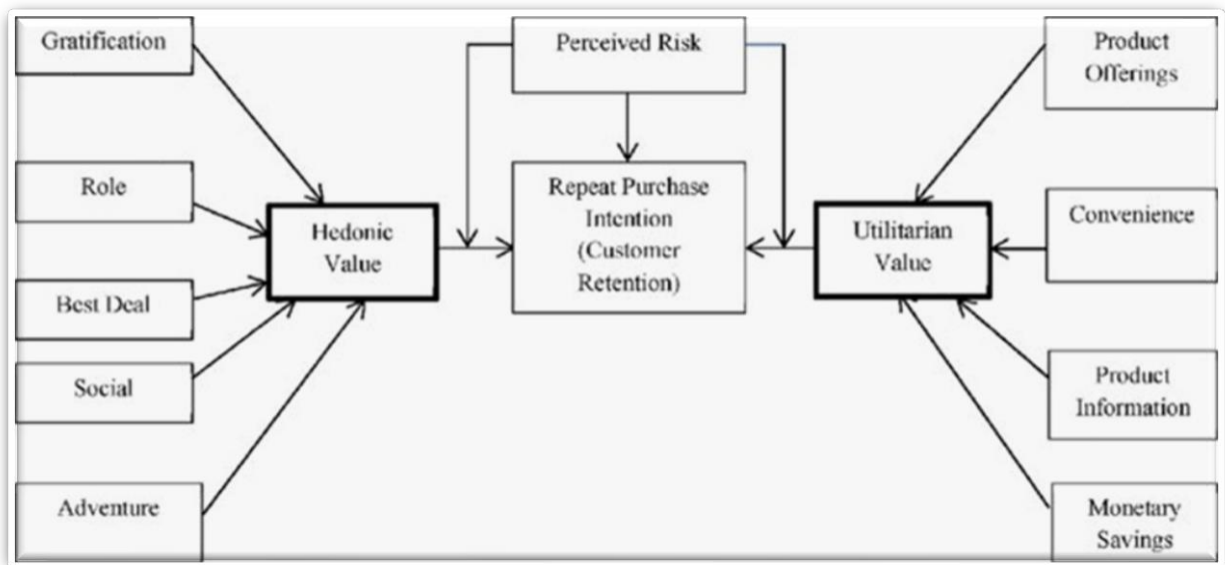
The research furthermore investigated the factors that influence online customers' repeat purchase intention. The combination of both utilitarian values and hedonistic values is needed to affect the repeat purchase intention (loyalty) positively. The data is collected from Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

2. Conceptual Background of the Domain Problem

A successful business strategy today is not only developing cost-effective and highly targeted ways to reach out the new customers, it is more about keeping the existing customers engaged in the company. It has been acknowledged that bringing in new customers is expensive. Investment in the acquisition of new customers is six times higher than investing in existing customers. Increased performance in customer retention practices, on the other hand, has been found to

create five times more impact than a similar amount of discount or cost of capital, leading to a more profitable customer relationship.

- Studies have suggested that past online shopping experience, perceived usefulness, and customer satisfaction are factors capable of influencing a customer's repurchase intention.
- Website quality (e-store) and the usability of the e-store have also been proposed as being very vital for e-retail success by studies.
- The customer retention model illustrates that for a customer to become loyal to an online retail brand, there must be satisfaction, which arises when the e-tailer possesses a quality system backed- up by the proper mix of values.



The situation in the market has changed, and the competition has become tougher. Customers have the luxury to choose between many providers. The increasing number of actors in the market has caused a rise in the significance and relevance of customer retention and the planning of a customer retention process is essential in order to achieve the desired level of outcome which is determined in the modern management literature. It focuses on the experience of purchasing the preferred product, instead of the product itself.

3 Motivation for the Problem Undertaken

The project was the first provided to me by Flip Robo Technologies as a part of the internship program. The exposure to real-world data and the opportunity to deploy my skillset in solving a real-time problem has been the primary motivation.

Our main objective of doing this project is to analyze whether the users are shopping for products from e-commerce websites. How did they give feedback to these websites on the basis of several positive and negative factors and also the details of the users on basis of factors like age, gender, city, etc?

Chap 2 Analytical Problem Framing

1. Data Sources and their formats

The data is collected from Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction. There are two sheets (one is detailed) and the second is encoded in the excel file.

```
In [1]: ## importing necessary libraries
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')
```

```
In [2]: df=pd.read_excel('customer_retention_dataset.xlsx')
```

```
In [3]: df.head(10)
```

Out[3]:

	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 1 year?	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?	Longer time to get logged in (promotion, sales period)	Longer time in displaying graphics and photos (promotion, sales period)	Lat declaratio of pric (promotior sales perio
0	Male	31-40 years	Delhi	110009	Above 4 years	31-40 times	Dial-up	Desktop	Others	Window/windows Mobile	Amazon.in	Amazon.in	Flipkart.cor
1	Female	21-30 years	Delhi	110030	Above 4 years	41 times and above	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	Amazon.in, Flipkart.com	Myntra.com	snapdeal.cor
2	Female	21-30 years	Greater Noida	201308	3-4 years	41 times and above	Mobile Internet	Smartphone	5.5 inches	Android	Myntra.com	Myntra.com	Myntra.cor
3	Male	21-30 years	Karnal	132001	3-4 years	Less than 10 times	Mobile Internet	Smartphone	5.5 inches	IOS/Mac	Snapdeal.com	Myntra.com, Snapdeal.com	Myntra.cor

The dataset contains 71 columns with 269 rows. Out of which 1 feature with int datatypes and rest with object datatypes.

2. Data Pre-processing

Before pre-processing data, the integrity of data is checked for missing values, possible duplicates, to check if any whitespaces or ('- ') is present or not.

```
In [5]: df.isin(['NA', 'N/A', '-', ' ', '?', ' ?']).sum()
Out[5]: 1Gender of respondent      0
        2 How old are you?      0
        3 Which city do you shop online from?  0
        4 What is the Pin Code of where you shop online from?  0
        5 Since How Long You are Shopping Online ?  0
        ..
        Longer delivery period      0
        Change in website/Application design  0
        Frequent disruption when moving from one page to another  0
        Website is as efficient as before      0
        Which of the Indian online retailer would you recommend to a friend?  0
        Length: 71, dtype: int64
```

```
In [6]: df.isnull().sum()
Out[6]: 1Gender of respondent      0
        2 How old are you?      0
        3 Which city do you shop online from?  0
        4 What is the Pin Code of where you shop online from?  0
        5 Since How Long You are Shopping Online ?  0
        ..
        Longer delivery period      0
        Change in website/Application design  0
        Frequent disruption when moving from one page to another  0
        Website is as efficient as before      0
        Which of the Indian online retailer would you recommend to a friend?  0
        Length: 71, dtype: int64
```

```
In [7]: df.describe()
Out[7]: 4 What is the Pin Code of where you shop online from?
        .....
```

Chap. 3 Models Development & Evaluation

1. 1.IDENTIFICATION OF POSSIBLE PROBLEM-SOLVING APPROACHES (METHODS)

There are a lot of features in the dataset. Our objective is to find key conclusions & finding related to data using analysis. The features are categorized into a few sections so we can perform an analysis of data section-wise focusing on a particular area. They are enlisted as below:

- General feature describing Population and online shopping feature
- Feature describing technological aspects related to internet services & device
- Purchase Decision & Payment related features
- Website Usability & performance related feature
- Online shopping store customer service requirement-related features

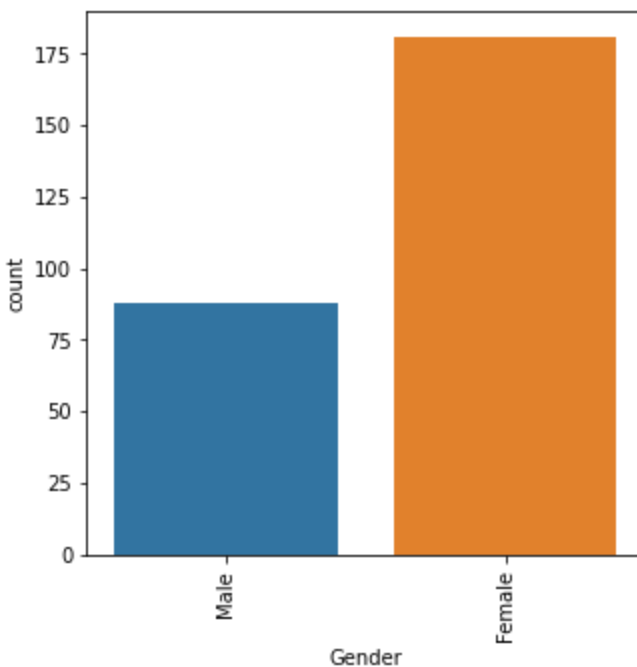
- Feature related to Customer online shopping experiences
- Online Shopping Platform-related question response by Customer

2. VISUALIZATIONS

Female 181

Male 88

Name: Gender, dtype: int64



Observations

Females are more in number than males by nearly 87

31-40 years 81

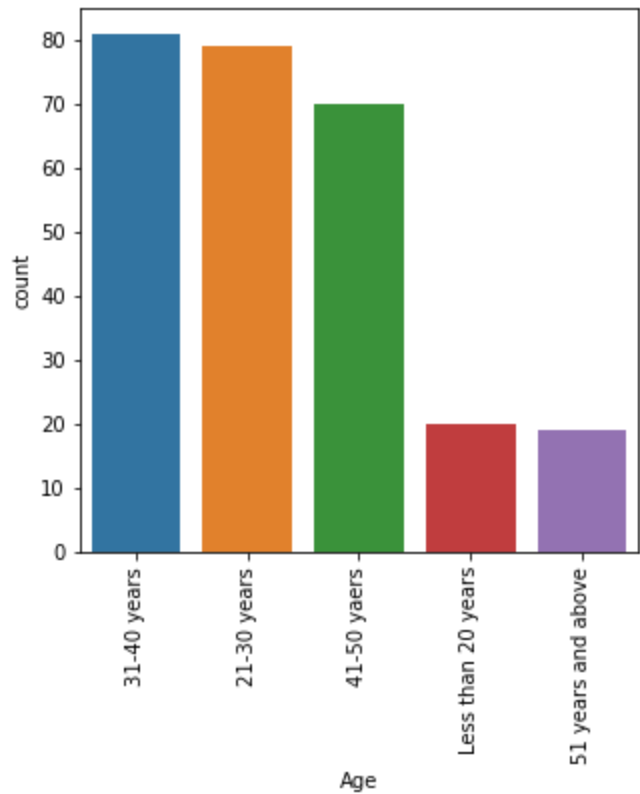
21-30 years 79

41-50 yaers 70

Less than 20 years 20

51 years and above 19

Name: Age, dtype: int64



Observations

21-40 Age groups are more buyers,above 51 with least number of buyes

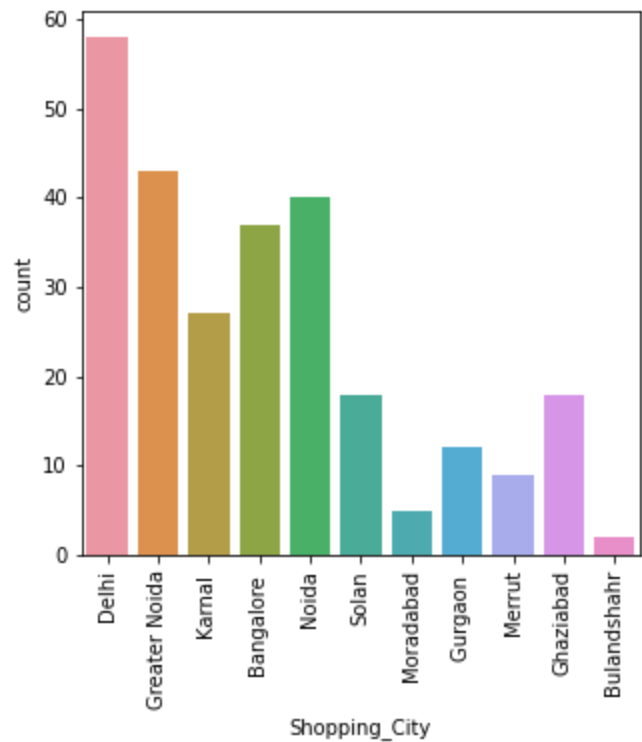
Delhi 58

Greater Noida 43

Noida 40

Bangalore	37
Karnal	27
Solan	18
Ghaziabad	18
Gurgaon	12
Merrut	9
Moradabad	5
Bulandshahr	2

Name: Shopping_City, dtype: int64



Observations

Delhi is on the top of chart for online orders and moradabad is on bottom

Above 4 years 98

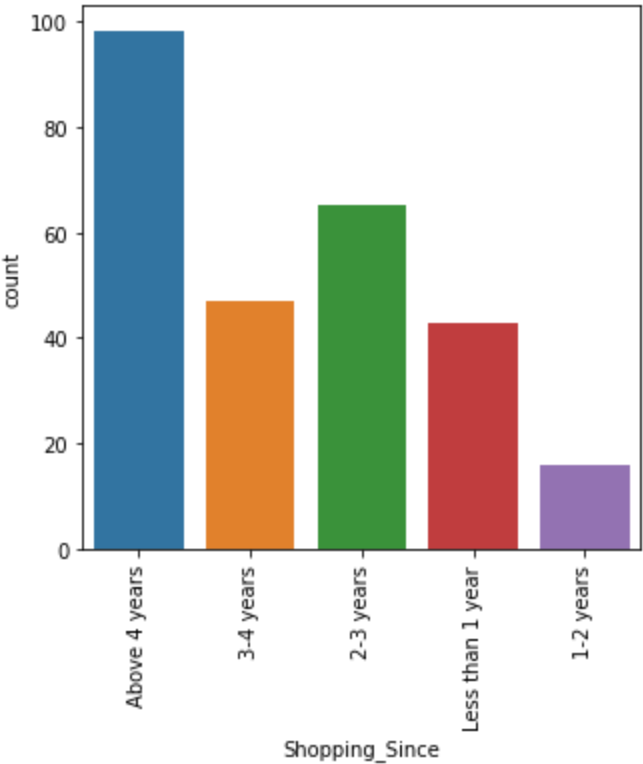
2-3 years 65

3-4 years 47

Less than 1 year 43

1-2 years 16

Name: Shopping_Since, dtype: int64



Observations

Above for years shopping_since has more number

Less than 10 times 114

31-40 times 63

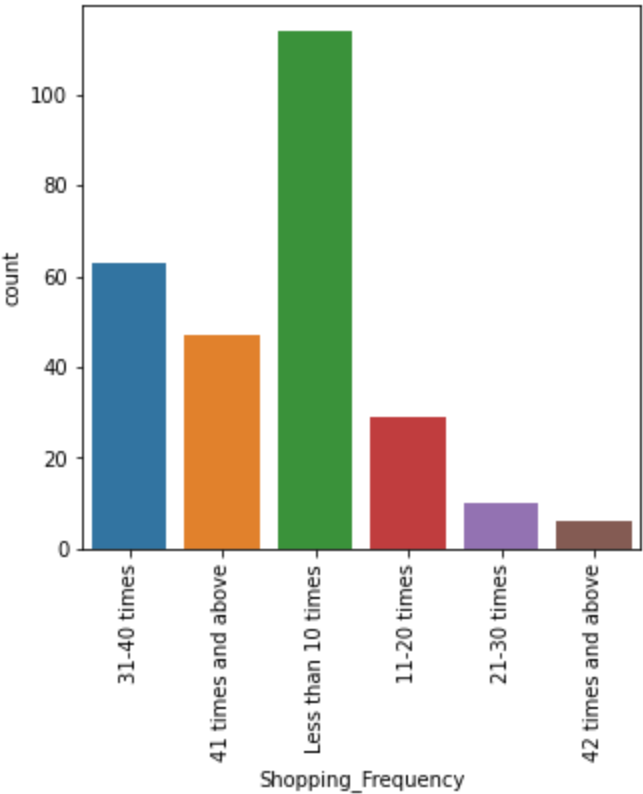
41 times and above 47

11-20 times 29

21-30 times 10

42 times and above 6

Name: Shopping_Frequency, dtype: int64



Observations

The customer shopping frequency is less than 10 times is more

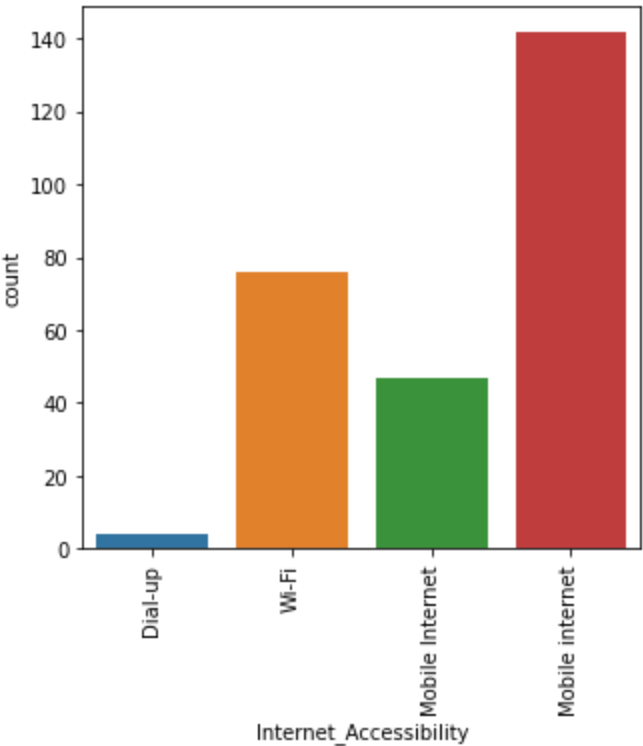
Mobile internet 142

Wi-Fi 76

Mobile Internet 47

Dial-up 4

Name: Internet_Accessibility, dtype: int64



Observations

Online shopping through mobile network is more

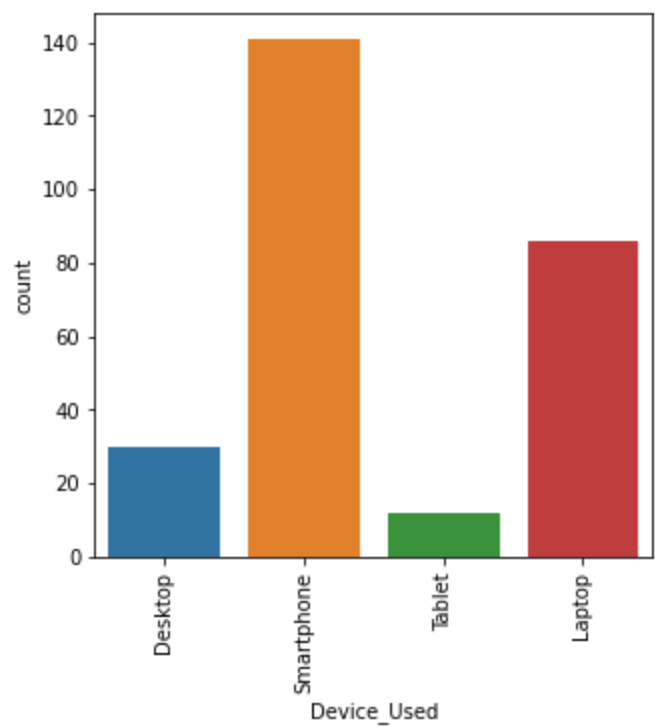
Smartphone 141

Laptop 86

Desktop 30

Tablet 12

Name: Device_Used, dtype: int64



Observations

Smartphone User purchase through online is more and tablet is very least

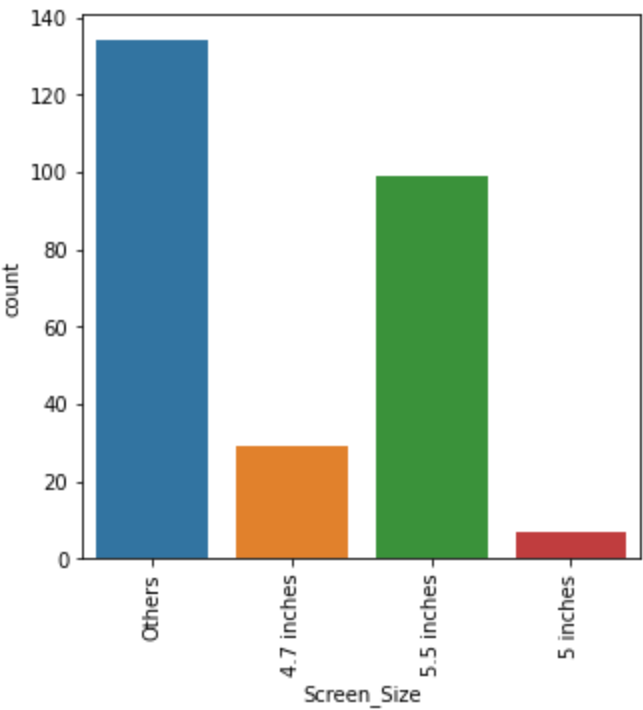
Others 134

5.5 inches 99

4.7 inches 29

5 inches 7

Name: Screen_Size, dtype: int64



Observations

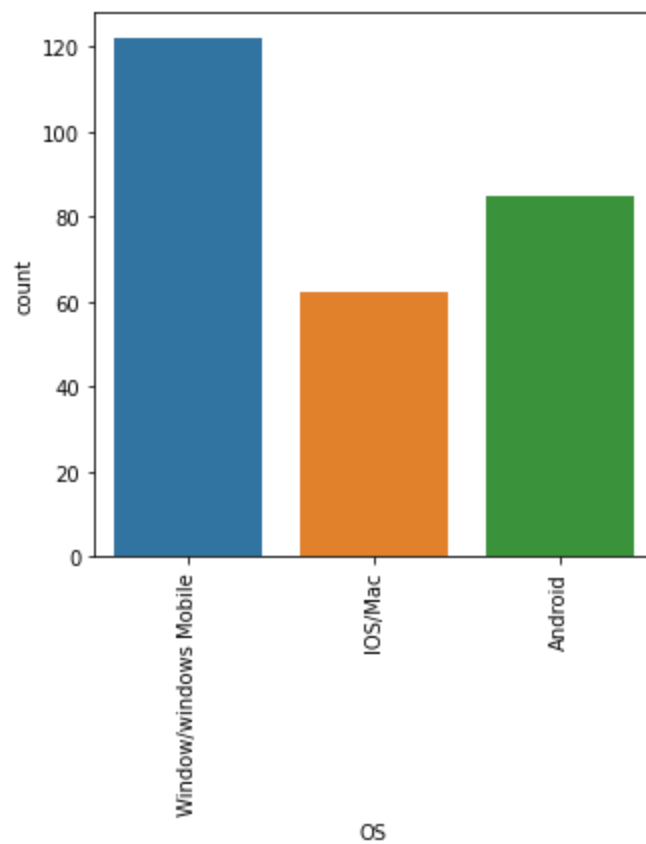
eople mobile screen size is mixed others and 5.5 inches

