
*Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector*



NAME OF THE PROJECT

Project Report on Data Analysis of Customer
Retention in the Ecommerce Sector

Submitted by:

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FLIPROBO SME:

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*Project Report on Data Analysis of Customer Retention
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ACKNOWLEDGMENT

I would like to express my special gratitude to the “Flip Robo” team, who has allowed me to deal with a beautiful dataset and helped me improve my analysis skills. And I want to express my huge gratitude to Ms. Khushboo Garg (SME Flip Robo).

Thanks to “Data trained” who are the reason behind my Internship at FlipRobo Technologies.

SOURCE USED IN THIS PROJECT:

1. Learn Library Documentation
2. Help from YouTube Channels, Blogs from Educational Websites
3. Notes on Machine Learning (GitHub)

*Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector*

INTRODUCTION

Business Problem Framing

Customer satisfaction has emerged as one of the most important factors that guarantee online store success; 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 an e-commerce store's success 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 a 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.

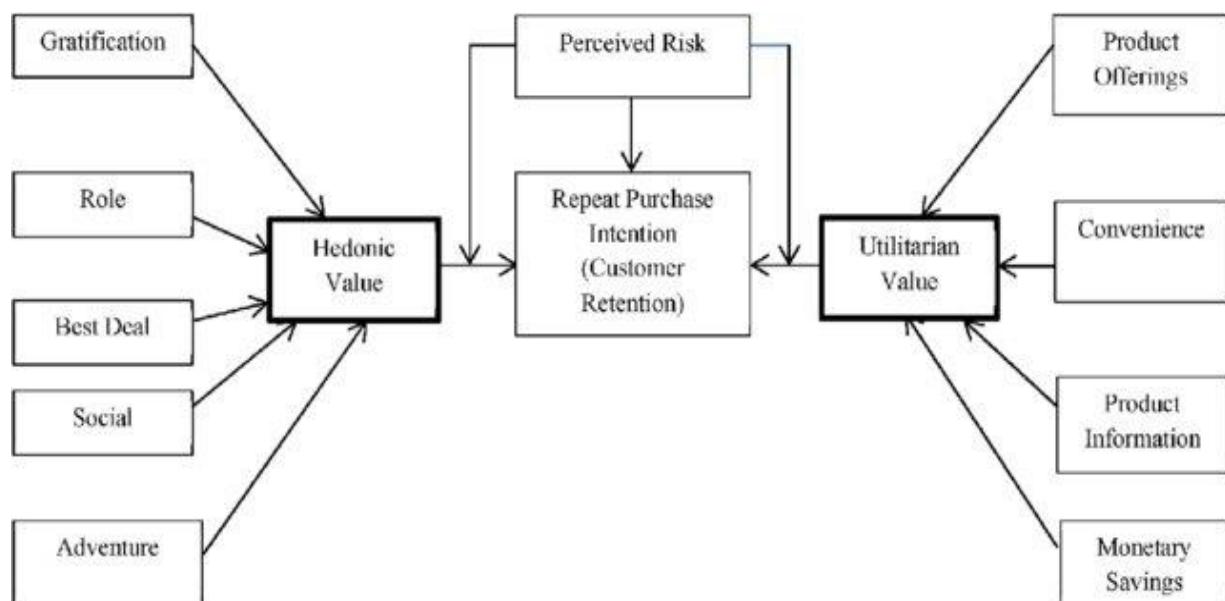
Background of the Domain Problem

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

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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 satisfied, which arises when the e-tailer possesses a quality system backed up by the proper mix of values.



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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 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.

Analytical Problem Framing

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.

First Import Libraries

Importing Required Libraries

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

Retrive DataSets

```
data=pd.read_excel('customer_retention_dataset.xlsx')
data
```

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CHEK SHAPE OF ROWS AND COLUMNS

```
: print('No. of Rows :',data.shape[0])
print('No. of Columns :',data.shape[1])
```

```
No. of Rows : 269
No. of Columns : 71
```

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

Data Pre-processing

Before pre-processing data, the integrity of data is checked for missing values, and possible duplicates are present or not.

```
data.isnull().sum().sum()
```

```
0
```

```
data.isin(['NA','N/A','-',' ','?',' ?']).sum().sum()
```

```
0
```

Hardware & Software Requirements Tool Used

Hardware Used:

Processor – AMD Ryzen 5

RAM - 8 GB

ROM – 512 GB SSD

4GB Nvidia GEFORCE GTX Graphics card

Software utilized:

Anaconda – Jupyter Notebook

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in the Ecommerce Sector*

Models Development & Evaluation

IDENTIFICATION OF POSSIBLE PROBLEM-SOLVING APPROACHES:

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:

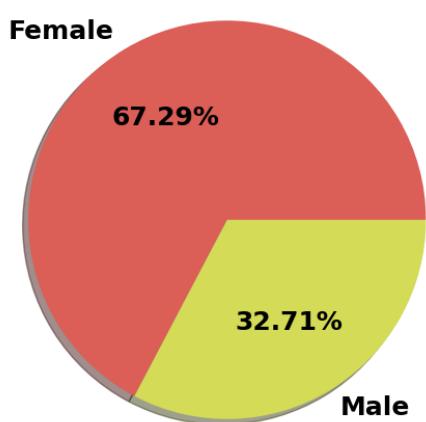
- General feature describing Population and online shopping feature
- Feature describing technological aspects related to internet services & device
- Purchase Decision & Payment related features
- Website Usability & performance related feature
- Online shopping store customer service requirement-related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

VISUALIZATIONS

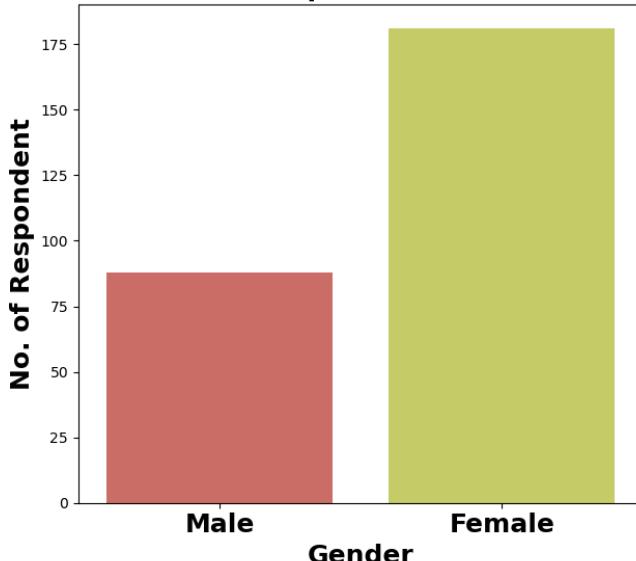
General feature describing Population and online shopping
Let's start EDA with the Gender distribution of respondent

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Gender of respondent Distribution



Gender of respondent Distribution



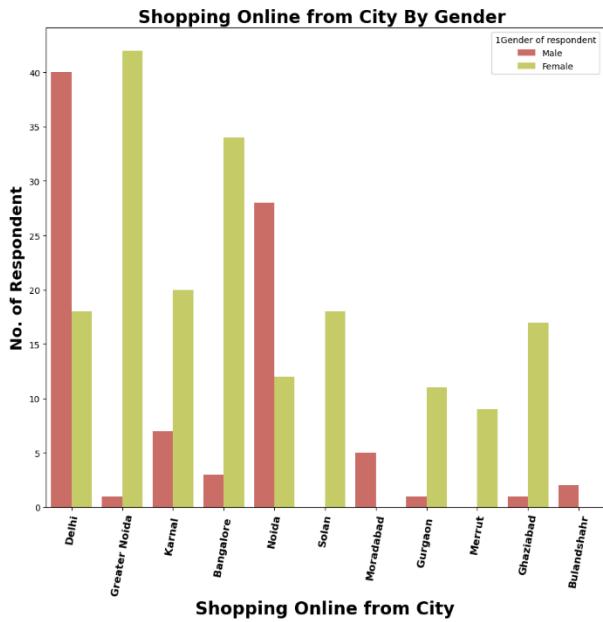
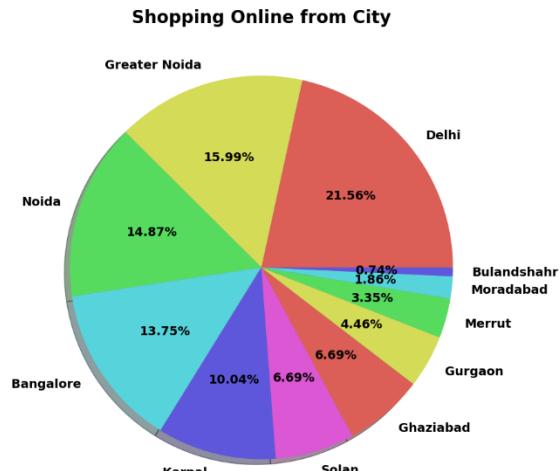
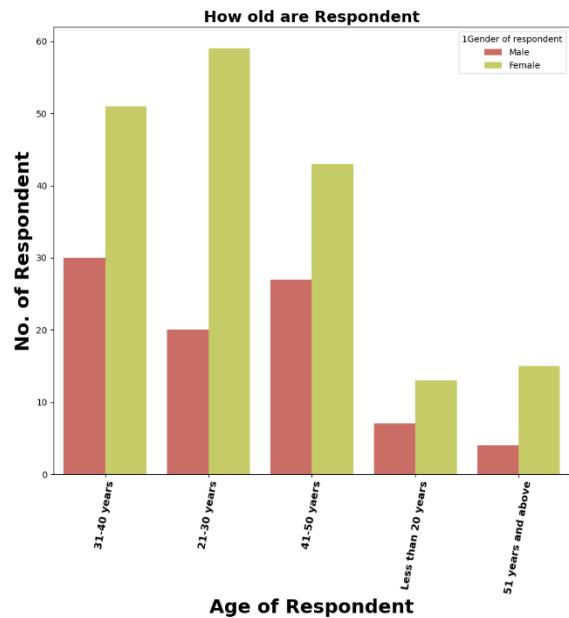
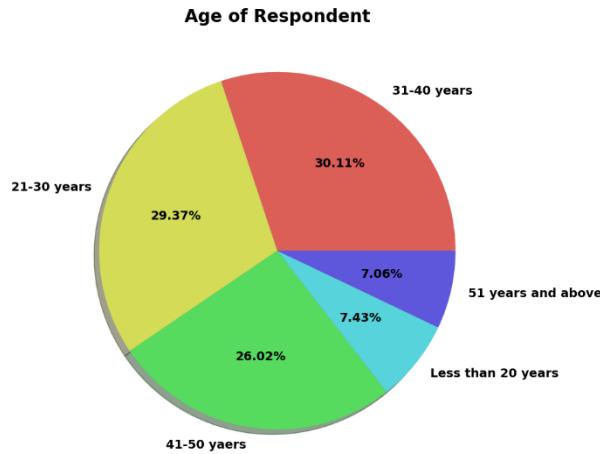
The Majority of respondents are Female (67.3%) & rest are Male respondents. This also shows that women are more shopping oriented than men.

Observation:

- The majority of female customers are between the age group of 21-40 years.
- Within Male Customers Tendency to online shopping is seen among the age group of 31-50 years.
- For both gender tendency of shopping is less for an age greater than 51 years old.

Exploring the Age of Respondent And How Old is Respondent With Gender of Respondent

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Observation:

- Most Online Shopping Customers belong to Metro Cities. and most of them are Male customers. We can conclude that in Metro cities like

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Delhi, males have more tendency to online shopping. shopping platform can target this population in marketing.