Window/windows Mobile 122

Android 85

IOS/Mac 62

Name: OS, dtype: int64



Observations

Windows operating system user are more so we can say people are using laptop for shopping

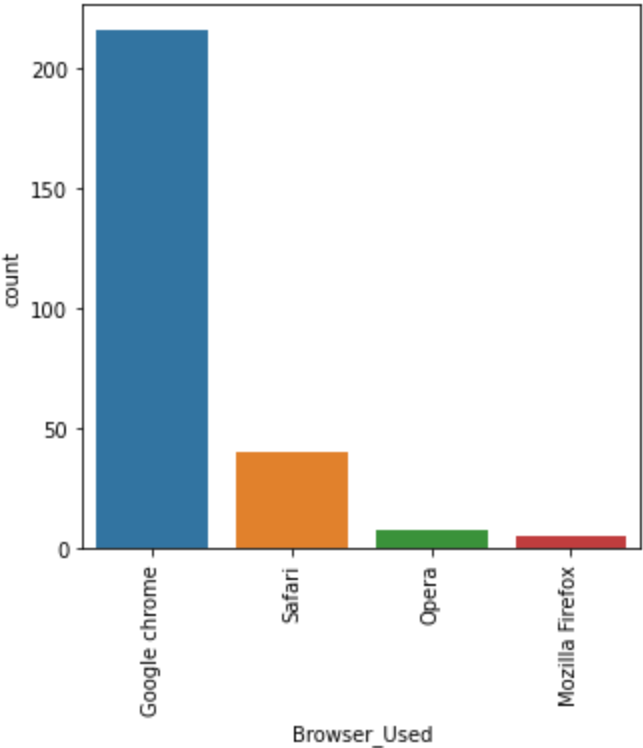
Google chrome 216

Safari 40

Opera 8

Mozilla Firefox 5

Name: Browser_Used, dtype: int64



Observations

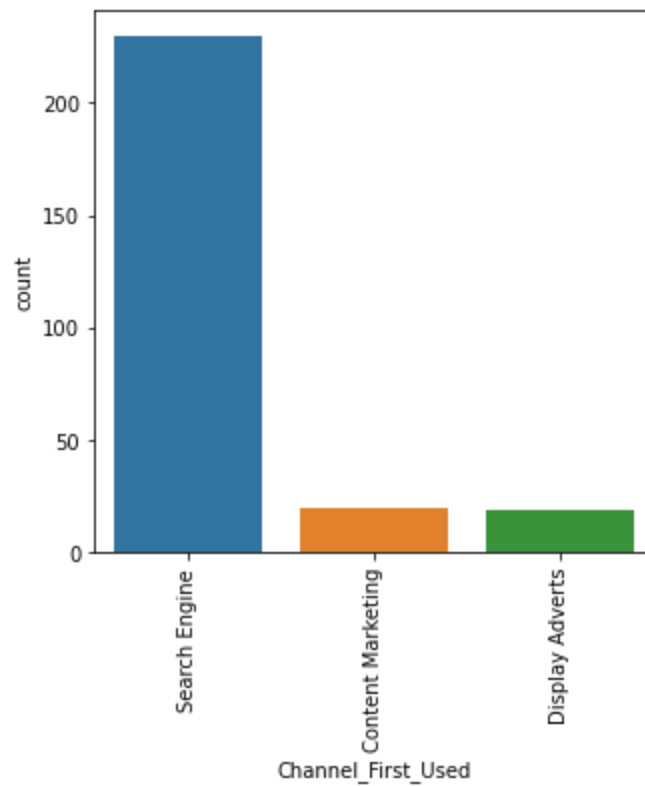
The most frequently used browser is google chrome

Search Engine 230

Content Marketing 20

Display Adverts 19

Name: Channel_First_Used, dtype: int64



Observations

The first channel used to browse the online shopping is Search Engine

Search Engine 87

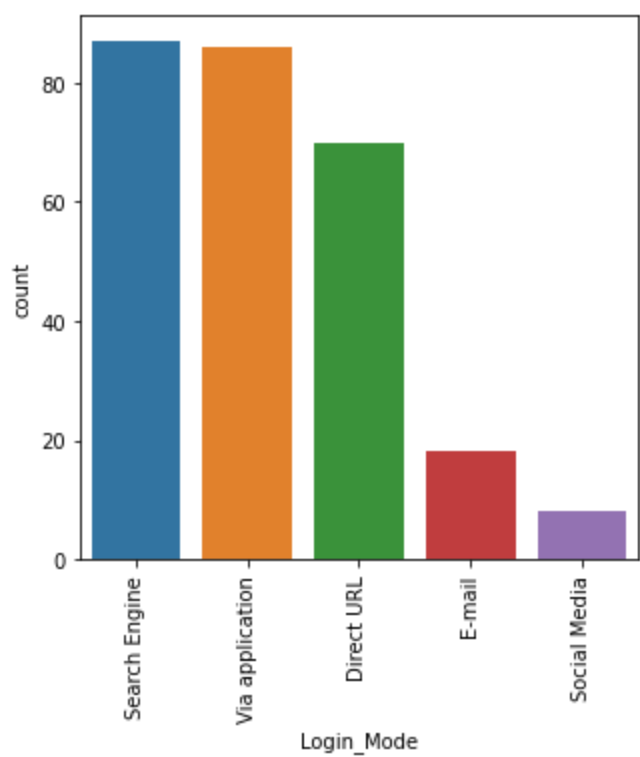
Via application 86

Direct URL 70

E-mail 18

Social Media 8

Name: Login_Mode, dtype: int64



Observations

Login_mode used most frequently is Search Engine and Apps

more than 15 mins 123

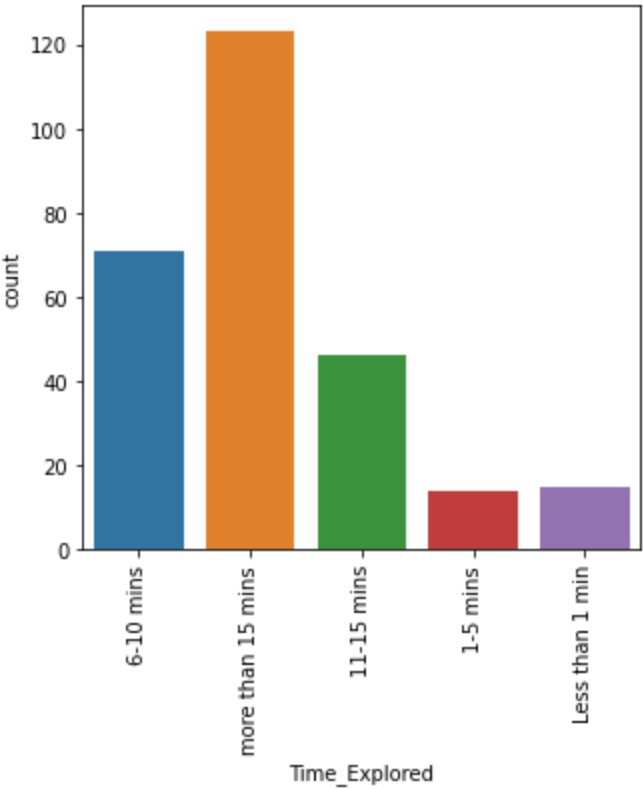
6-10 mins 71

11-15 mins 46

Less than 1 min 15

1-5 mins 14

Name: Time_Explored, dtype: int64

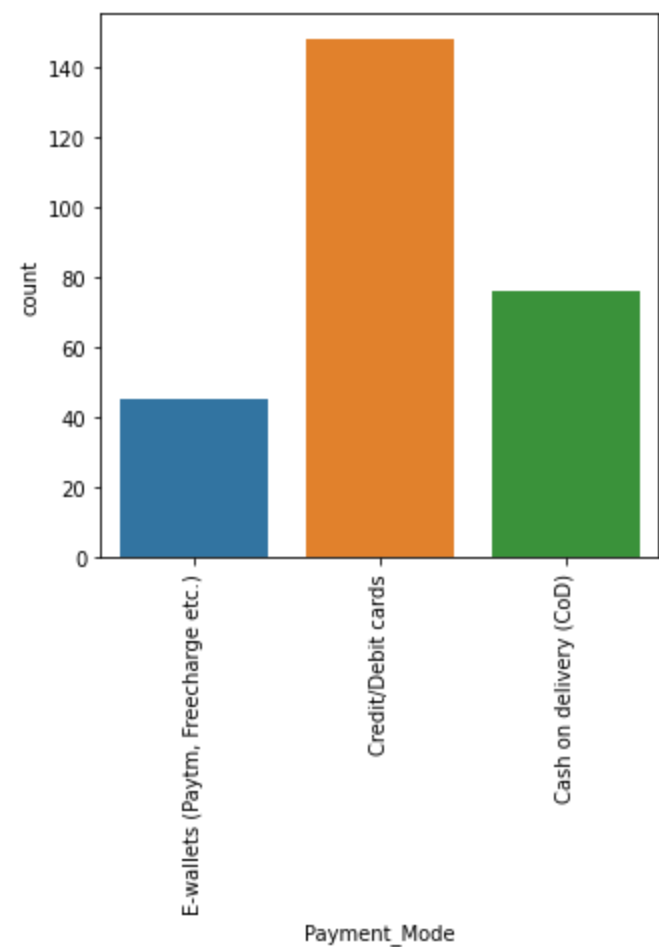


Observations

More than 15 times explored ratio is more on the data

Credit/Debit cards	148
Cash on delivery (CoD)	76
E-wallets (Paytm, Freecharge etc.)	45

Name: Payment_Mode, dtype: int64



Observations

The people used mostly credit card and debit card for payment mode, followed by Cash on delivery

Sometimes 171

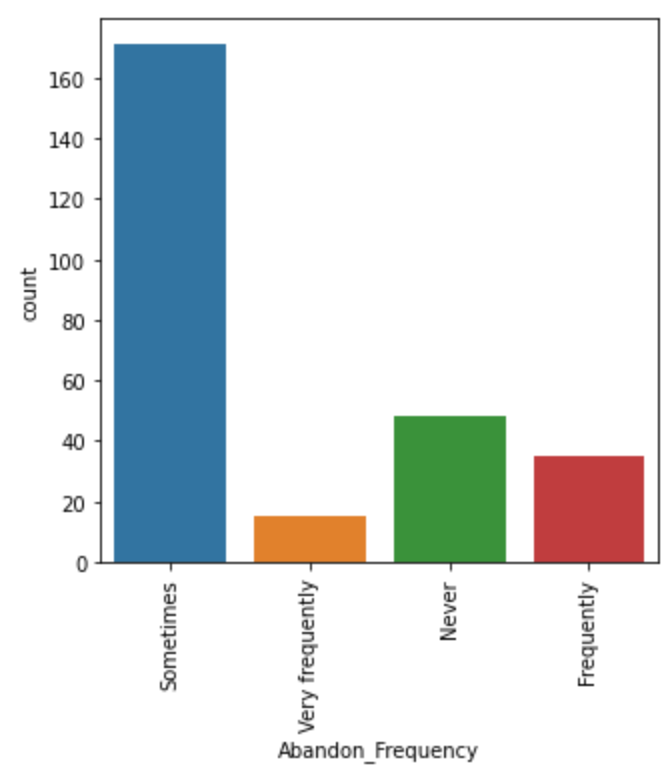
Never 48



Frequently 35

Very frequently 15

Name: Abandon_Frequency, dtype: int64



Observations

Abondan Frequency , sometimes is more on the data

Better alternative offer 133

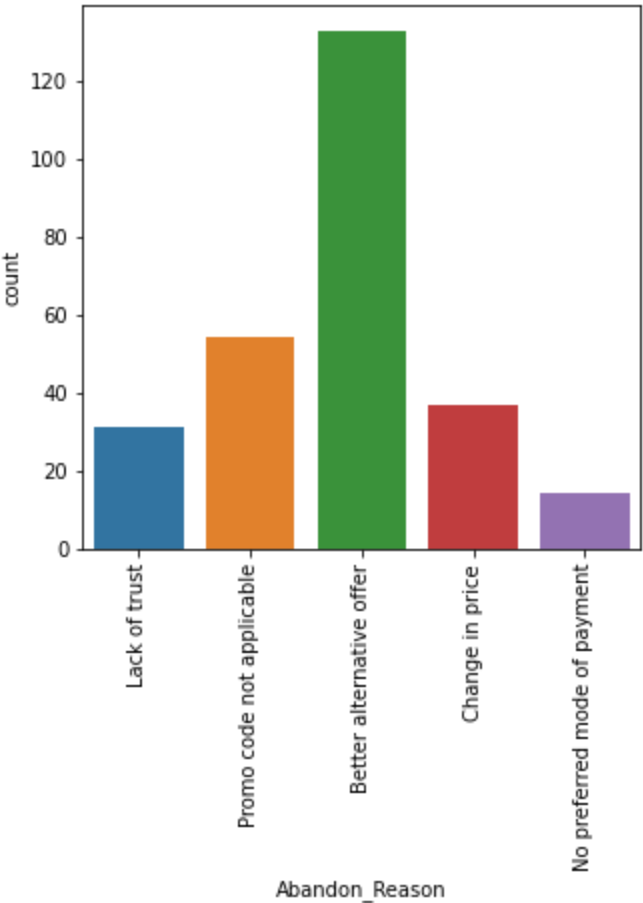
Promo code not applicable 54

Change in price 37

Lack of trust 31

No preferred mode of payment 14

Name: Abandon_Reason, dtype: int64



Observations

The reason to abandon is people better alternatives and offer which some people think that promo code is not available

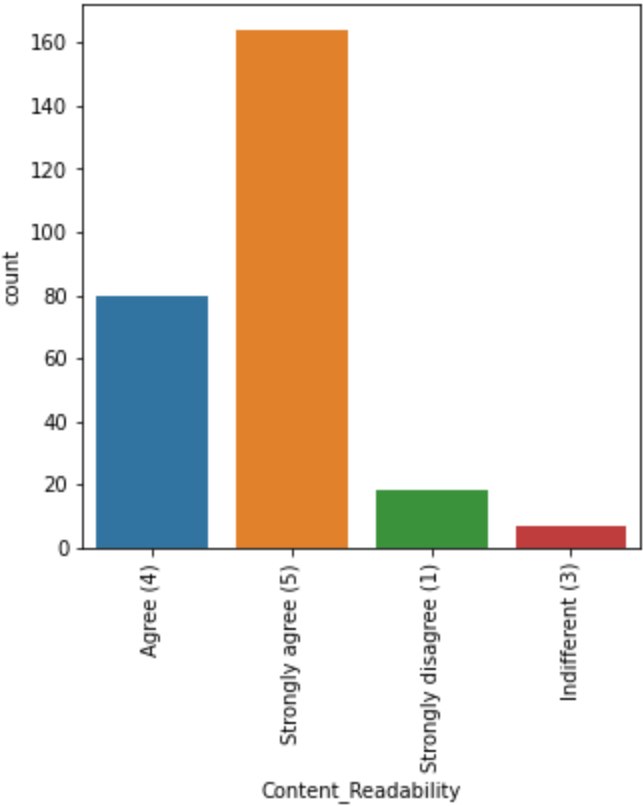
Strongly agree (5) 164

Agree (4) 80

Strongly disagree (1) 18

Indifferent (3) 7

Name: Content_Readability, dtype: int64



Observations

Content readiability has good ratings which is 4 and 5

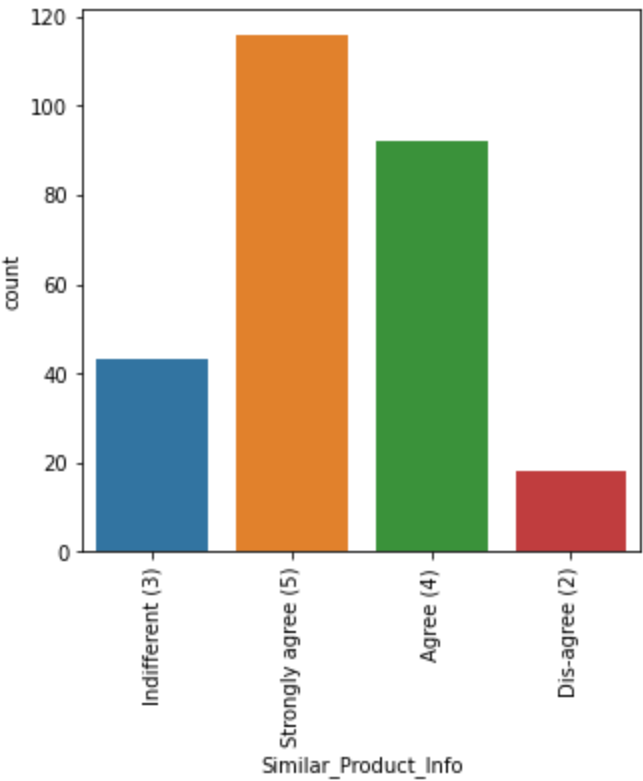
Strongly agree (5) 116

Agree (4) 92

Indifferent (3) 43

Dis-agree (2) 18

Name: Similar_Product_Info, dtype: int64

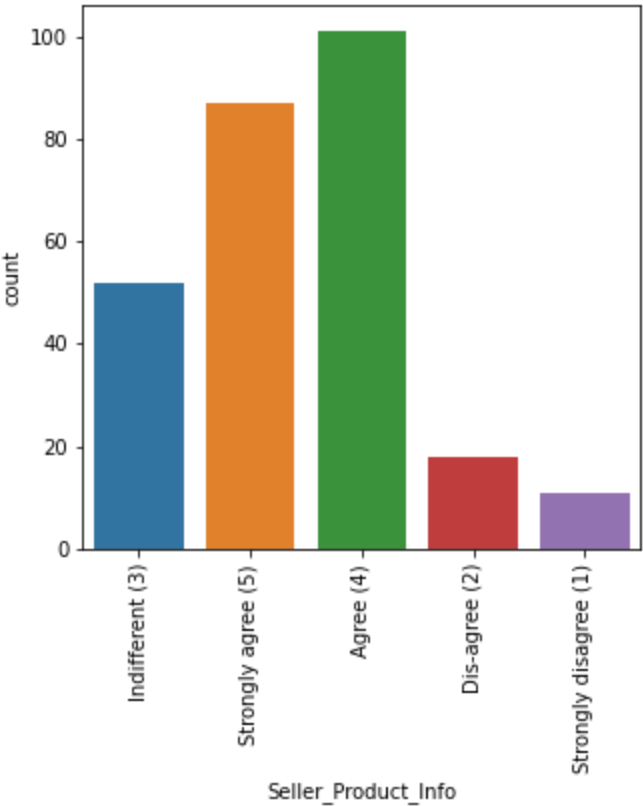


Observations

Most of the people strongly agree that similar product as comparision is good

Agree (4)	101
Strongly agree (5)	87
Indifferent (3)	52
Dis-agree (2)	18
Strongly disagree (1)	11