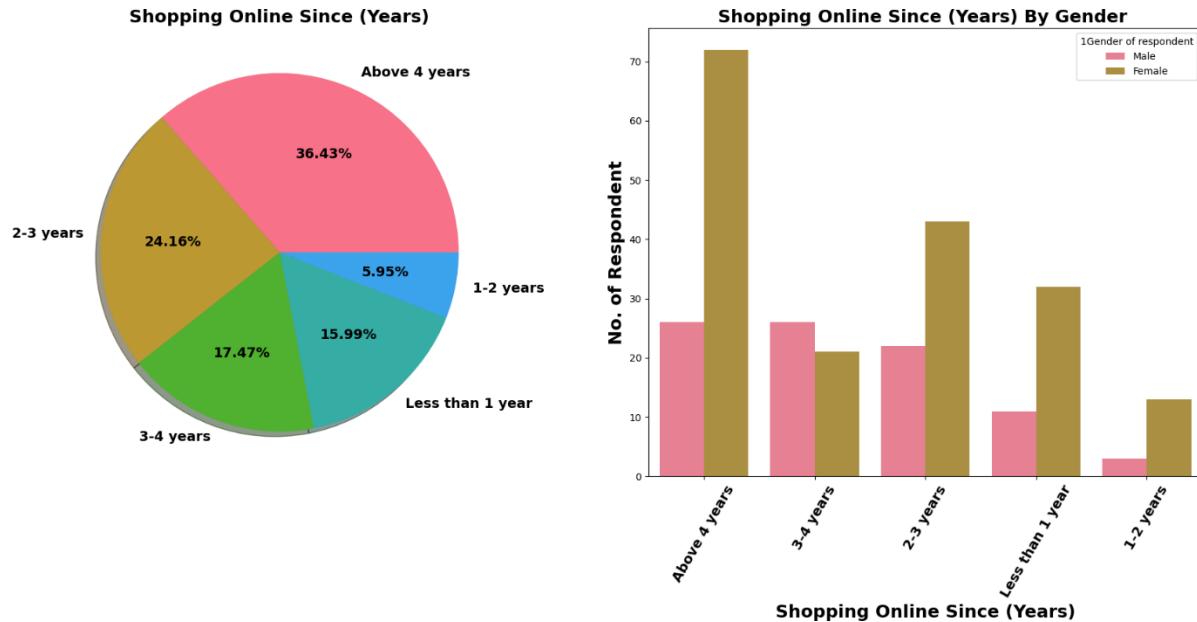
- Cities Majority of online shopping customers is Females. We can run female product-related campaigns for this target customer population in these cities.

		3 Which city do you shop online from?												
		Bangalore	Bulandshahr	Delhi	Ghaziabad	Greater Noida	Gurgaon	Karnal	Merrut	Moradabad	Noida	Solan	All	
2 How old are you?	1Gender of respondent													
		Female	18	0	7	0	14	0	8	5	0	1	6	59
21-30 years	Female	Male	3	0	5	1	0	0	7	0	0	4	0	20
	Male	Female	0	0	10	8	17	0	7	1	0	4	4	51
31-40 years	Female	Male	0	2	9	0	0	1	0	0	5	13	0	30
	Male	Female	12	0	1	5	11	0	4	3	0	7	0	43
41-50 years	Female	Male	0	0	22	0	1	0	0	0	0	4	0	27
	Male	Female	3	0	0	0	0	11	1	0	0	0	0	15
51 years and above	Female	Male	0	0	0	0	0	0	0	0	0	4	0	4
	Male	Female	1	0	0	4	0	0	0	0	0	0	8	13
Less than 20 years	Female	Male	0	0	4	0	0	0	0	0	0	3	0	7
	Male	All	37	2	58	18	43	12	27	9	5	40	18	269

Observation:

We get an interesting observation here in a crosstab, as the customer gets older, they have less tendency for shopping in turn they have less tendency to spend money.

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Observation:

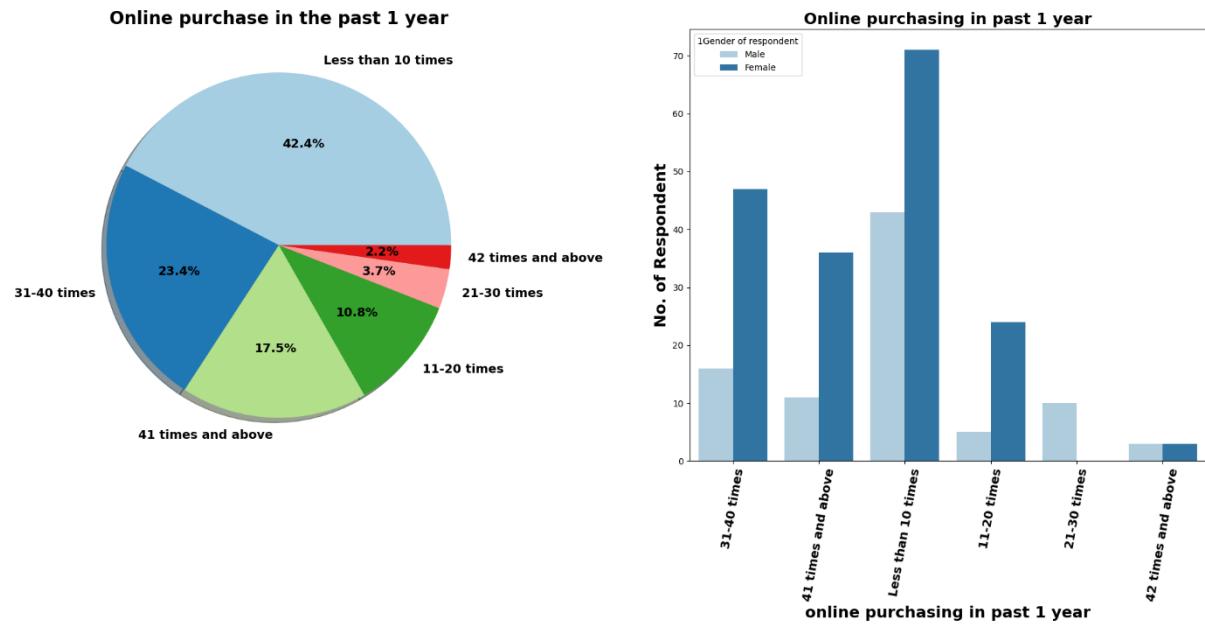
- 36.4% of Respondent shopping online for 4 Yrs.
- Most females shop for 4 Yrs.