Name: Seller_Product_Info, dtype: int64

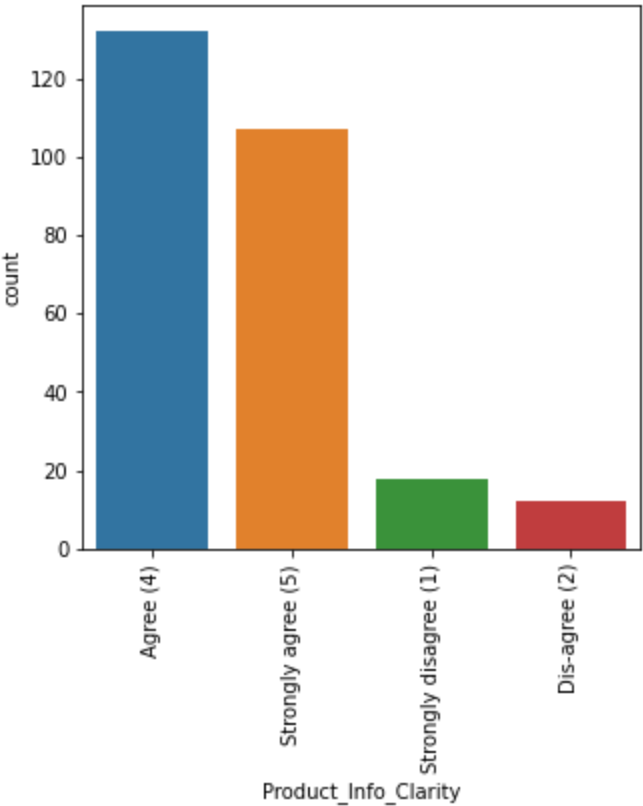


Observations

People voted for agree and strongly for knowing seller information

Agree (4)	132
Strongly agree (5)	107
Strongly disagree (1)	18
Dis-agree (2)	12

Name: Product_Info_Clarity, dtype: int64



Observations

Product information clarity in online shopping is more

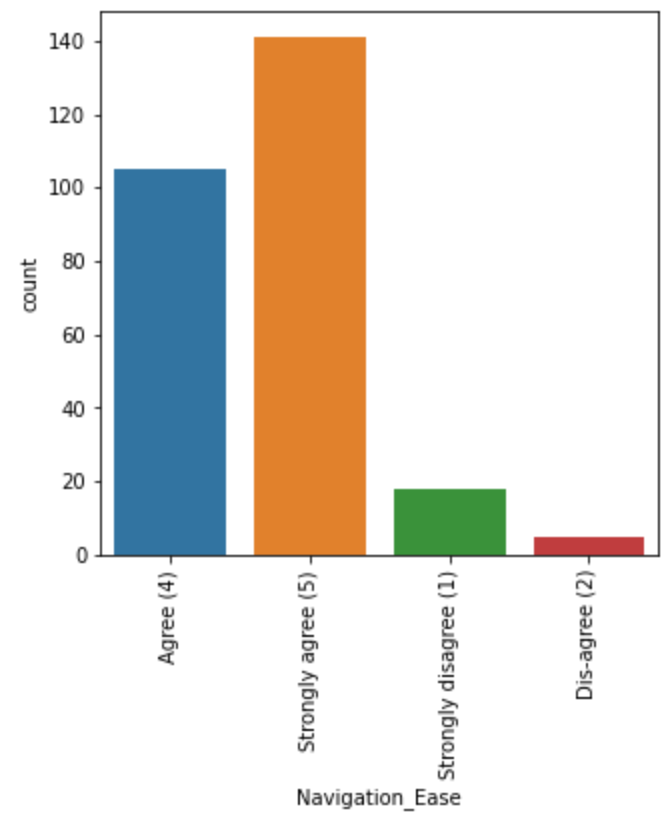
Strongly agree (5) 141

Agree (4) 105

Strongly disagree (1) 18

Dis-agree (2) 5

Name: Navigation_Ease, dtype: int64

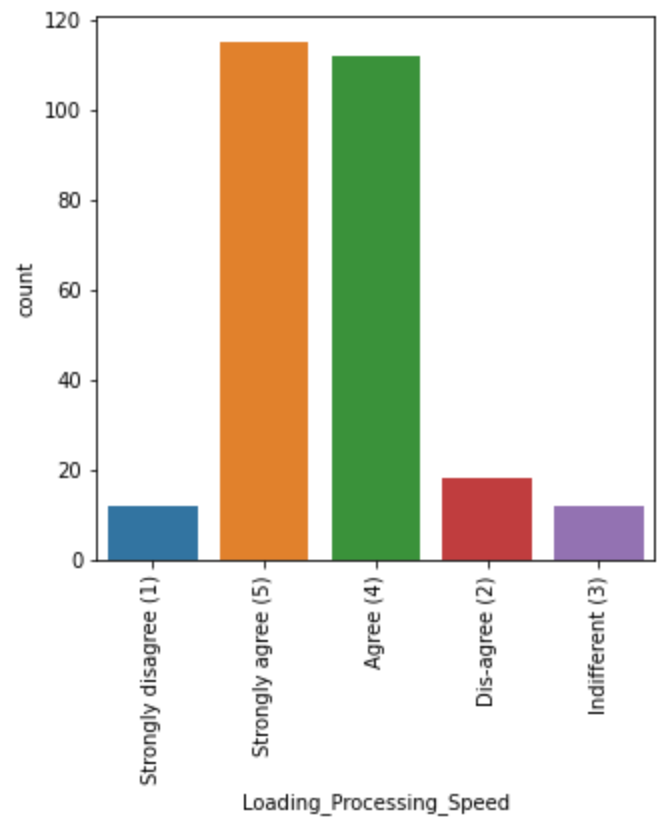


Observations

Navigation ease is has good rating

Strongly agree (5)	115
Agree (4)	112
Dis-agree (2)	18
Strongly disagree (1)	12
Indifferent (3)	12

Name: Loading_Processing_Speed, dtype: int64



Observations

Loading_Processing_Speed is good as most of them agreed and strongly agreed

Strongly agree (5) 189

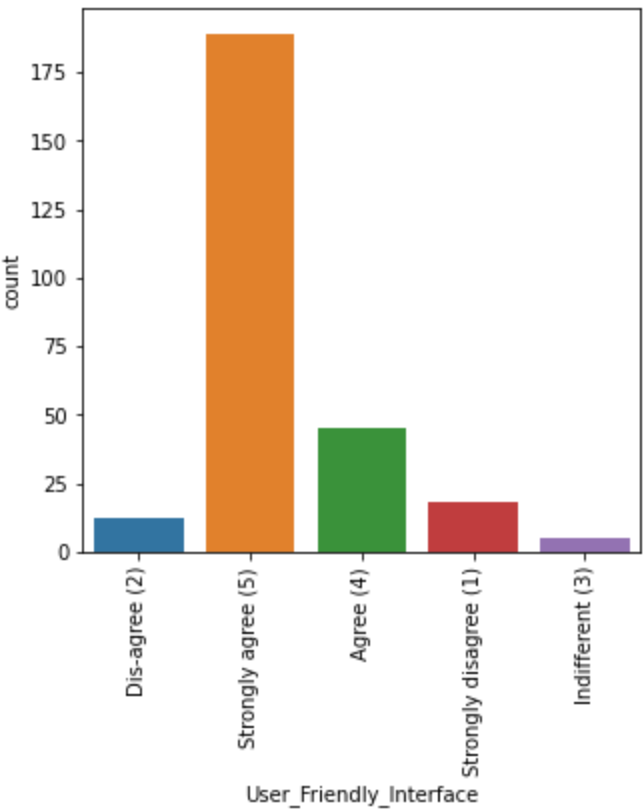
Agree (4) 45

Strongly disagree (1) 18

Dis-agree (2) 12

Indifferent (3) 5

Name: User_Friendly_Interface, dtype: int64



Observations

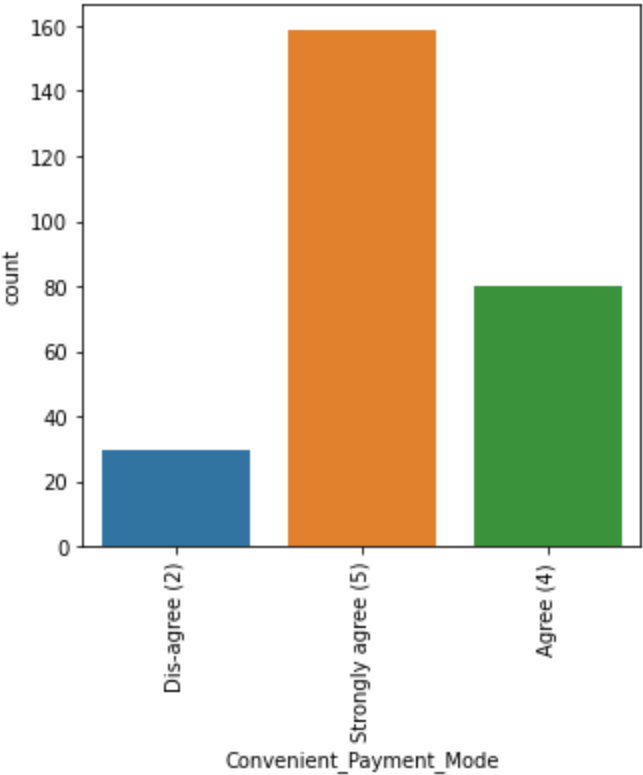
Since online merchants is user-friendly-interface people strongly agree to that

Strongly agree (5) 159

Agree (4) 80

Dis-agree (2) 30

Name: Convenient_Payment_Mode, dtype: int64



Observations

People feel online shoping has convenient_payment_mdoe

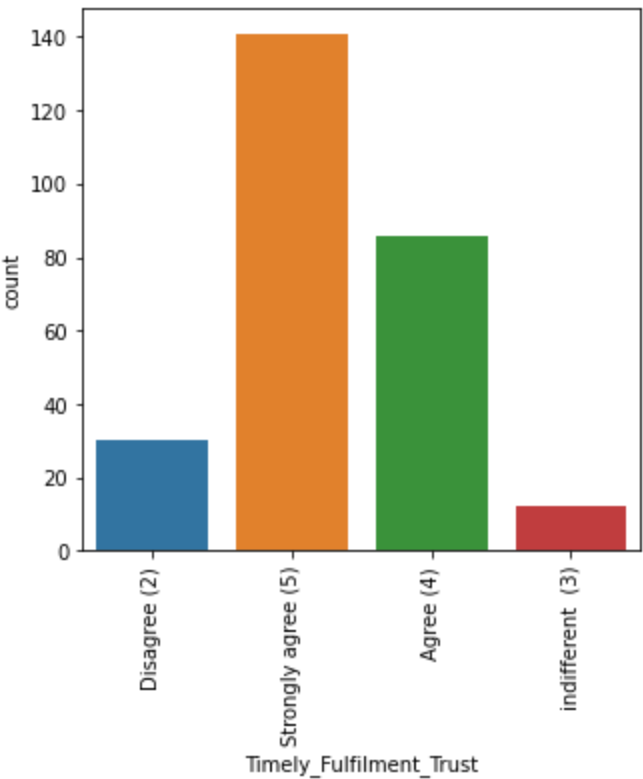
Strongly agree (5) 141

Agree (4) 86

Disagree (2) 30

indifferent (3) 12

Name: Timely_Fulfilment_Trust, dtype: int64



Observations

Many people feel that online shopping has timely fullfullment of Trust

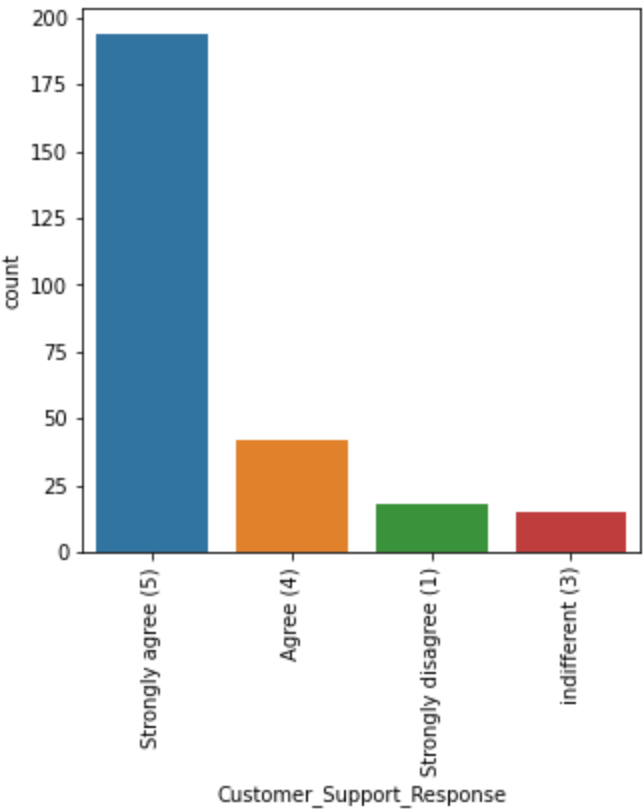
Strongly agree (5) 194

Agree (4) 42

Strongly disagree (1) 18

indifferent (3) 15

Name: Customer_Support_Response, dtype: int64



Observations

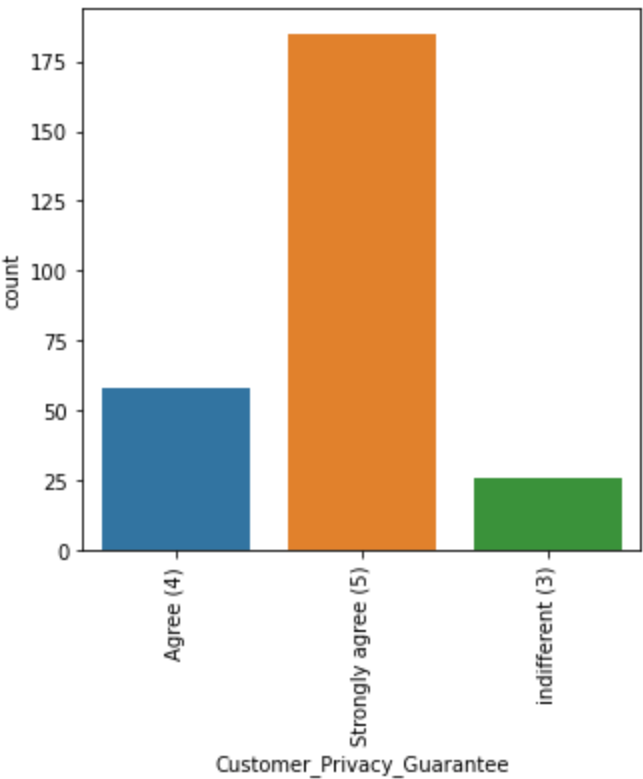
Customer support online people feels is very good

Strongly agree (5) 185

Agree (4) 58

indifferent (3) 26

Name: Customer_Privacy_Guarantee, dtype: int64



Observations

People feel that customer_privacy is taken care by online mode of shopping

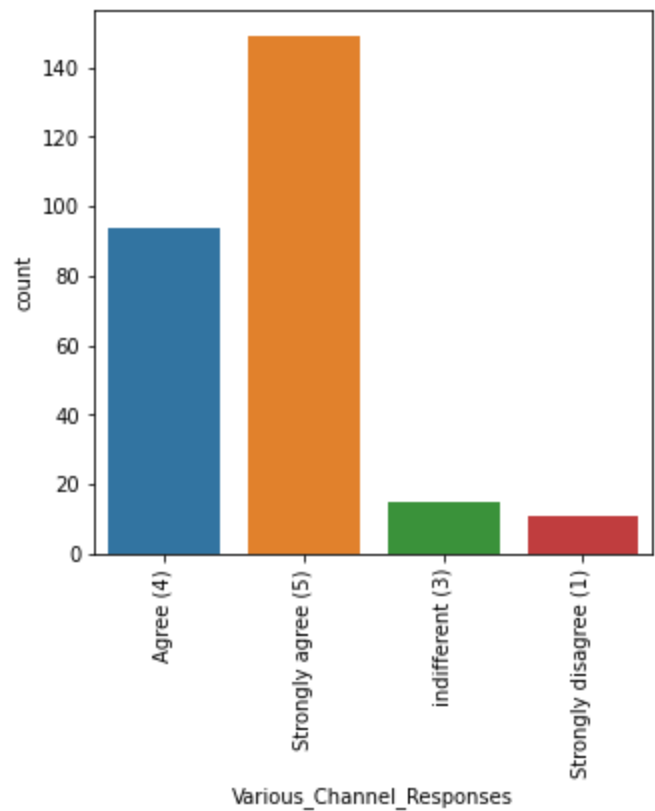
Strongly agree (5) 149

Agree (4) 94

indifferent (3) 15

Strongly disagree (1) 11

Name: Various_Channel_Responses, dtype: int64

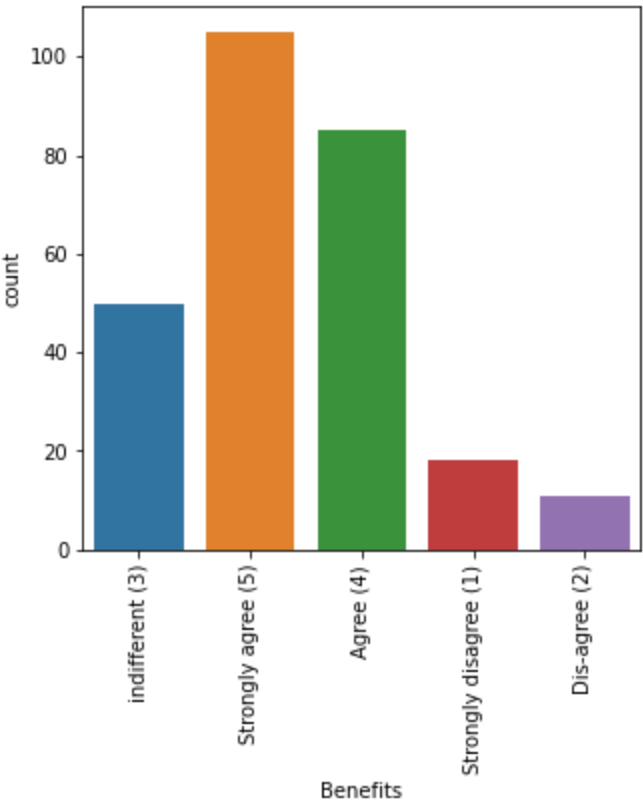


Observations

The various_channel_rating is good for online mode

Strongly agree (5) 105

Agree (4)	85
indifferent (3)	50
Strongly disagree (1)	18
Dis-agree (2)	11
Name: Benefits, dtype: int64	



Observations

Benifits of online shopping is more

Strongly agree (5) 86

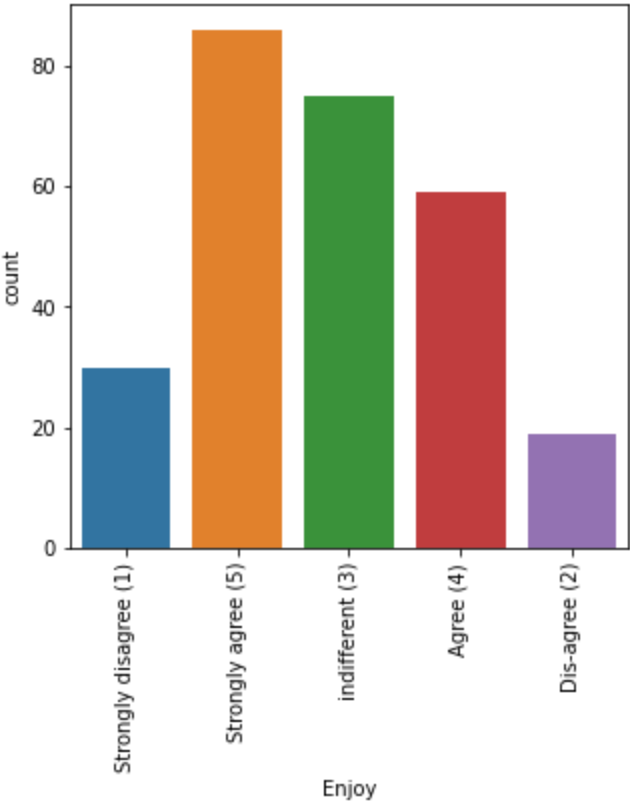
indifferent (3) 75

Agree (4) 59

Strongly disagree (1) 30

Dis-agree (2) 19

Name: Enjoy, dtype: int64



Observations

People are enjoying the online mode shopping

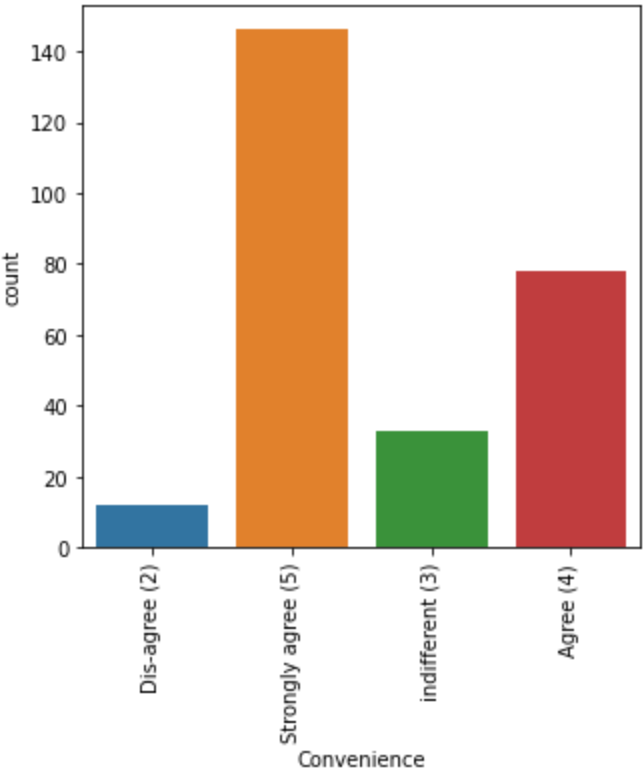
Strongly agree (5) 146

Agree (4) 78

indifferent (3) 33

Dis-agree (2) 12

Name: Convenience, dtype: int64



Observations

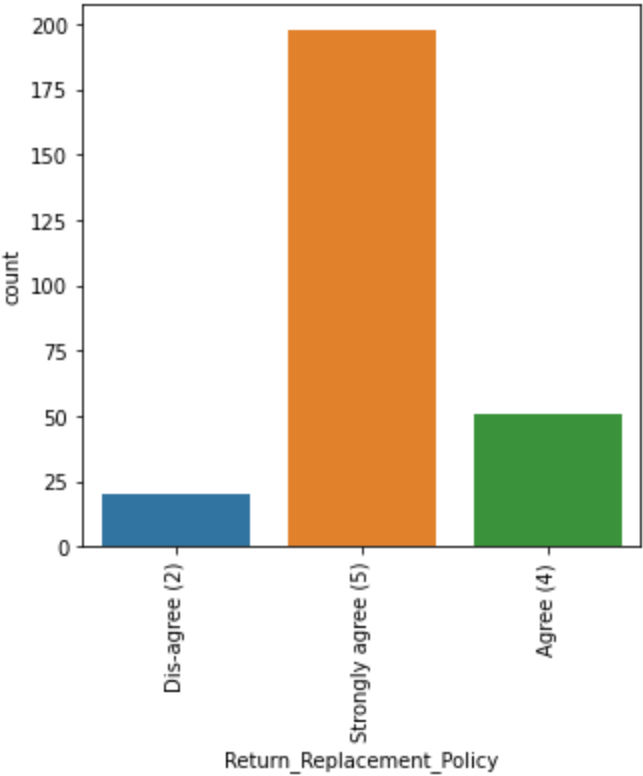
people feel online shopping has convenience

Strongly agree (5) 198

Agree (4) 51

Dis-agree (2) 20

Name: Return_Replacement_Policy, dtype: int64



Observations

Return policy is good of online mode as people strongly agree has great number

Strongly agree (5) 115

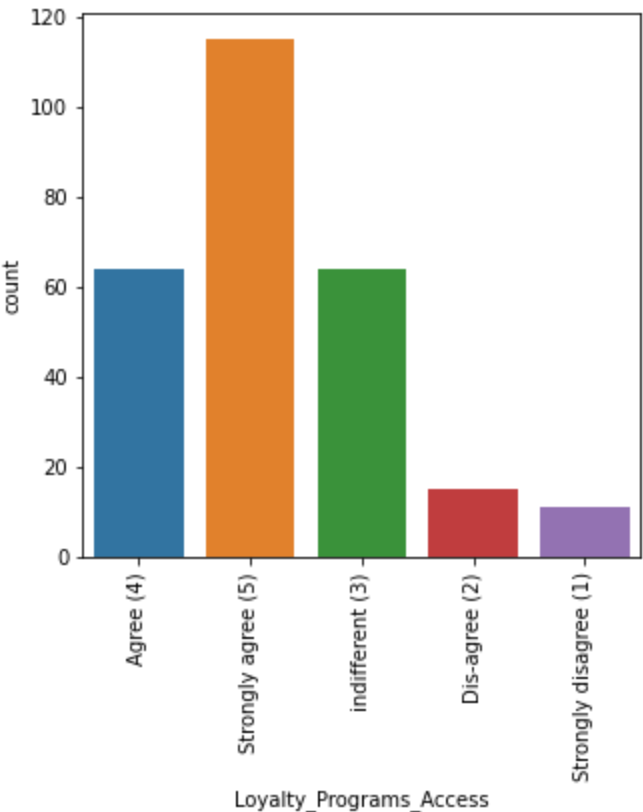
Agree (4) 64

indifferent (3) 64

Dis-agree (2) 15

Strongly disagree (1) 11

Name: Loyalty_Programs_Access, dtype: int64



Observations

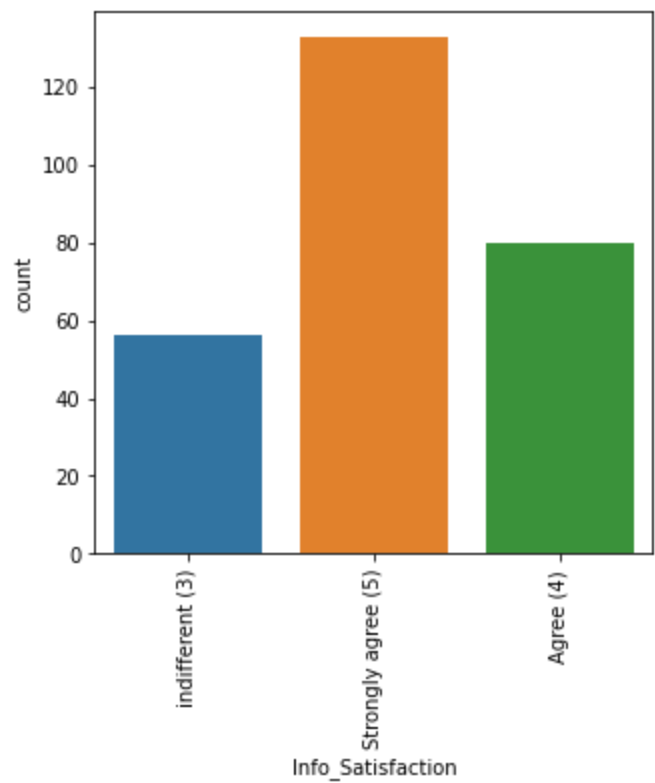
Loyalty of online has strongly agreed is more number

Strongly agree (5) 133

Agree (4) 80

indifferent (3) 56

Name: Info_Satisfaction, dtype: int64



Observations

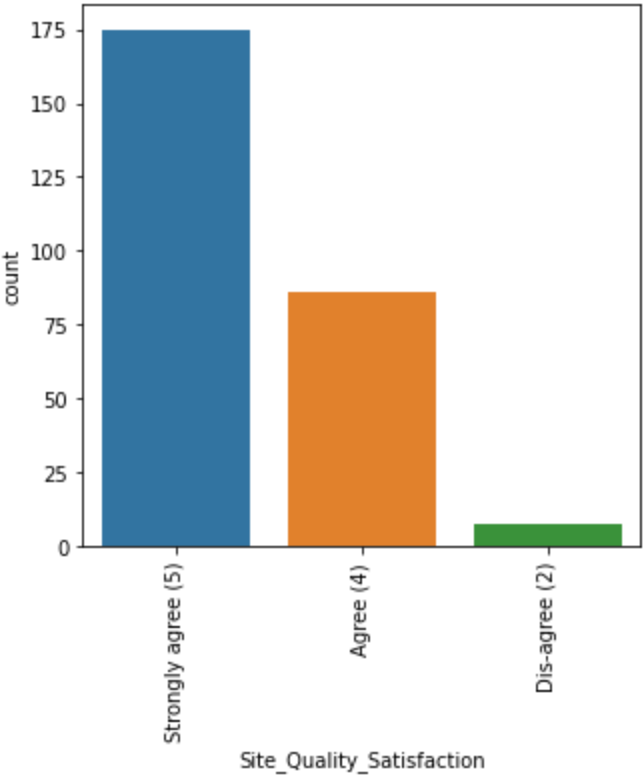
Info_satisfactin of online mode is good

Strongly agree (5) 175

Agree (4) 86

Dis-agree (2) 8

Name: Site_Quality_Satisfaction, dtype: int64



Observations

The quality of site got good ratings that is strongly agreed

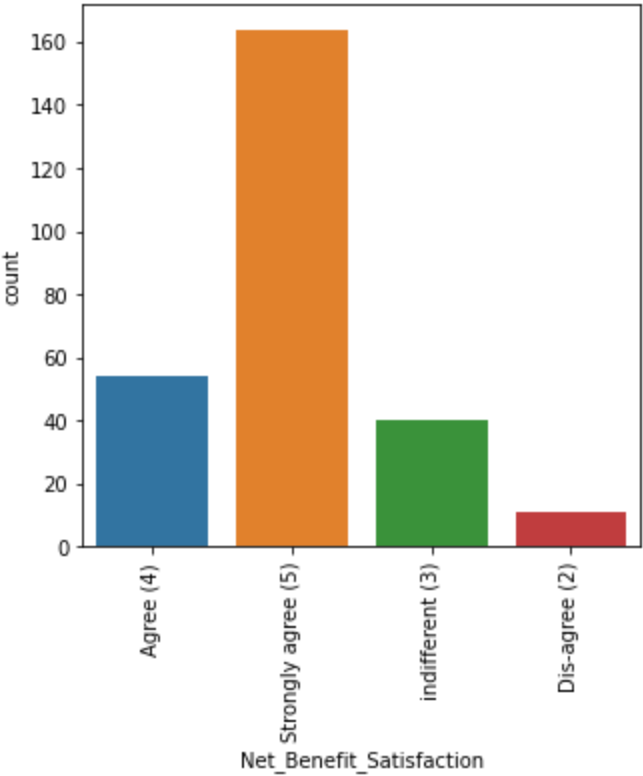
Strongly agree (5) 164

Agree (4) 54

indifferent (3) 40

Dis-agree (2) 11

Name: Net_Benefit_Satisfaction, dtype: int64



Observations

Net_Benifit_Satisfaction is good

Strongly agree (5) 122

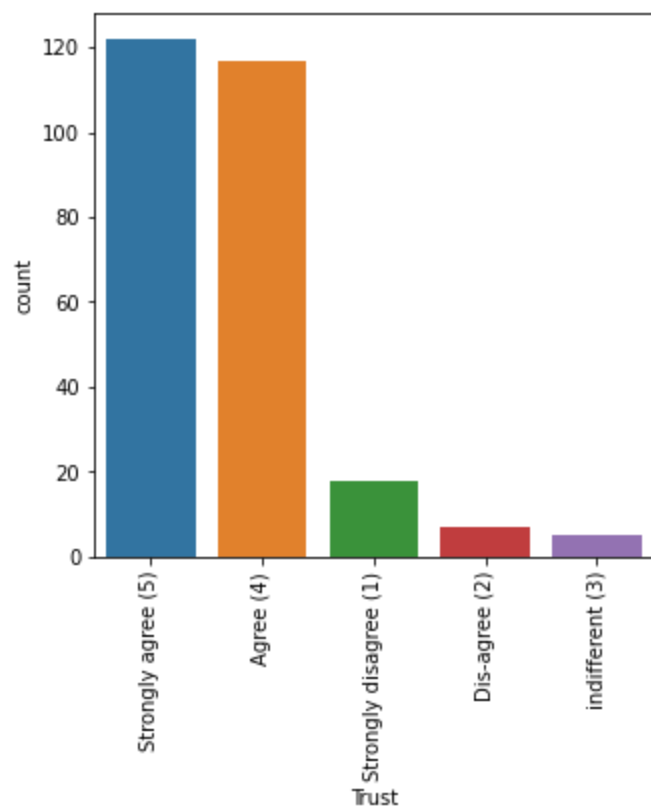
Agree (4) 117

Strongly disagree (1) 18

Dis-agree (2) 7

indifferent (3) 5

Name: Trust, dtype: int64



Observations

People are trusting online mode of shopping

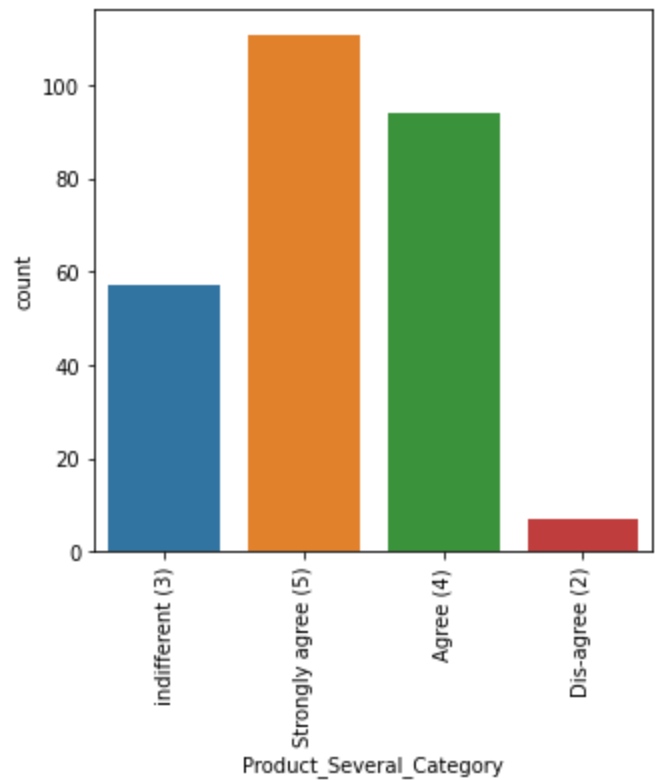
Strongly agree (5) 111

Agree (4) 94

indifferent (3) 57

Dis-agree (2) 7

Name: Product_Several_Category, dtype: int64



Observations

People feels that product several category is present in online shopping

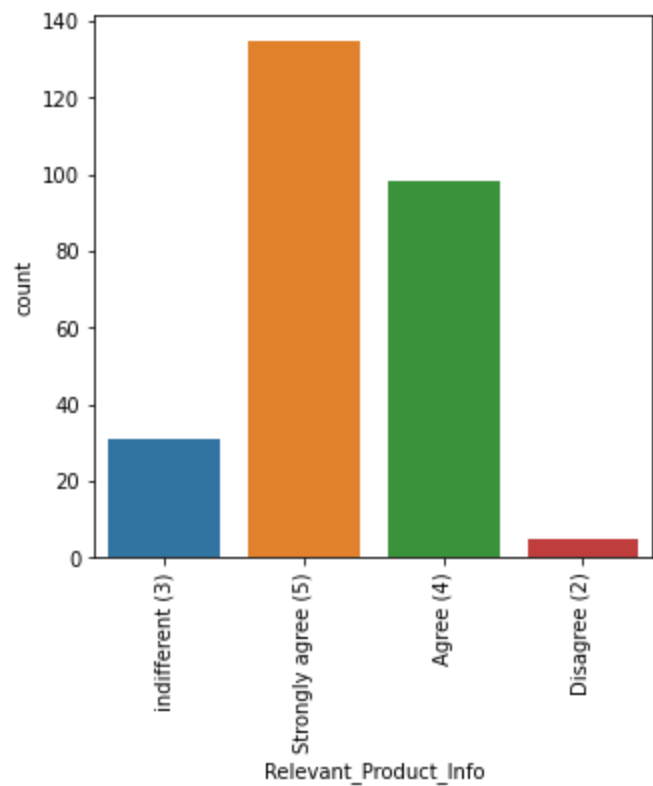
Strongly agree (5) 135

Agree (4) 98

indifferent (3) 31

Disagree (2) 5

Name: Relevant_Product_Info, dtype: int64



Observations

Online shopping has great relevant_product_info

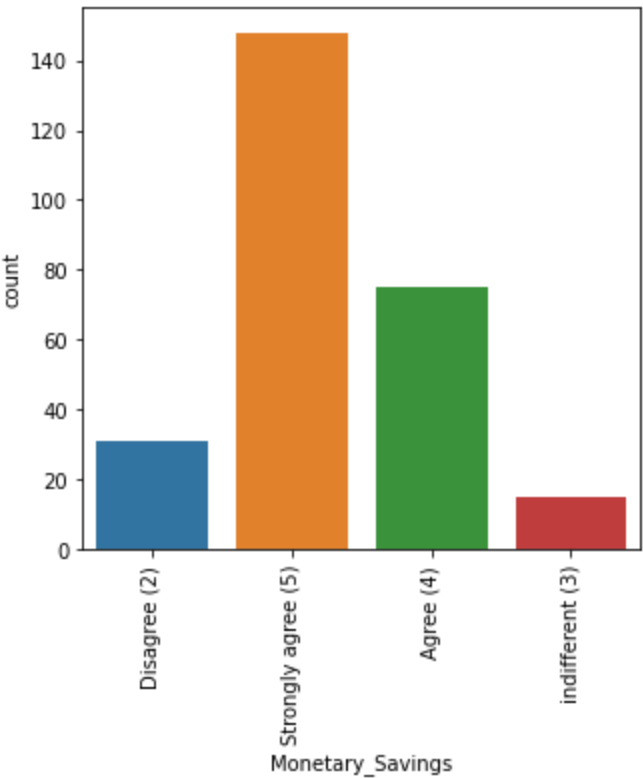
Strongly agree (5) 148

Agree (4) 75

Disagree (2) 31

indifferent (3) 15

Name: Monetary_Savings, dtype: int64

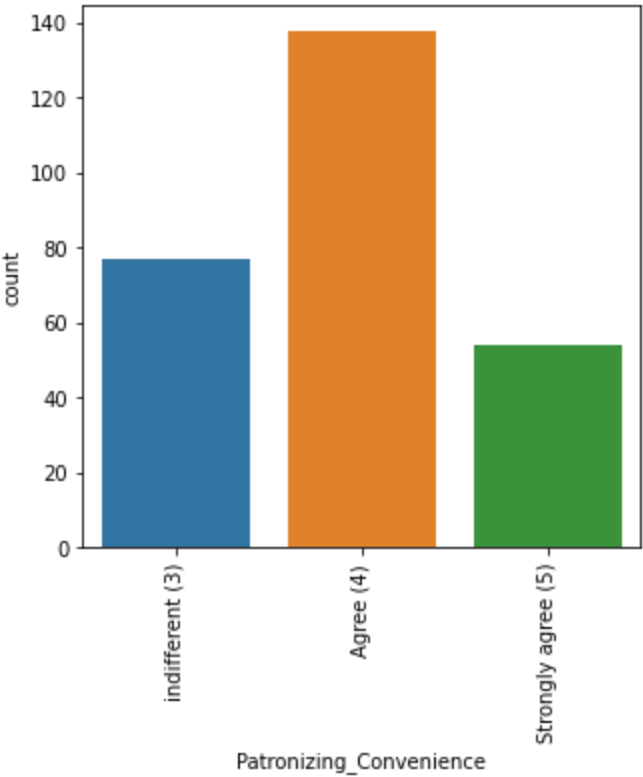


Observations

People has monetary saving through online

Agree (4) 138
indifferent (3) 77
Strongly agree (5) 54

Name: Patronizing_Convenience, dtype: int64

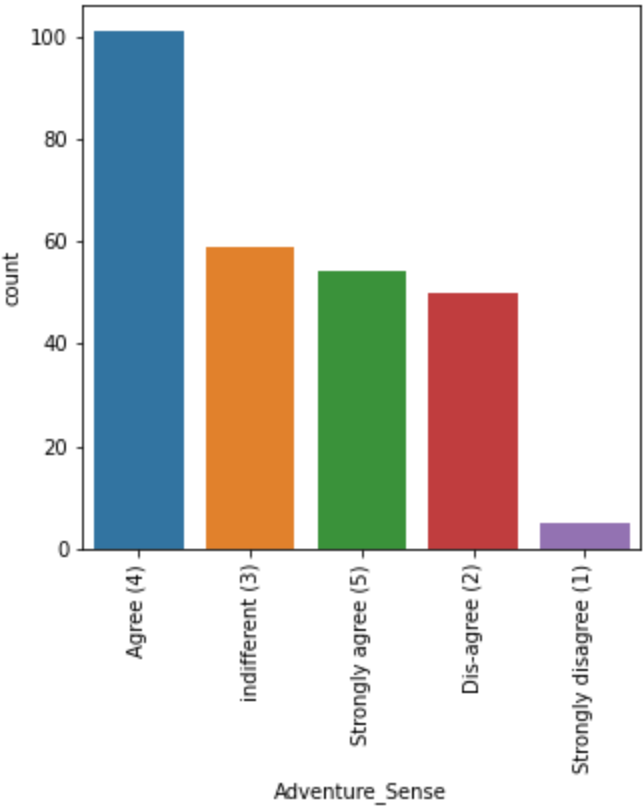


Observations

The ratio of rating shows good

Agree (4)	101
indifferent (3)	59
Strongly agree (5)	54
Dis-agree (2)	50
Strongly disagree (1)	5