3 Which city do you shop online from?	Bangalore	Bulandshahr	Delhi	Ghaziabad	Greater Noida	Gurgaon	Karnal	Merrut	Moradabad	Noida	Solan	All
5 Since How Long You are Shopping Online ?												
1-2 years	0	2	1	5	0	0	0	0	0	2	6	16
2-3 years	14	0	13	5	4	7	2	3	0	9	8	65
3-4 years	8	0	8	0	7	1	8	1	0	10	4	47
Above 4 years	12	0	20	3	22	0	13	5	5	18	0	98
Less than 1 year	3	0	16	5	10	4	4	0	0	1	0	43
All	37	2	58	18	43	12	27	9	5	40	18	269

Observation:

Online shopping is less popular in tier 3 cities like Bulandshahar, Moradabad, and Meerut.

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Observation:

- 42.4% of Customers in the last 1 year made online purchases less than 10 times.
- Around 19.7% of customers have made online sing 41 times & more in the last 1 year. Out which Majority are females.
- Another interesting observation no female had made shopping at the age of 21-30 times.

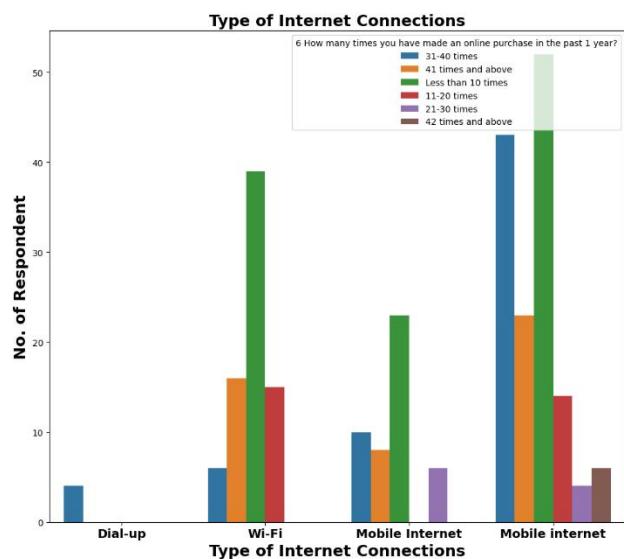
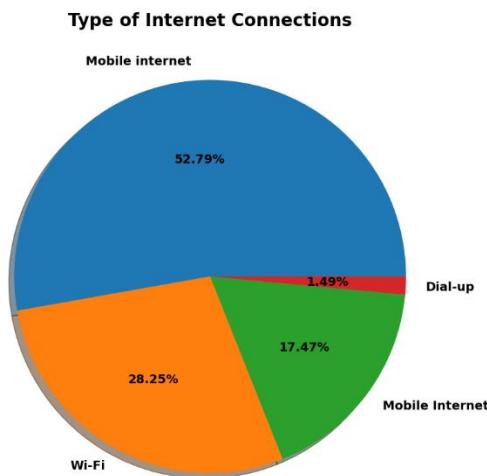
3 Which city do you shop online from?	Bangalore	Bulandshahr	Delhi	Ghaziabad	Greater Noida	Gurgaon	Karnal	Merrut	Moradabad	Noida	Solan	All
6 How many times you have made an online purchase in the past 1 year?												
11-20 times	12	0	1	1	10	0	0	1	0	3	1	29
21-30 times	0	0	1	0	0	0	0	0	5	4	0	10
31-40 times	11	0	12	10	11	1	10	6	0	2	0	63
41 times and above	2	0	13	3	13	0	5	1	0	10	0	47
42 times and above	0	0	3	0	3	0	0	0	0	0	0	6
Less than 10 times	12	2	28	4	6	11	12	1	0	21	17	114
All	37	2	58	18	43	12	27	9	5	40	18	269

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Observation:

- We can see that most of the customers making a purchase 41 times & more come from the city of Delhi, Greater Noida, Noida.

Exploring Internet Access While shopping Online



Observation:

- 70.3% of Customers are mobile internet users followed by Wi-Fi Users.
- We can see that all customers who made online shopping 41 times & more are using Mobile internet.
- Only 4 users are using Dial-up Connection and all of them made online shopping less than 10 times.