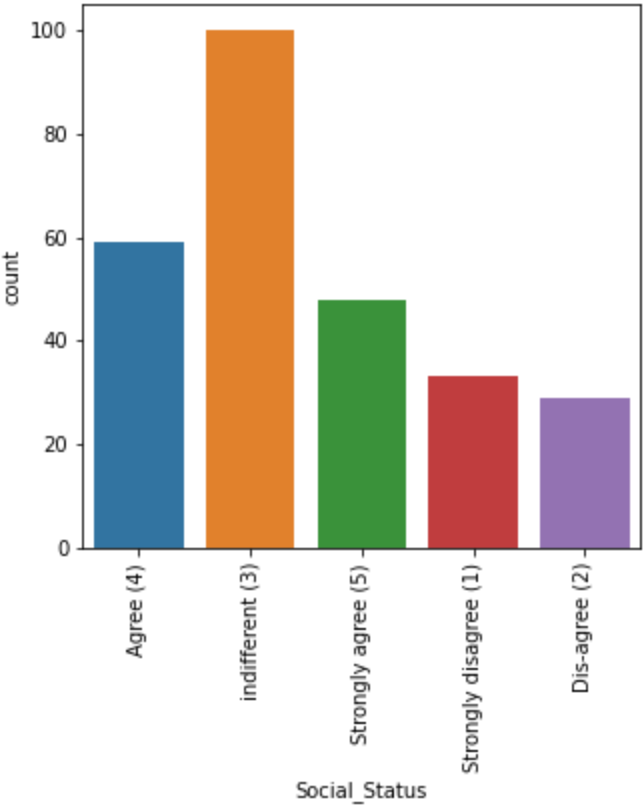
Name: Adventure_Sense, dtype: int64



Observations

This parameter has mixed reaction

indifferent (3)	100
Agree (4)	59
Strongly agree (5)	48
Strongly disagree (1)	33
Dis-agree (2)	29
Name: Social_Status, dtype: int64	

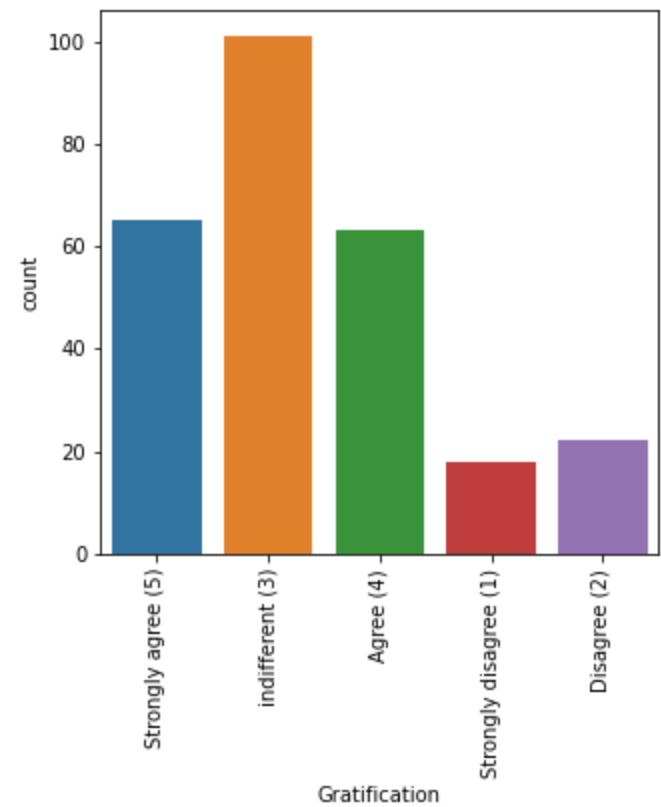


Observations

People dont feel shoping online has impact on Social status

indifferent (3)	101
Strongly agree (5)	65
Agree (4)	63
Disagree (2)	22
Strongly disagree (1)	18

Name: Gratification, dtype: int64



Observations

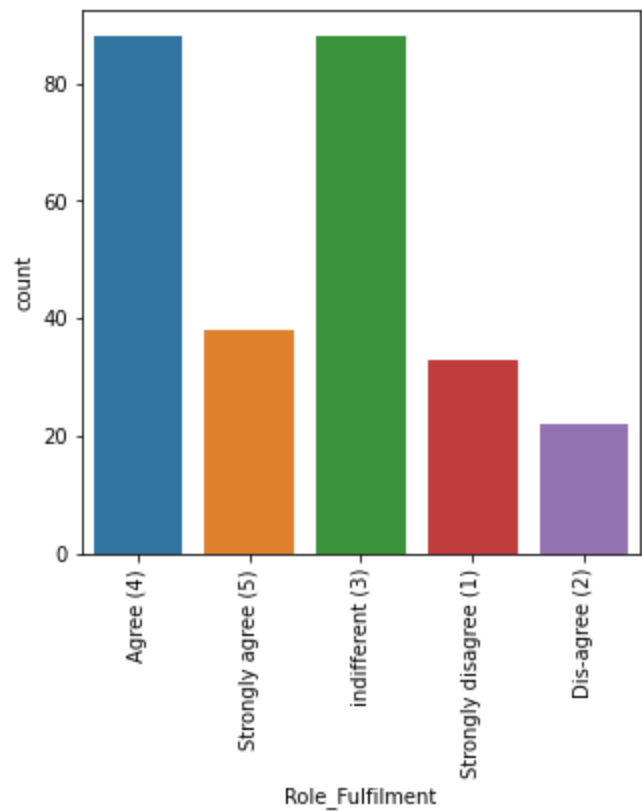
People dont feel online shopping has much impact on Gratification

Agree (4)	88
indifferent (3)	88
Strongly agree (5)	38

Strongly disagree (1) 33

Dis-agree (2) 22

Name: Role_Fulfilment, dtype: int64



Observations

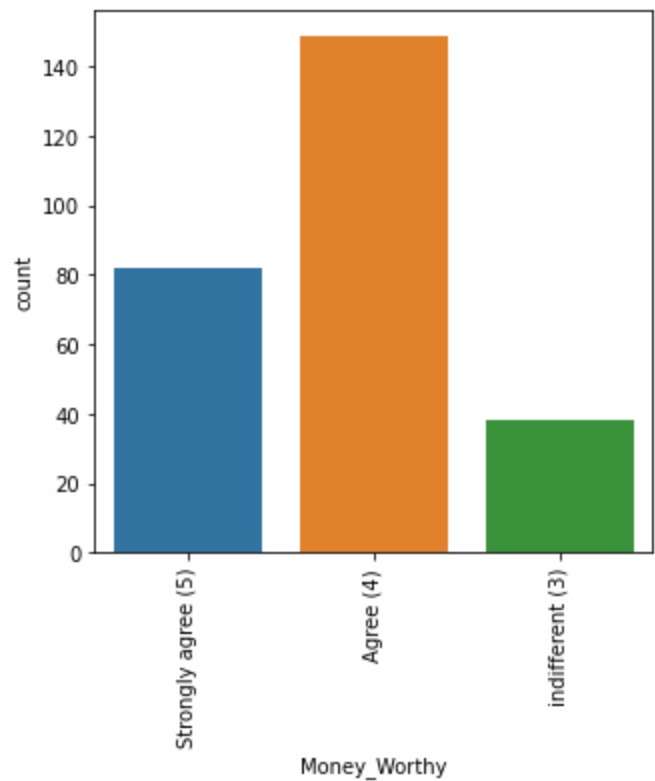
Role Fulfillment has mixed reaction

Agree (4) 149

Strongly agree (5) 82

indifferent (3) 38

Name: Money_Worthy, dtype: int64



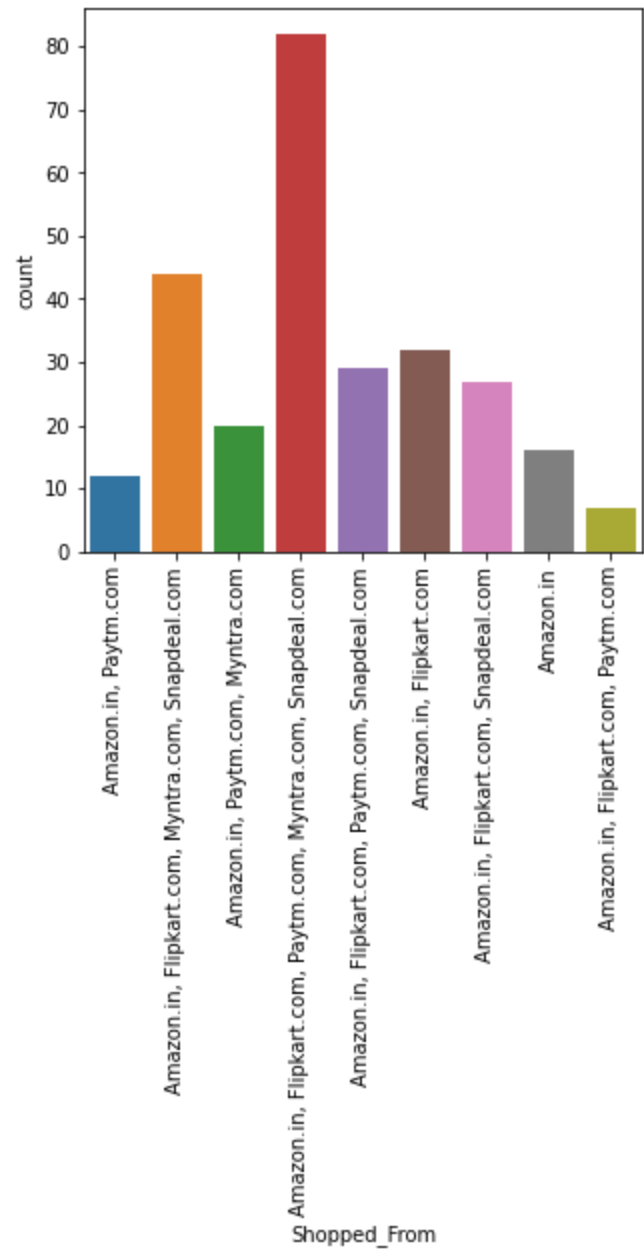
Observations

Money worthy has good ratings.

Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com 82

Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com 44

Amazon.in, Flipkart.com	32	
Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com		29
Amazon.in, Flipkart.com, Snapdeal.com	27	
Amazon.in, Paytm.com, Myntra.com	20	
Amazon.in	16	
Amazon.in, Paytm.com	12	
Amazon.in, Flipkart.com, Paytm.com	7	
Name: Shopped_From, dtype: int64		



Observations

Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com has more number which people genearily uses all online shopping

Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com 64

Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com 44

Amazon.in, Flipkart.com 44

Amazon.in 29

Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com 22

Amazon.in, Paytm.com, Myntra.com 20

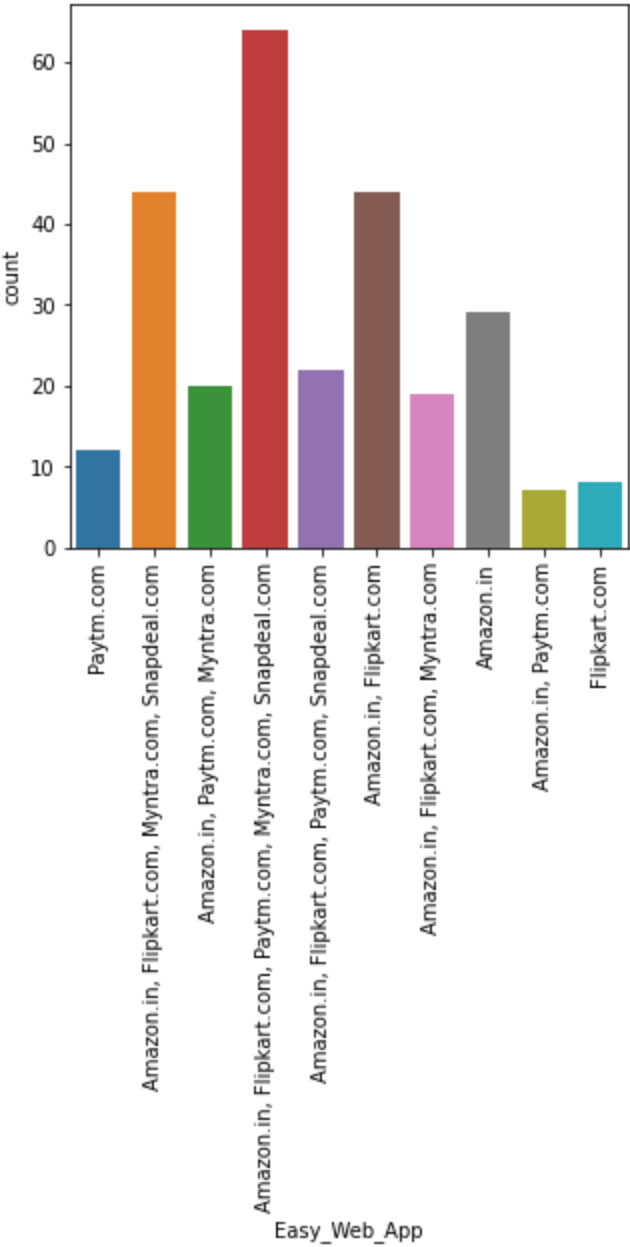
Amazon.in, Flipkart.com, Myntra.com 19

Paytm.com 12

Flipkart.com 8

Amazon.in, Paytm.com 7

Name: Easy_Web_App, dtype: int64

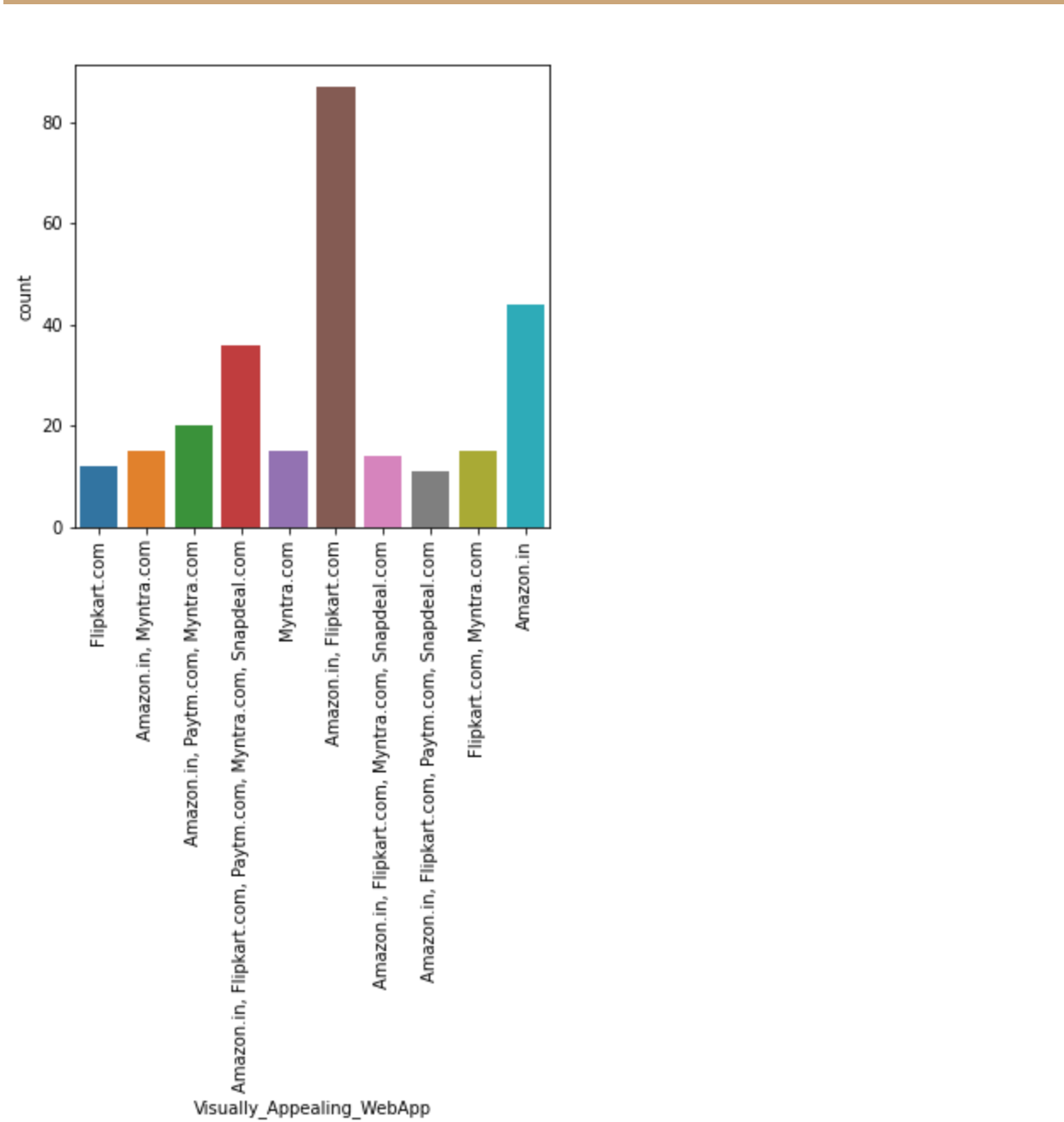


Observations

Amazon.in has Easy_Web_App



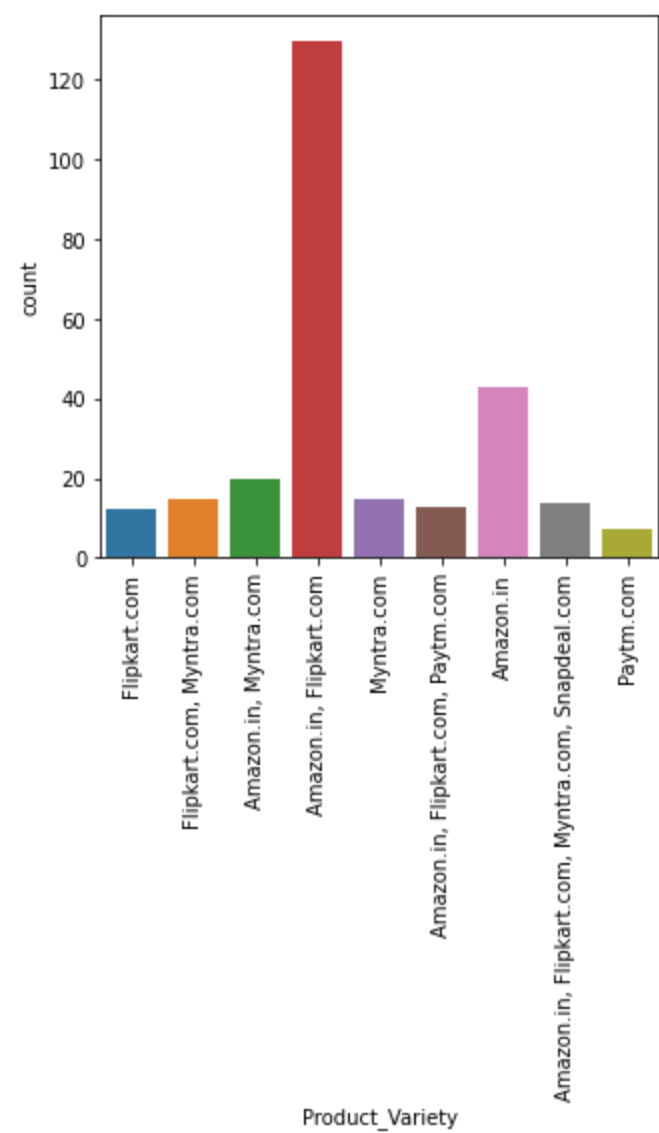
Amazon.in, Flipkart.com	87	
Amazon.in	44	
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com	36	
Amazon.in, Paytm.com, Myntra.com	20	
Amazon.in, Myntra.com	15	
Myntra.com	15	
Flipkart.com, Myntra.com	15	
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	14	
Flipkart.com	12	
Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com	11	
Name: Visually_Appealing_WebApp, dtype: int64		