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Exploring Technology Related To internet Services And Devices

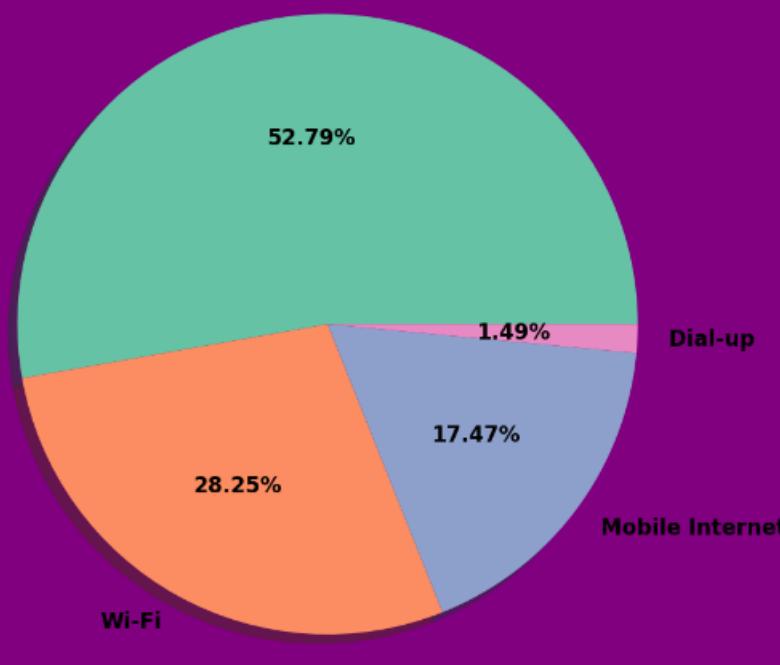
```
Use_Col_1=data.iloc[:,6:13]
```

```
Use_Col_1
```

	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?
0	Dial-up	Desktop	Others	Window/windows Mobile	Google chrome	Search Engine	Search Engine
1	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	Google chrome	Search Engine	Via application
2	Mobile Internet	Smartphone	5.5 inches	Android	Google chrome	Search Engine	Via application
3	Mobile Internet	Smartphone	5.5 inches	IOS/Mac	Safari	Search Engine	Search Engine
4	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	Safari	Content Marketing	Via application
...
264	Mobile Internet	Smartphone	5.5 inches	Android	Opera	Display Adverts	Social Media

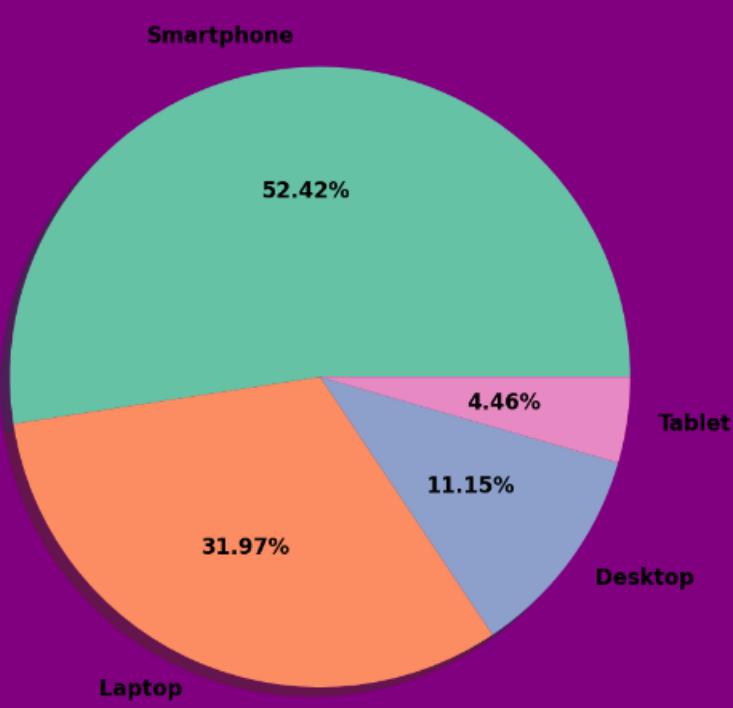
7 How do you access the internet while shopping on-line?

Mobile internet

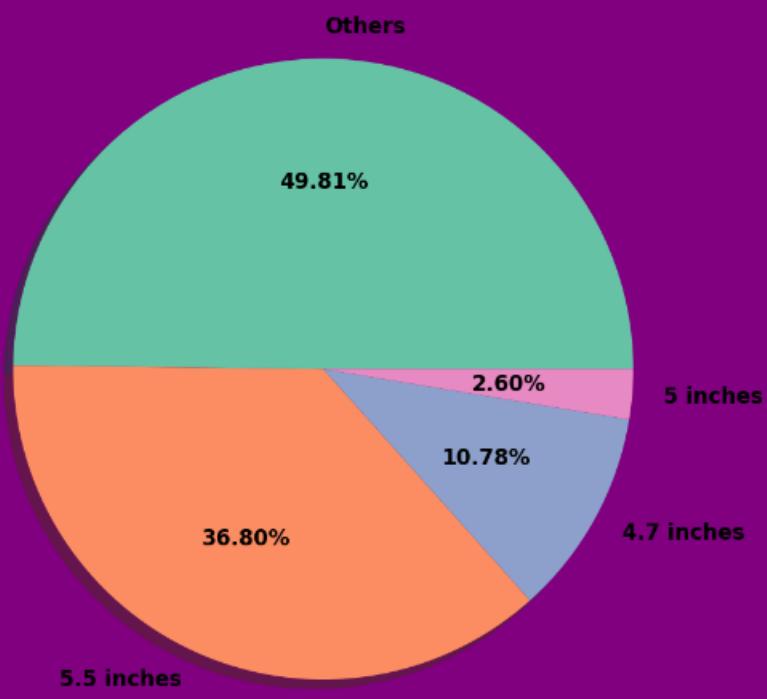


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8 Which device do you use to access the online shopping?

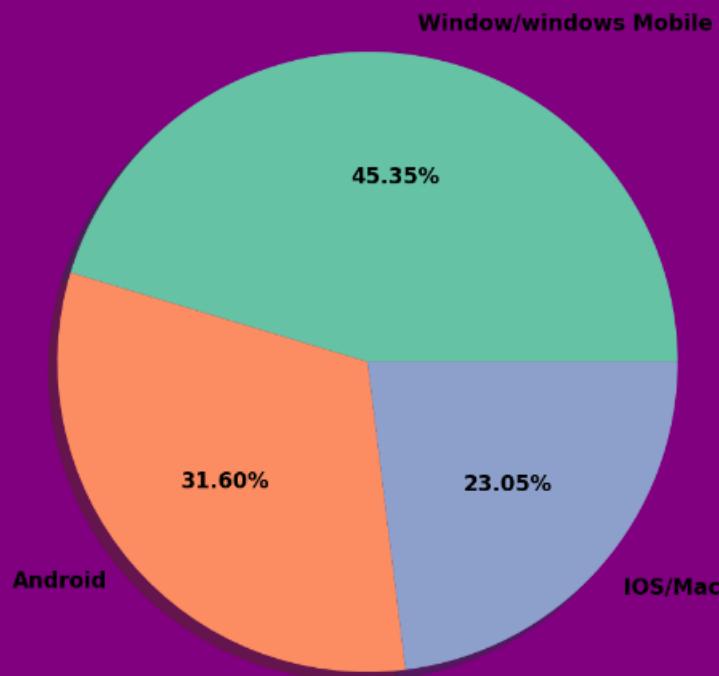


9 What is the screen size of your mobile device?□□□□□

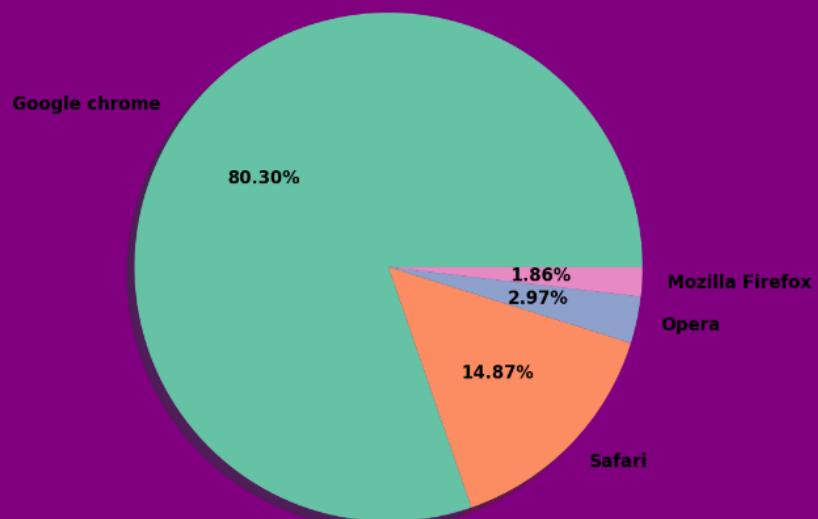


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10 What is the operating system (OS) of your device?□□□□

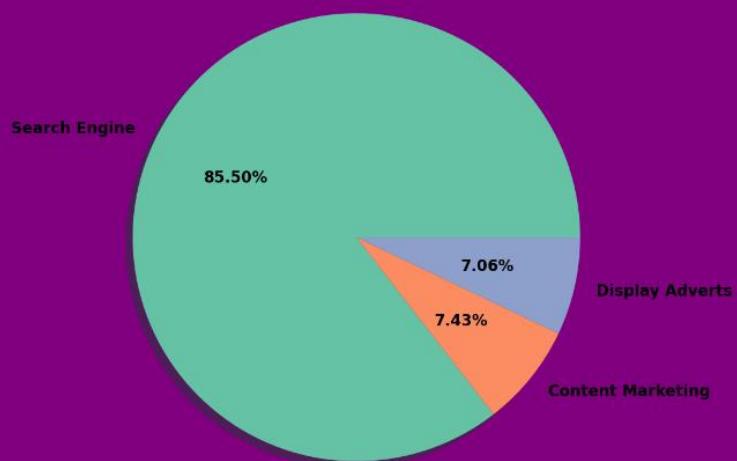


11 What browser do you run on your device to access the website?□□□

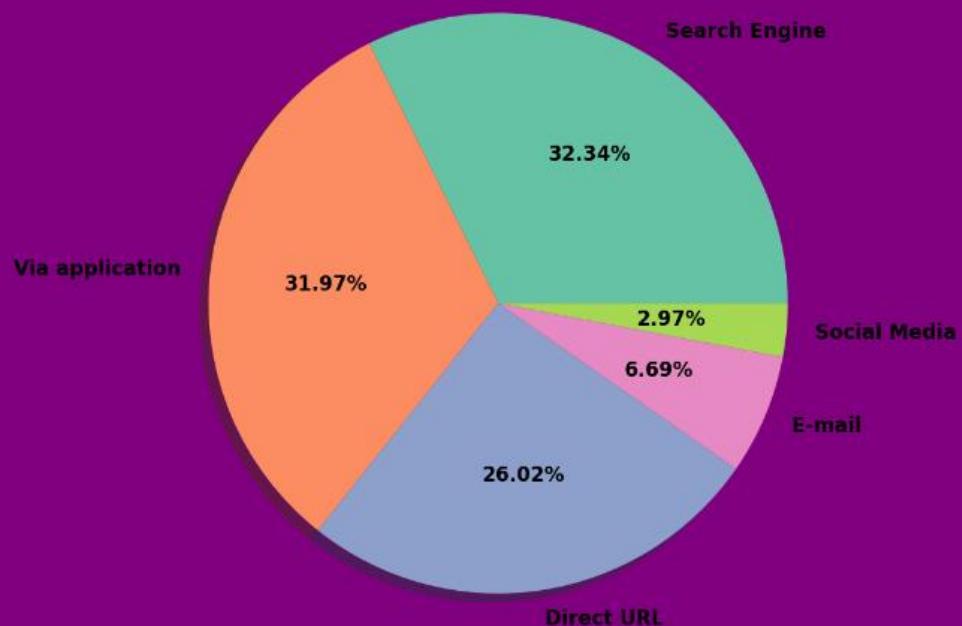


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12 Which channel did you follow to arrive at your favorite online store for the first time?