Observations

Amazon.in is more visually appealing

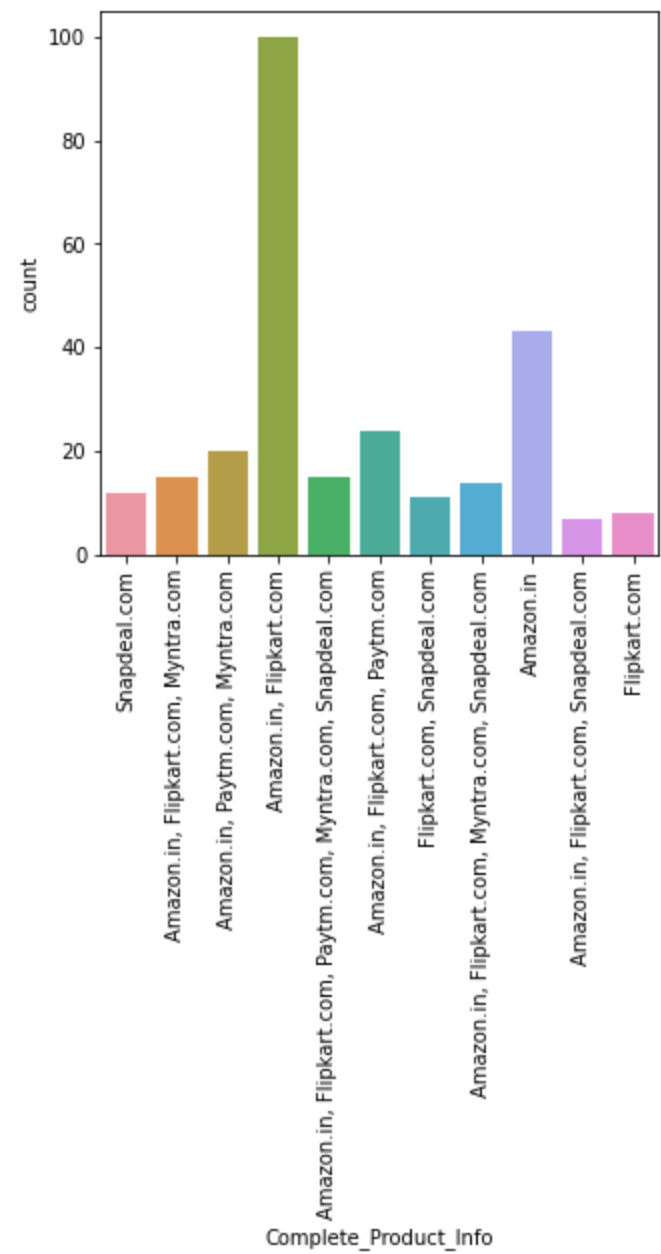
Amazon.in, Flipkart.com	130
Amazon.in	43
Amazon.in, Myntra.com	20
Flipkart.com, Myntra.com	15
Myntra.com	15
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	14
Amazon.in, Flipkart.com, Paytm.com	13
Flipkart.com	12
Paytm.com	7
Name: Product_Variety, dtype: int64	



Observations

Amazon.in has good Product_variety compared to others

Amazon.in, Flipkart.com	100
Amazon.in	43
Amazon.in, Flipkart.com, Paytm.com	24
Amazon.in, Paytm.com, Myntra.com	20
Amazon.in, Flipkart.com, Myntra.com	15
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com	15
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	14
Snapdeal.com	12
Flipkart.com, Snapdeal.com	11
Flipkart.com	8
Amazon.in, Flipkart.com, Snapdeal.com	7
Name: Complete_Product_Info, dtype: int64	



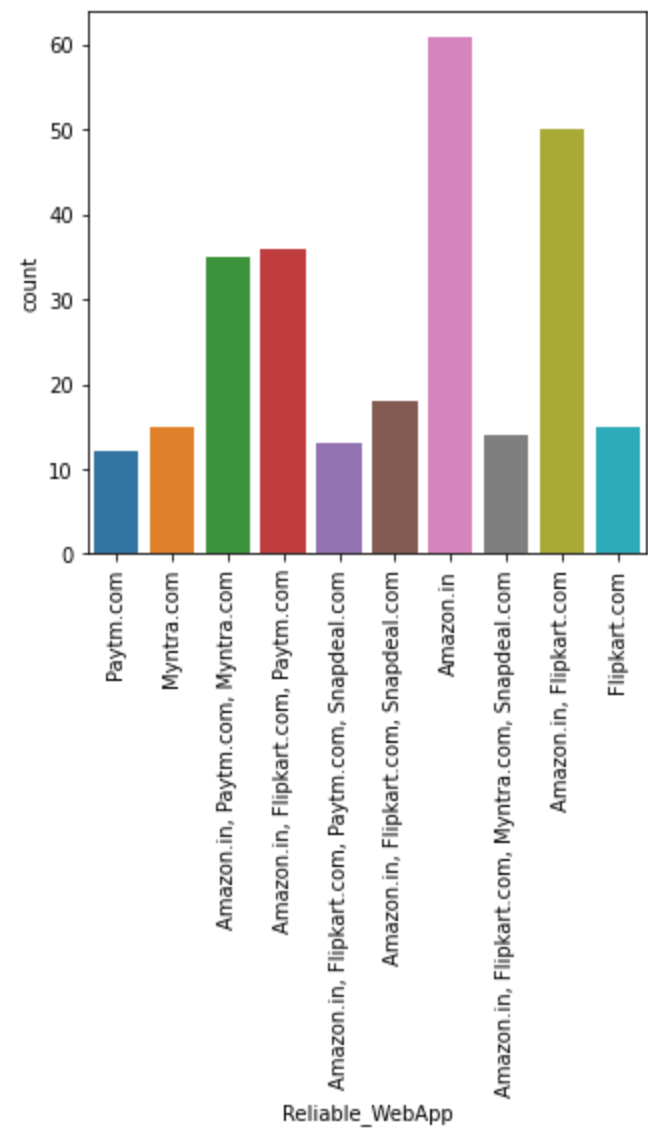
Observations

Amazon.in, Flipkart.com combined has complete_product_info

Amazon.in	51	
Amazon.in, Paytm.com	44	
Amazon.in, Flipkart.com, Myntra.com	30	
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com	30	
Amazon.in, Flipkart.com	30	
Amazon.in, Flipkart.com, Snapdeal.com	25	
Amazon.in, Flipkart.com, Paytm.com	25	
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	14	
Snapdeal.com	12	
Flipkart.com	8	
Name: Fast_WebApp, dtype: int64		

=====

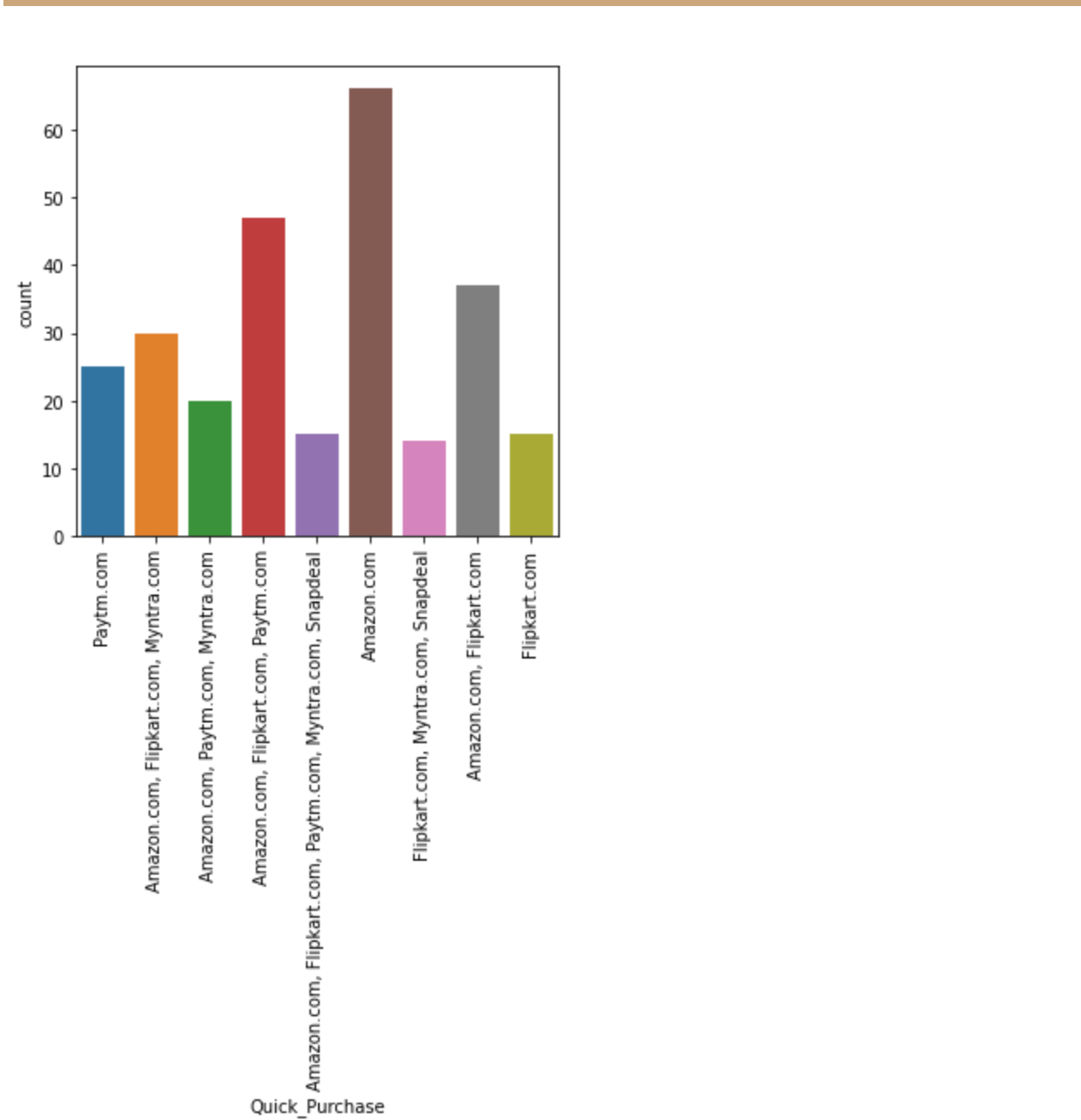
Amazon.in	61	
Amazon.in, Flipkart.com	50	
Amazon.in, Flipkart.com, Paytm.com	36	
Amazon.in, Paytm.com, Myntra.com	35	
Amazon.in, Flipkart.com, Snapdeal.com	18	
Myntra.com	15	
Flipkart.com	15	
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	14	
Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com	13	
Paytm.com	12	
Name: Reliable_WebApp, dtype: int64		



Observations

Amazon.in is Reliable_Web app the data shows

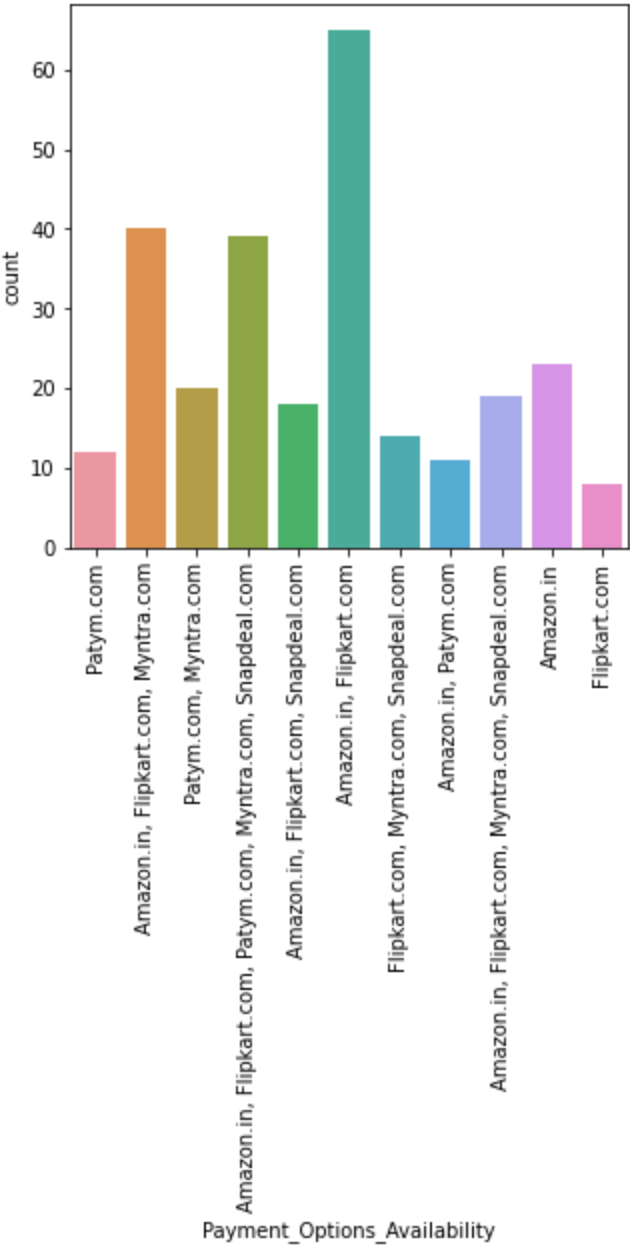
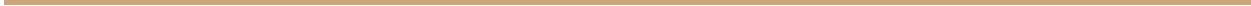
Amazon.com	66	
Amazon.com, Flipkart.com, Paytm.com	47	
Amazon.com, Flipkart.com	37	
Amazon.com, Flipkart.com, Myntra.com	30	
Paytm.com	25	
Amazon.com, Paytm.com, Myntra.com	20	
Amazon.com, Flipkart.com, Paytm.com, Myntra.com, Snapdeal	15	
Flipkart.com	15	
Flipkart.com, Myntra.com, Snapdeal	14	
Name: Quick_Purchase, dtype: int64		



Observations

Amazon.com has facility of Quick purchase

Amazon.in, Flipkart.com	65	
Amazon.in, Flipkart.com, Myntra.com	40	
Amazon.in, Flipkart.com, Patym.com, Myntra.com, Snapdeal.com	39	
Amazon.in	23	
Patym.com, Myntra.com	20	
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	19	
Amazon.in, Flipkart.com, Snapdeal.com	18	
Flipkart.com, Myntra.com, Snapdeal.com	14	
Patym.com	12	
Amazon.in, Patym.com	11	
Flipkart.com	8	
Name: Payment_Options_Availability, dtype: int64		

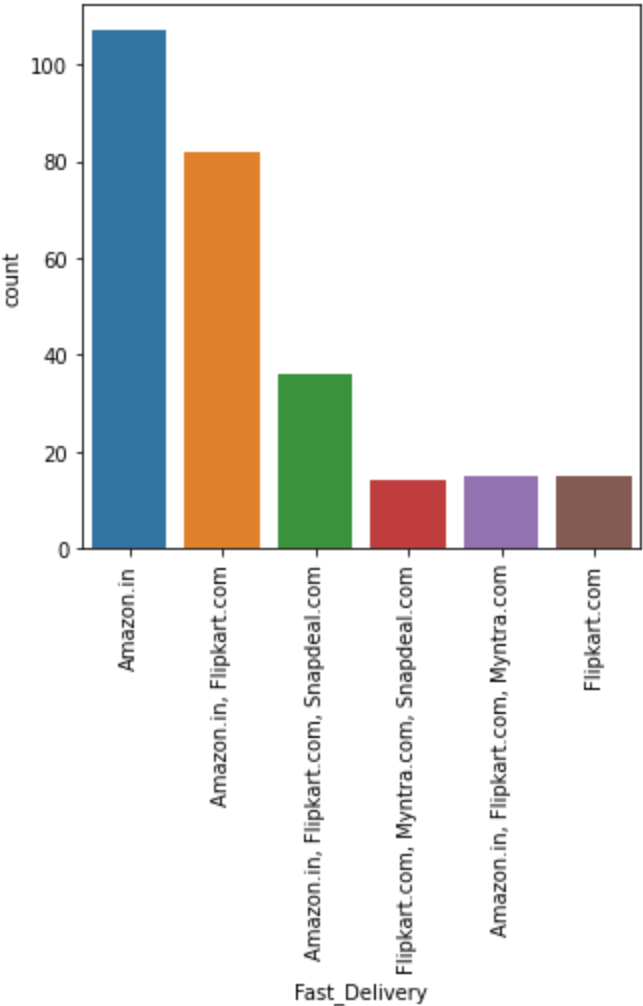


Observations

Amazon.in, Flipkart.com both are good in terms of payment facility



Amazon.in	107
Amazon.in, Flipkart.com	82
Amazon.in, Flipkart.com, Snapdeal.com	36
Amazon.in, Flipkart.com, Myntra.com	15
Flipkart.com	15
Flipkart.com, Myntra.com, Snapdeal.com	14
Name: Fast_Delivery, dtype: int64	



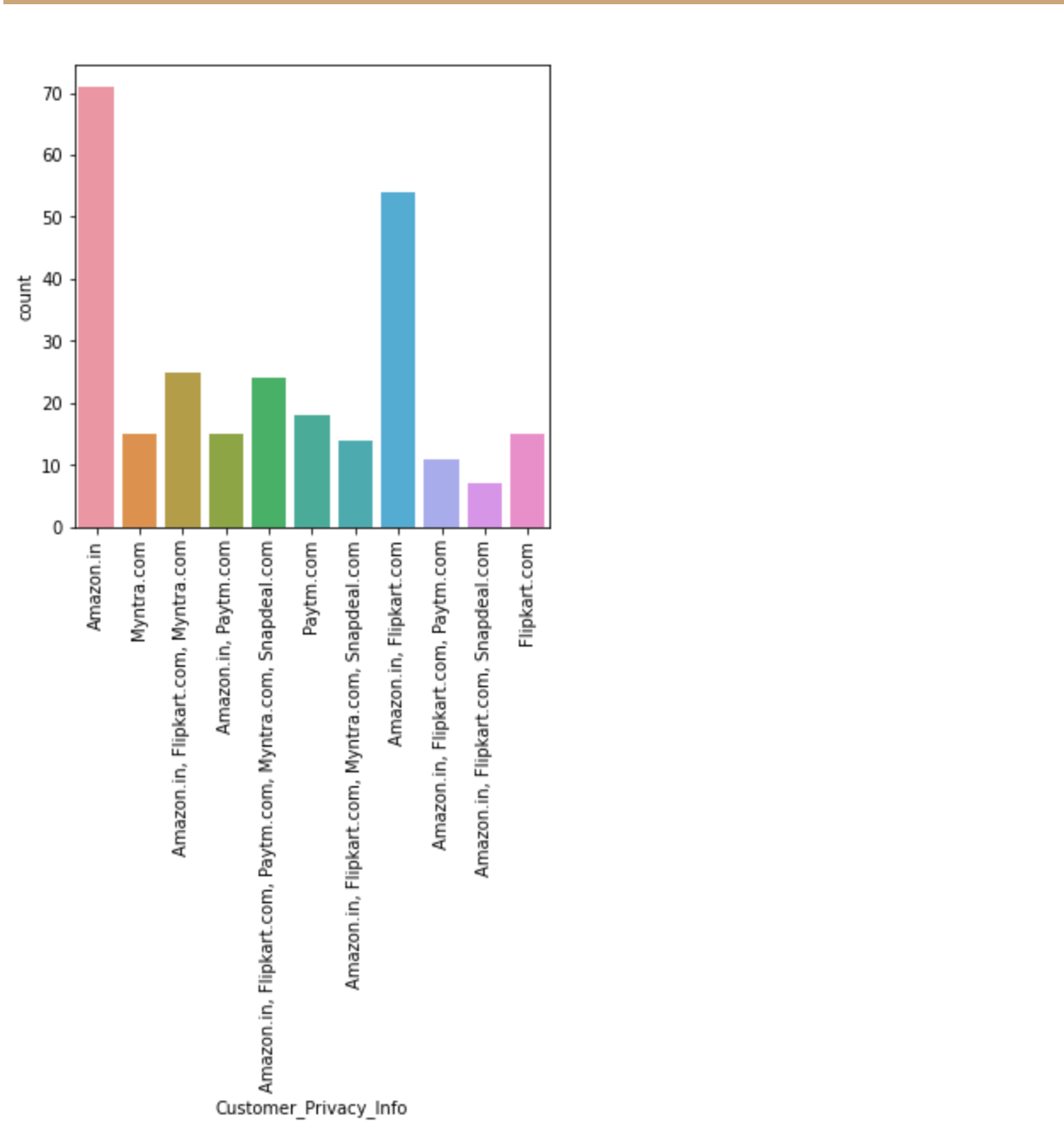
Observations

Amazon.in has fast_delivery

Amazon.in	71
Amazon.in, Flipkart.com	54



Amazon.in, Flipkart.com, Myntra.com	25
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com	24
Paytm.com	18
Myntra.com	15
Amazon.in, Paytm.com	15
Flipkart.com	15
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	14
Amazon.in, Flipkart.com, Paytm.com	11
Amazon.in, Flipkart.com, Snapdeal.com	7
Name: Customer_Privacy_Info, dtype: int64	