13 After first visit, how do you reach the online retail store?□□□□



Observation:

- 70.3% of Customer uses mobile internet for shopping.

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- 52.4% Uses Smartphone followed by Laptop for online shopping.
Companies can make device-oriented marketing strategies for different customers as per the use of the device.
- Not all user uses a smartphone so we do not have the screen size details of other users. Out of 52.4% of Mobile users,' the majority have a 5.5-inch mobile display screen.
- 45.4% of customers have Windows operating system on their smartphone & laptop. Followed by it around 31.6% of customer uses Android as OS which can come from both smartphone & Tablet.
- We can see 85.5 % of Customers arrived on the shopping platform through a search engine. Ads & Marketing campaigns are not bringing many leads. Most customers made an online purchase because they want to buy a product or are due for a discount on online shopping.
- After 1st Purchase, 32% of customers visit the online store through a mobile application and 32.3% through a search engine.

Compare Data Internet Connection VS Devices



Observation:

- No desktop with Wi-Fi Connectivity. All 30 desktop users are using mobile internet or dial-up connection.

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- Out of 141 Smartphone users 104 use mobile internet while the rest use Wi-Fi

Compare Device VS Operating System

10 What is the operating system (OS) of your device?						
	Android	iOS/Mac	Window/windows	Mobile	All	
Desktop	0	0	30	30		
Laptop	0	2	84	86		
Smartphone	73	60	8	141		
Tablet	12	0	0	12		
All	85	62	122	269		

Observation:

- No Tablet with IOS operating system.
- We already know 45.4% of Customer uses Windows OS and here we can see that almost all of them come from desktop & laptop user.
- Surprisingly only 2 Customers with Apple laptops.
- 73 customers using android and 60 customers using Apple iPhone.

Compare Favourite Channel Online Store First Time VS After First Visit Reach Online Retail Store

13 After first visit, how do you reach the online retail store?						
	Direct URL	E-mail	Search Engine	Social Media	Via application	All
Content Marketing	0	0	5	0	15	20
Display Adverts	11	0	0	8	0	19
Search Engine	59	18	82	0	71	230
All	70	18	87	8	86	269

Observation:

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- Visit 71 customers arrived online store via application, followed by 59 via Direct URL & 18 Customer Via Promotional Email Marketing.
- Display adverts have very poor performance in landing customers in online stores. Similar to Social Media marketing.

Exploring Purchase Decisions and Payments

```
Use_Col_2 = data.iloc[:, 13:17]
```

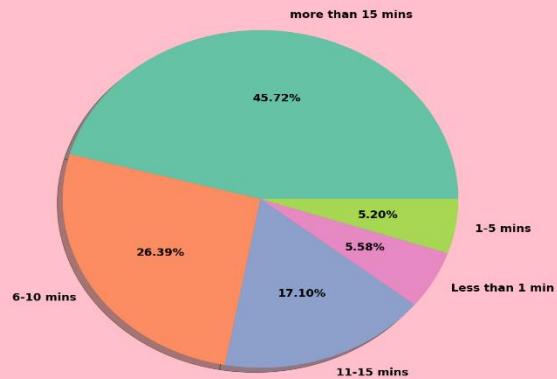
```
Use_Col_2
```

	14 How much time do you explore the e-retail store before making a purchase decision?	15 What is your preferred payment Option?	16 How frequently do you abandon (selecting an items and leaving without making payment) your shopping cart?	17 Why did you abandon the "Bag", "Shopping Cart"?
0	6-10 mins	E-wallets (Paytm, Freecharge etc.)	Sometimes	Lack of trust
1	more than 15 mins	Credit/Debit cards	Very frequently	Promo code not applicable
2	11-15 mins	E-wallets (Paytm, Freecharge etc.)	Sometimes	Promo code not applicable
3	6-10 mins	Credit/Debit cards	Never	Better alternative offer
4	more than 15 mins	Credit/Debit cards	Frequently	Better alternative offer
...
264	more than 15 mins	Cash on delivery (CoD)	Never	Better alternative offer
265	Less than 1 min	Cash on delivery (CoD)	Sometimes	Change in price
266	more than 15 mins	Credit/Debit cards	Sometimes	Better alternative offer
267	1-5 mins	Cash on delivery (CoD)	Sometimes	No preferred mode of payment
268	11-15 mins	Cash on delivery (CoD)	Never	Promo code not applicable

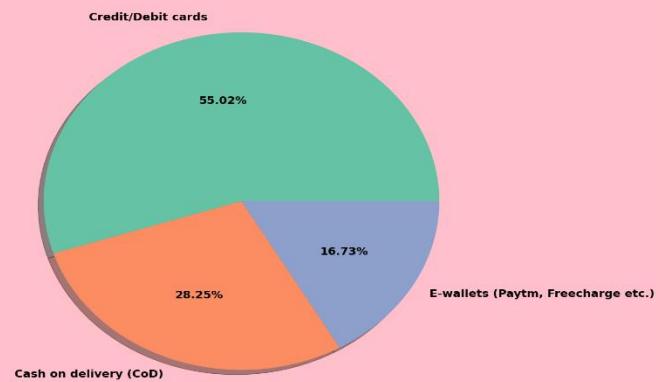
269 rows x 4 columns

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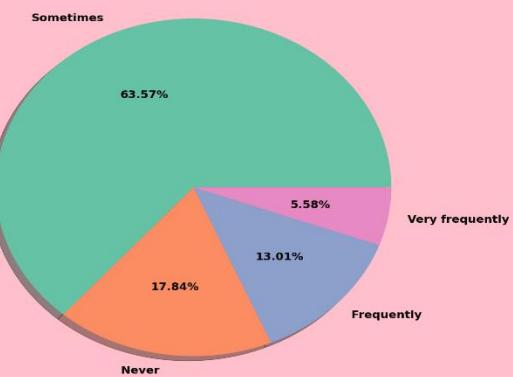
14 How much time do you explore the e-retail store before making a purchase decision?