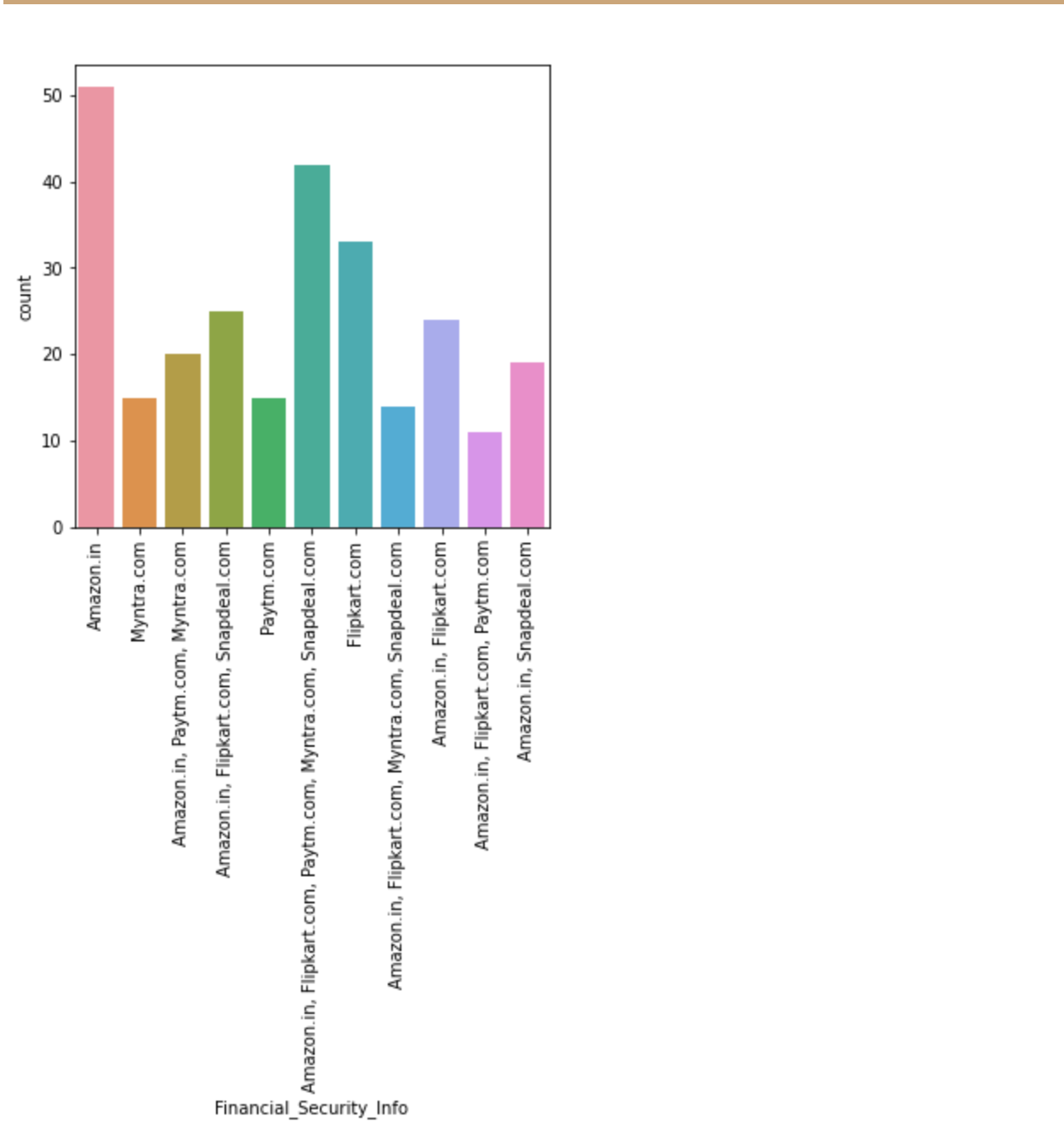


Observations

Amazon.in has good Customer_Privacy_info

Amazon.in	51	
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com	42	
Flipkart.com	33	
Amazon.in, Flipkart.com, Snapdeal.com	25	
Amazon.in, Flipkart.com	24	
Amazon.in, Paytm.com, Myntra.com	20	
Amazon.in, Snapdeal.com	19	
Myntra.com	15	
Paytm.com	15	
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	14	
Amazon.in, Flipkart.com, Paytm.com	11	

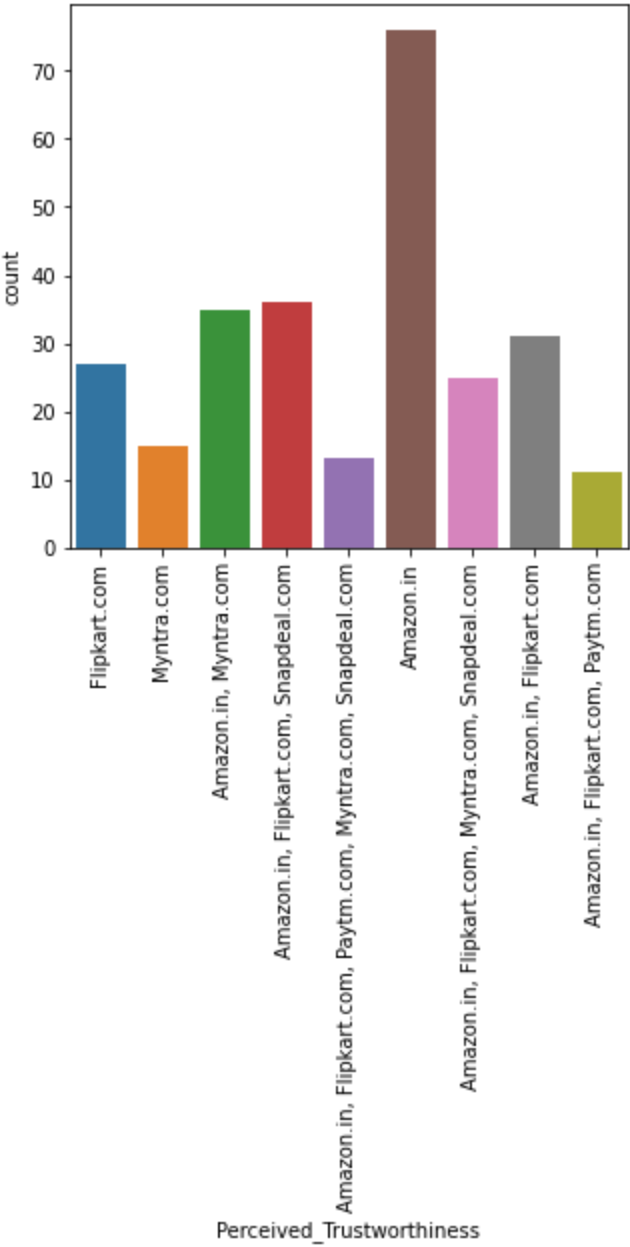
Name: Financial_Security_Info, dtype: int64



Observations

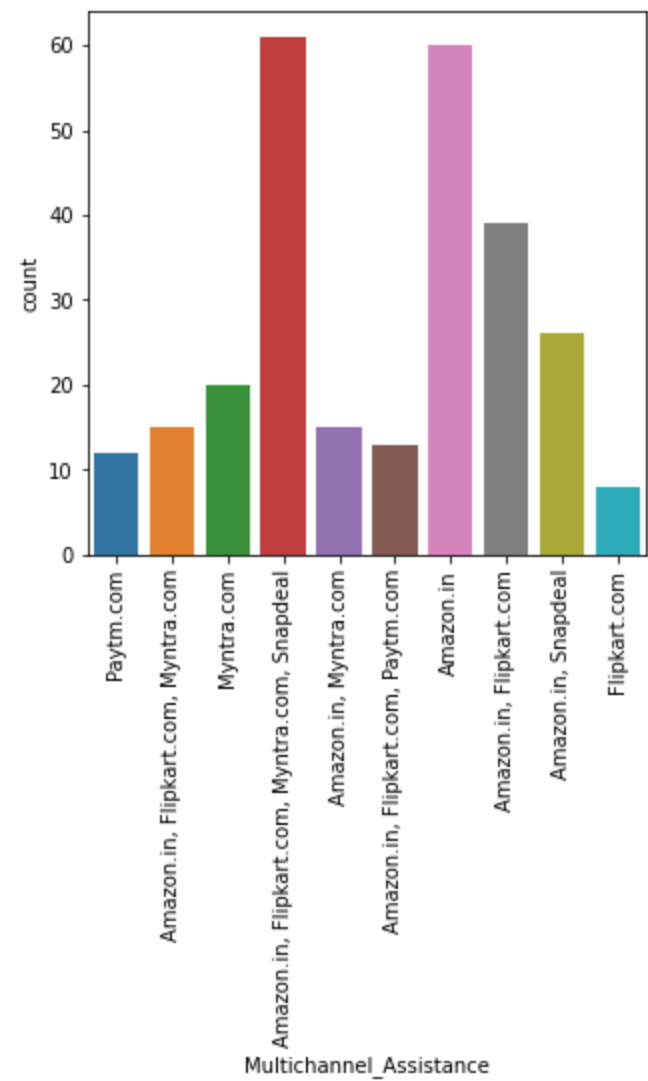
Amazon.in has good Financial_Security

Amazon.in	76	
Amazon.in, Flipkart.com, Snapdeal.com	36	
Amazon.in, Myntra.com	35	
Amazon.in, Flipkart.com	31	
Flipkart.com	27	
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	25	
Myntra.com	15	
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com	13	
Amazon.in, Flipkart.com, Paytm.com	11	
Name: Perceived_Trustworthiness, dtype: int64		



Observations

Amazon.in has more Peerceived_Trustworthiness

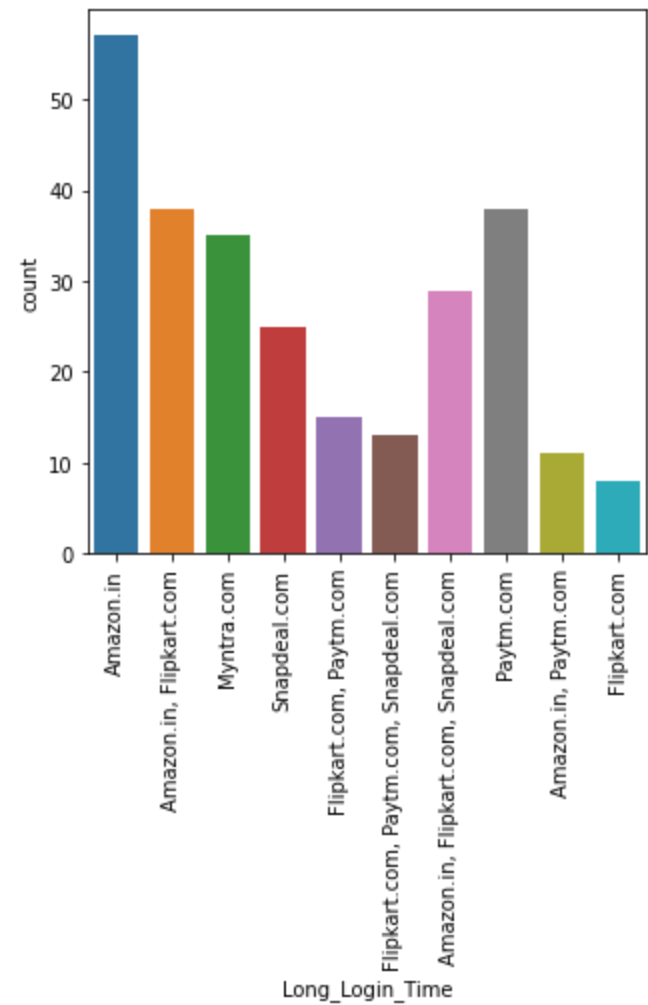


Observations

Amazon.in has good Multichannel_Assistance

Amazon.in 57

Amazon.in, Flipkart.com	38
Paytm.com	38
Myntra.com	35
Amazon.in, Flipkart.com, Snapdeal.com	29
Snapdeal.com	25
Flipkart.com, Paytm.com	15
Flipkart.com, Paytm.com, Snapdeal.com	13
Amazon.in, Paytm.com	11
Flipkart.com	8
Name: Long_Login_Time, dtype: int64	



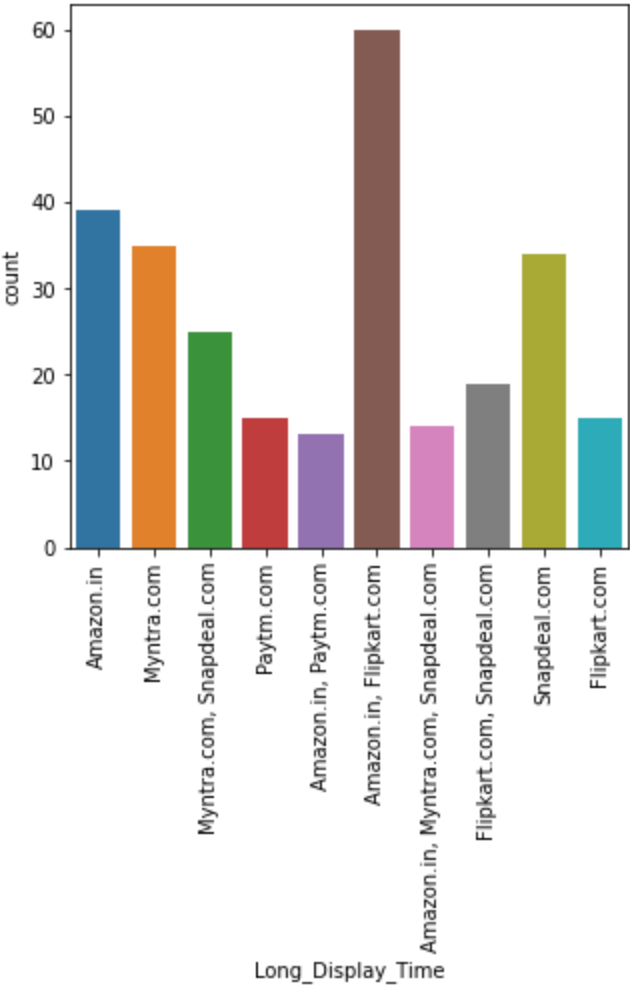
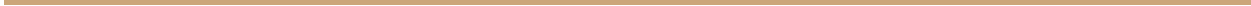
Observations

Amazon.in shows Long_Login_time

Amazon.in, Flipkart.com 60

Amazon.in 39

Myntra.com	35
Snapdeal.com	34
Myntra.com, Snapdeal.com	25
Flipkart.com, Snapdeal.com	19
Paytm.com	15
Flipkart.com	15
Amazon.in, Myntra.com, Snapdeal.com	14
Amazon.in, Paytm.com	13
Name: Long_Display_Time, dtype: int64	



Observations

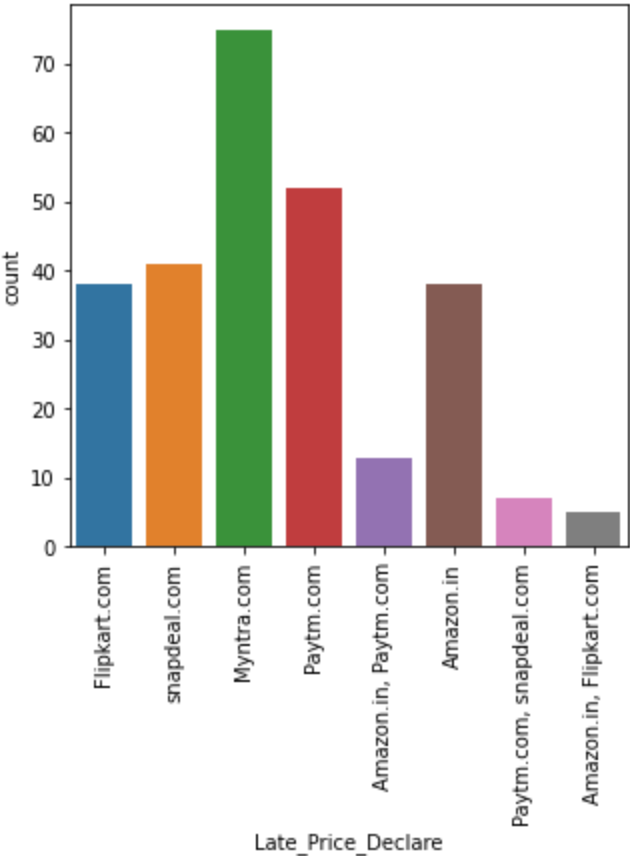
Amazon.in has long display time which negative

Myntra.com	75
Paytm.com	52



snapdeal.com	41
Flipkart.com	38
Amazon.in	38
Amazon.in, Paytm.com	13
Paytm.com, snapdeal.com	7
Amazon.in, Flipkart.com	5

Name: Late_Price_Declare, dtype: int64

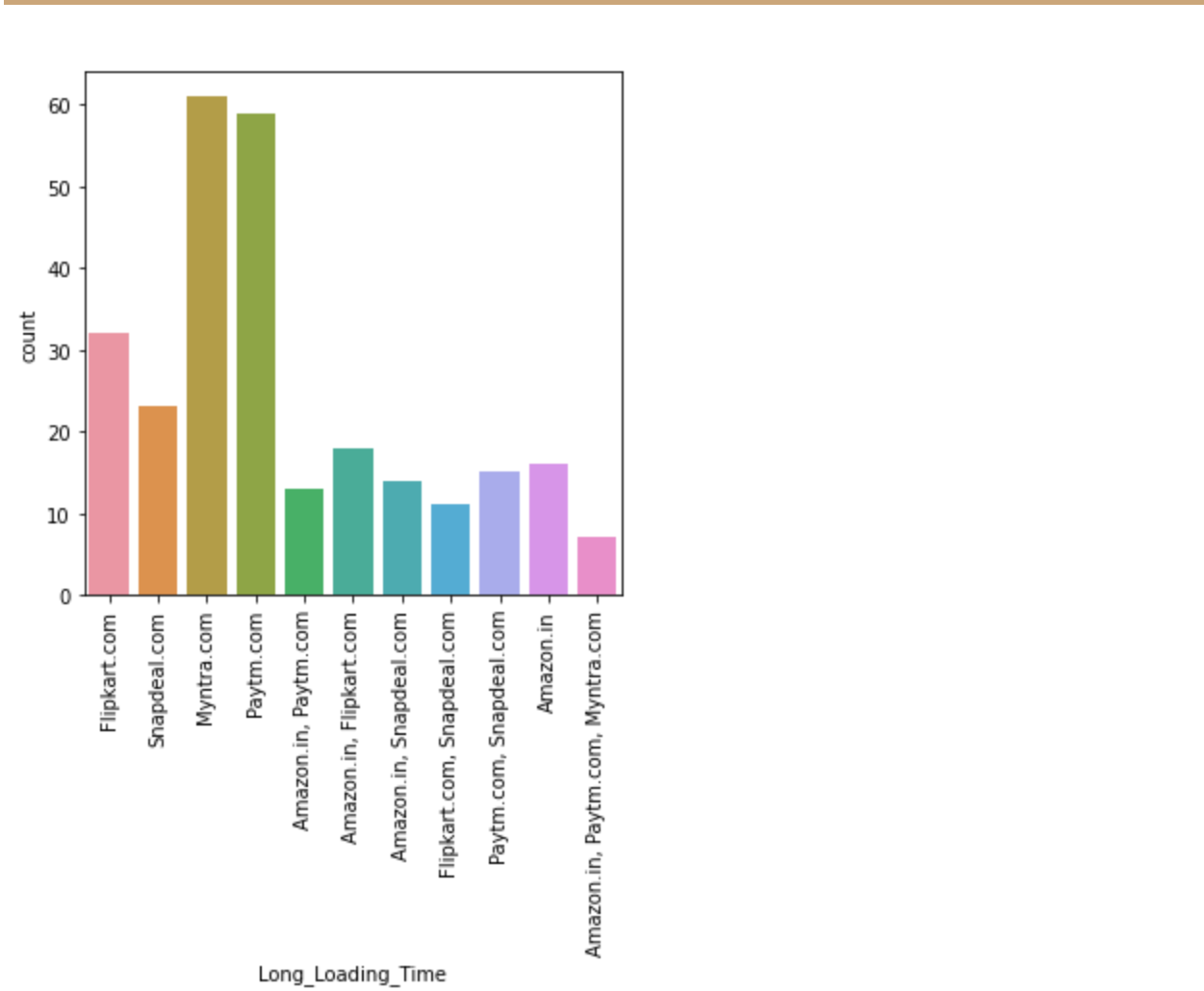


Observations

Myntra.com declare price too late

Myntra.com	61
Paytm.com	59
Flipkart.com	32
Snapdeal.com	23
Amazon.in, Flipkart.com	18
Amazon.in	16
Paytm.com, Snapdeal.com	15
Amazon.in, Snapdeal.com	14
Amazon.in, Paytm.com	13
Flipkart.com, Snapdeal.com	11
Amazon.in, Paytm.com, Myntra.com	7

Name: Long>Loading_Time, dtype: int64



Observations

Myntra.com has long loading time

Snapdeal.com 87

Amazon.in 62

Flipkart.com 31

Amazon.in, Flipkart.com 29

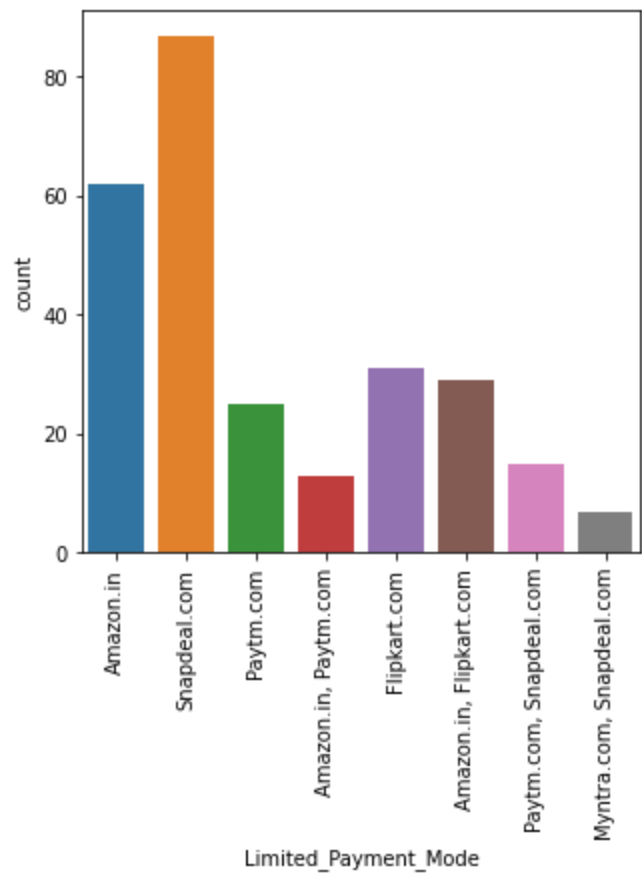
Paytm.com 25

Paytm.com, Snapdeal.com 15

Amazon.in, Paytm.com 13

Myntra.com, Snapdeal.com 7

Name: Limited_Payment_Mode, dtype: int64

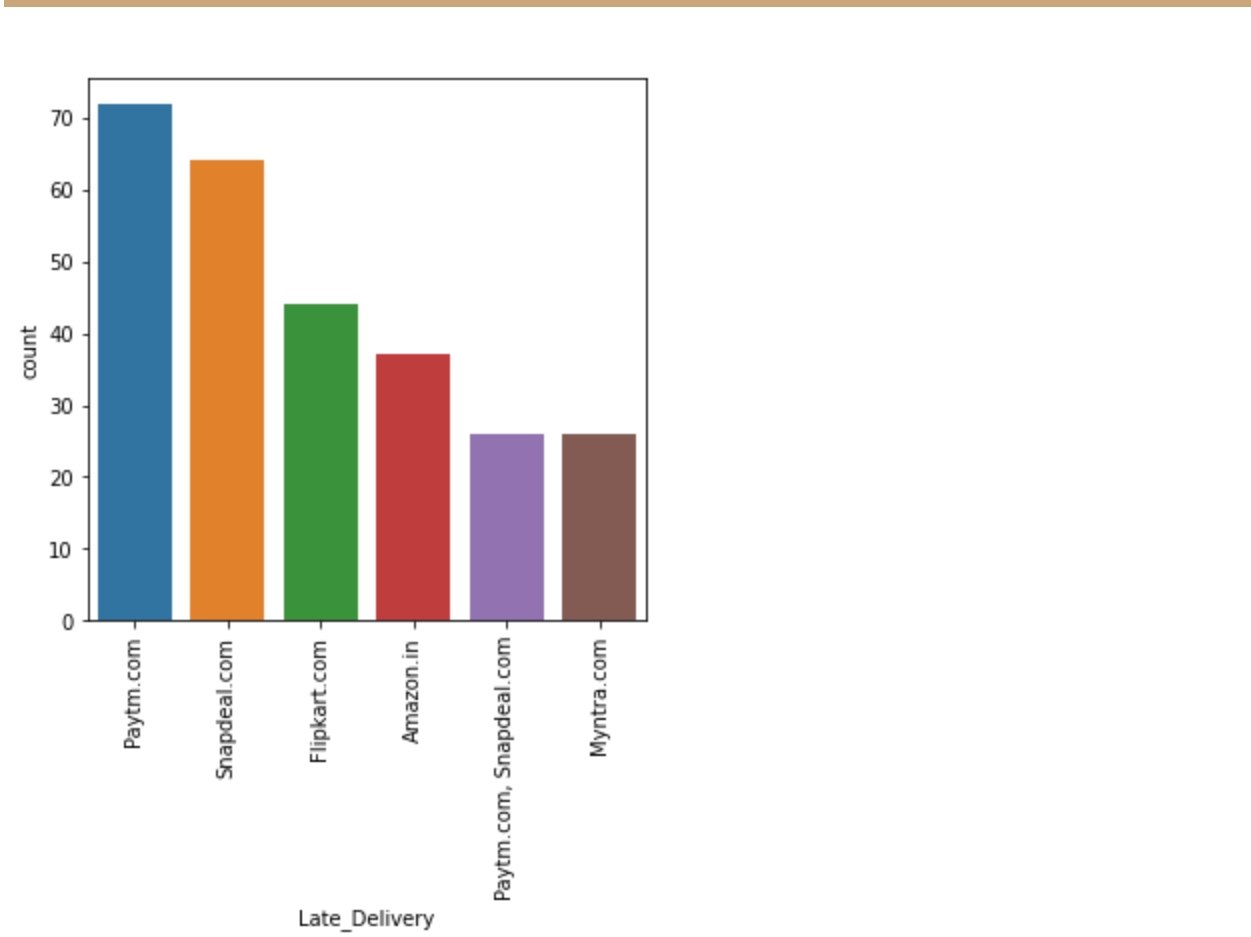


Observations

Snapdeal.com has Limited payment option

Paytm.com	72
Snapdeal.com	64
Flipkart.com	44
Amazon.in	37
Paytm.com, Snapdeal.com	26
Myntra.com	26

Name: Late_Delivery, dtype: int64



Observations

Paytm.com along with Myntra.com has late delivery

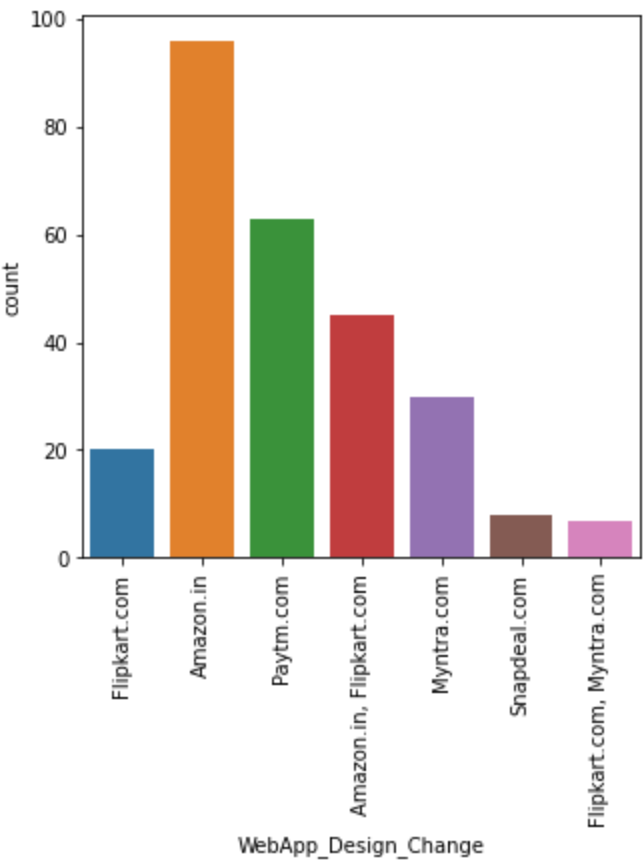
Amazon.in	96
Paytm.com	63
Amazon.in, Flipkart.com	45
Myntra.com	30

Flipkart.com 20

Snapdeal.com 8

Flipkart.com, Myntra.com 7

Name: WebApp_Design_Change, dtype: int64



Observations

Amazon.in used change Web_App_design

Amazon.in 53

Myntra.com 52

Snapdeal.com 49

Paytm.com 39

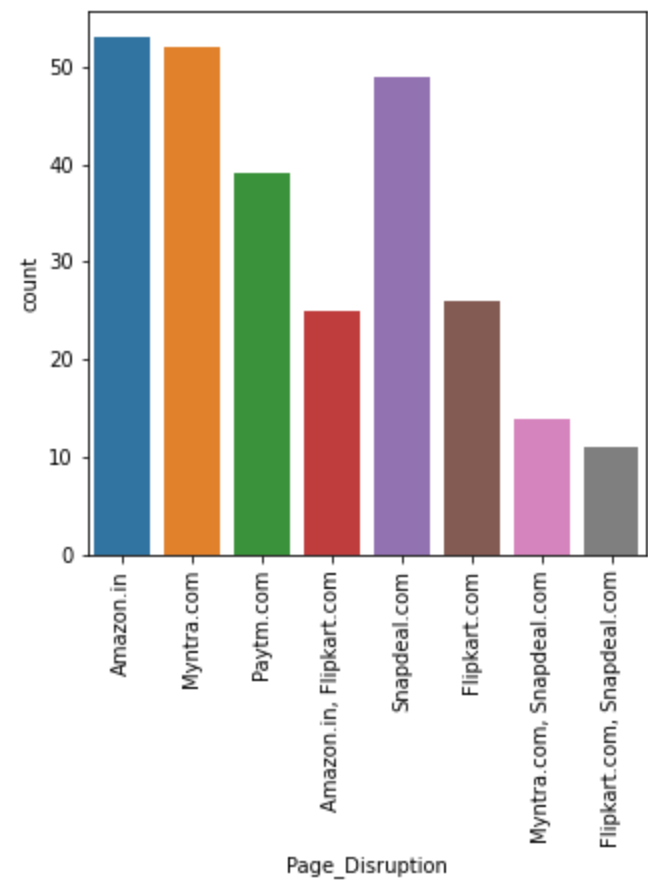
Flipkart.com 26

Amazon.in, Flipkart.com 25

Myntra.com, Snapdeal.com 14

Flipkart.com, Snapdeal.com 11

Name: Page_Disruption, dtype: int64

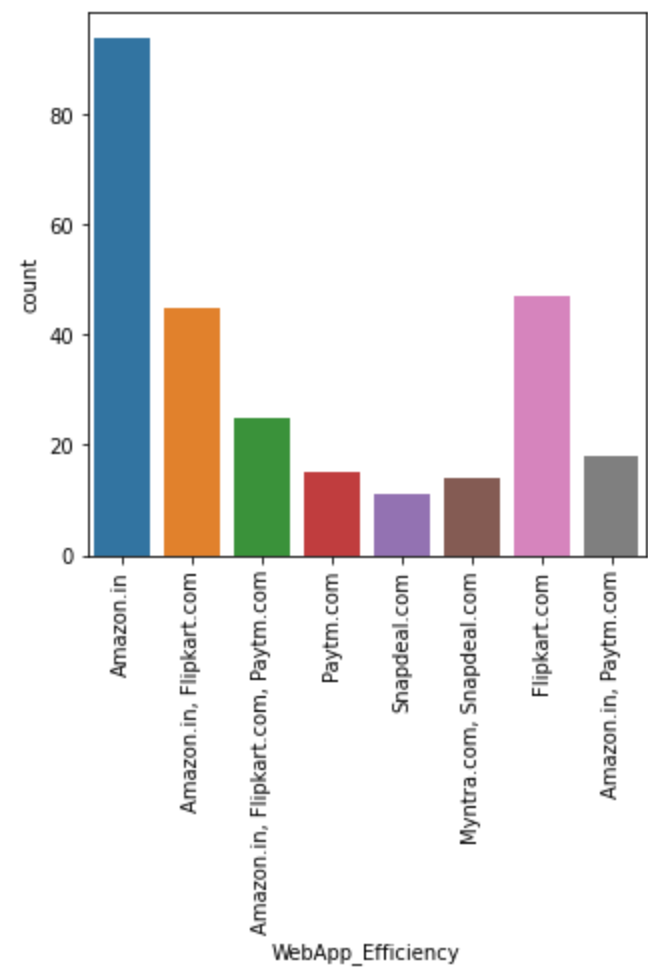


Observations

Amazon.in has more Page_Disruption

Amazon.in	94
Flipkart.com	47
Amazon.in, Flipkart.com	45
Amazon.in, Flipkart.com, Paytm.com	25

Amazon.in, Paytm.com	18
Paytm.com	15
Myntra.com, Snapdeal.com	14
Snapdeal.com	11
Name: WebApp_Efficiency, dtype: int64	

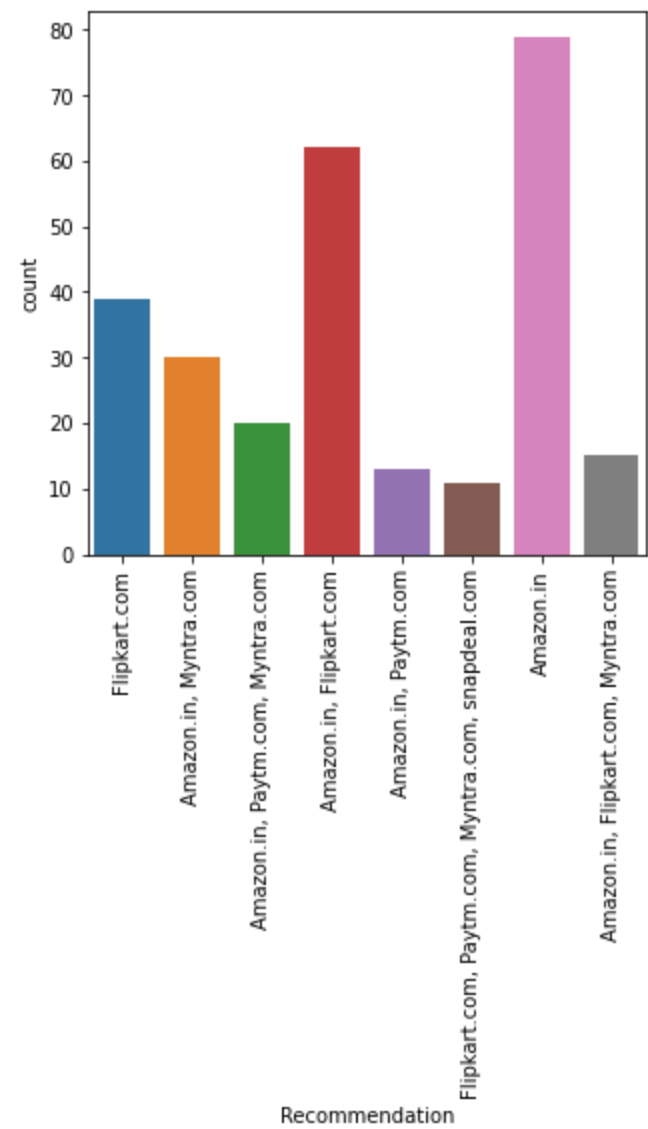


Observations

Amazon.in has WebApp_Efficiency

Amazon.in	79
Amazon.in, Flipkart.com	62
Flipkart.com	39
Amazon.in, Myntra.com	30
Amazon.in, Paytm.com, Myntra.com	20
Amazon.in, Flipkart.com, Myntra.com	15
Amazon.in, Paytm.com	13
Flipkart.com, Paytm.com, Myntra.com, snapdeal.com	11

Name: Recommendation, dtype: int64



Observations

Amazon.in is widely recommended

Exploring Opinion on Online Shopping Platform Websites by Customer

In this section, we will analyze features related to the website or application like performance, and web layout. Following features, we have analyzed in this section:

1. Easy to use website or application
2. Visual appealing web-page layout
3. The wide variety of products on offer
4. Complete, relevant description information of products
5. Fast loading website speed of website and application
6. Reliability of the website or application
7. Quickness to complete purchase
8. Availability of several payment options
9. Speedy order delivery
10. Privacy of customers' information
11. Security of customer financial information
12. Perceived Trustworthiness
13. Presence of online assistance through multi-channel
14. Longer time to get logged in (promotion, sales period)
15. Longer time in displaying graphics and photos (promotion, sales period)
16. Late declaration of price (promotion, sales period)
17. Longer page loading time (promotion, sales period)
18. Limited mode of payment on most products (promotion, sales period)
19. Longer delivery period
20. Change in website/Application design
21. Frequent disruption when moving from one page to another
22. The website is as efficient as before
23. Which Indian online retailer would you recommend to a friend?

On analyzing the above features following key findings: Observation:

- The majority, 64 customers agree that Amazon.in, Flipkart.com, Paytm.com, Myntra.com, and Snapdeal.com are Easy to use websites or applications. **But overall if we look at the count plot of the easy-to-use application & website Amazon. in got individually 1st Rank.**
- 87 customers agree that Amazon. in, Flipkart.com have Visual appealing web-page layout than most of the other market players.
- Around 125 people on Amazon.in, Flipkart.com provides a wide variety of offer on products.

- We already know 50.2% Strongly agree over providing complete relevant product information, and here we can see that 100 customers think that Amazon.in, Flipkart.com provides complete information compared to others.
- Previously we know that 42.8 % of customers strongly agree and 41.6

% customers agree with high loading & processing speed of the website. Here we can see Majority of people think that the loading speed of Amazon.in is fastest while Flipkart.com slowest website to load.

- In terms of *Reliability of website or application* again Amazon top of list.
- The majority of people also think that *Amazon.in tops the chart in terms of quick purchase process* compare to others.
- The majority of customers think that Amazon.in, Flipkart.com provides several payment options compared to others.
- Safe & Speed delivery very much deciding factor in terms of purchase. In terms of *speed of delivery Amazon.in is much better than other online shopping platforms* and *Flipkart.com worst among all* in terms of speed of delivery of products.
- We already know more than 90% of Customer thinks that guaranteeing on the privacy of their information is important for them. The majority of customers trust Amazon.in more than other shopping platform for the Privacy of customers' information
- Majority of customer trust Amazon. followed by Flipkart.in over the Security of their financial information. We also see very few peoples trust the payment platform Paytm.

Chap 4. Conclusion

1. Key Findings and Conclusions of the Study

- It is strong recommendation to companies that Do not spend more money over social media marketing & Display Adverts in their Digital Marketing campaign instead of that focus on Search engine Optimization & Email Marketing which will likely to be more effective to earlier.
- Complete description product on website or app is essential from making purchase decision.
- For both gender tendency of shopping is less for age greater than 51 years old.
- Most of them agrees that the functioning of app efficiently is also a

major factor which helps in enhance user experience while doing online shopping.

- Around 50% customers abandon cart due to better alternative offer

which is obvious reason. Another most common reason is promo code not applicable on particular product.

- Paytm and Snapdeal has poor customer services and there is lot of scope for further improvement.
- Amazon and Flipkart are standing best out in the market competent

business strategies and lot advantages over there competitor.

- Mostly because, it is convenient and flexible, people prefer online shopping.
- people who have been shopping for more then 3-4 years are the ones who frequently shops.
- We can observe that most of the people, abandoned them cart as they were having better alternative offers
- To conclude, having the right customer retention strategy will keep sellers company growing if they know how to take advantage of it.

Then customers will find their way back and continue buying stuff from the best company.