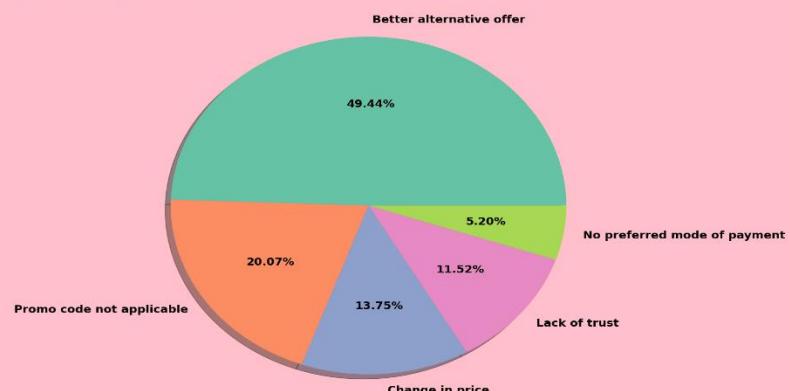
15 What is your preferred payment Option? ☰☐☐☐☐



16 How frequently do you abandon (selecting an items and leaving without making payment) your shopping cart? ☰☐☐☐☐☐



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



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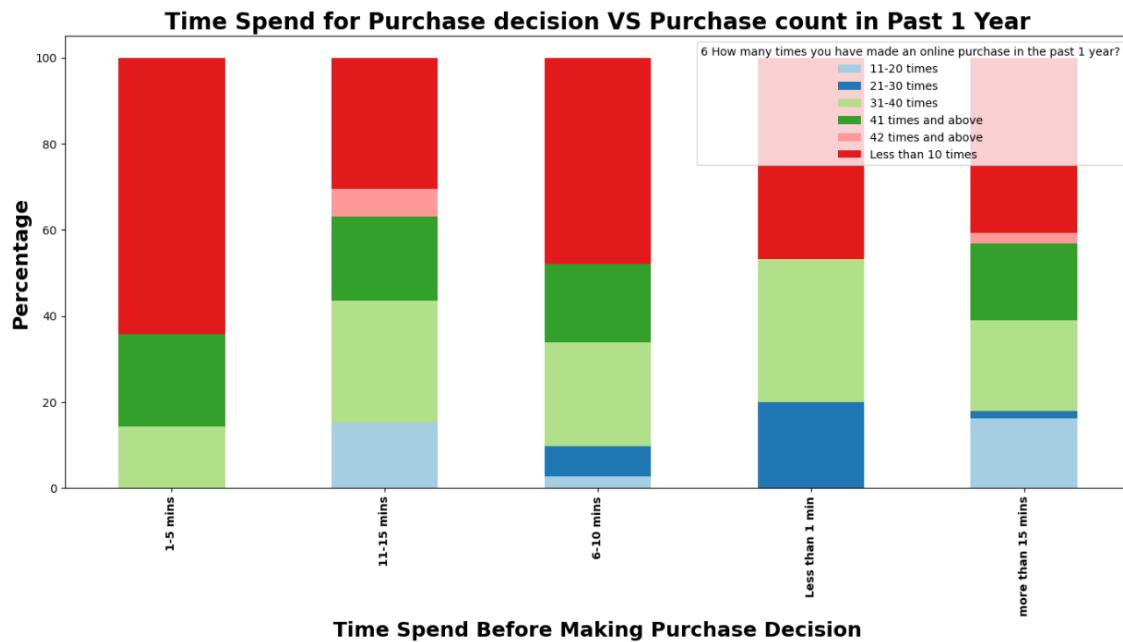
Observation:

- 45.7% of Customers spend more than 15 mins before making a purchase decision. Followed by 17.1% of customers with 11-15 mins before making a purchase decision.
- 55% of customers paid using credit/debit cards while 28.3% of customers still prefer cash on delivery
- We can see that 63.6% of customers add products to their cart but later leave without making payment. Surprisingly there is a category of 17.8% of customers who never abandon products without making a payment.
- Another common reason to abandon a purchase decision is a promo code not applicable to a particular product. Followed by the next most common reason is a price change.

Time Spend For Purchase decision VS Purchase count In Past 1 Year

6 How many times you have made an online purchase in the past 1 year?	11-20 times	21-30 times	31-40 times	41 times and above	42 times and above	Less than 10 times	All
14 How much time do you explore the e- retail store before making a purchase decision?							
1-5 mins	0	0	2	3	0	9	14
11-15 mins	7	0	13	9	3	14	46
6-10 mins	2	5	17	13	0	34	71
Less than 1 min	0	3	5	0	0	7	15
more than 15 mins	20	2	26	22	3	50	123
All	29	10	63	47	6	114	269

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Observation:

- Here comes an interesting observation about Customers who are spending more than 15 mins before making any purchase decision, out of 45.7% of these customers around 25 customers have done online shopping more than 41 times s in the past year.
- 15 Customers purchased shopping within less than 1 min, Majority of them 7 customers made shopping less than 10 times in the past year.

16 How frequently do you abandon (selecting an items and leaving without making payment) your shopping cart?	Frequently	Never	Sometimes	Very frequently	All
1-5 mins	0	0	14	0	14
11-15 mins	7	8	31	0	46
6-10 mins	0	25	46	0	71
Less than 1 min	0	7	8	0	15
more than 15 mins	28	8	72	15	123
All	35	48	171	15	269

14 How much time do you explore the e- retail store before making a purchase decision?

	1-5 mins	11-15 mins	6-10 mins	Less than 1 min	more than 15 mins	All
Frequently	0	7	0	0	28	35
Never	0	8	25	7	8	48
Sometimes	14	31	46	8	72	171
Very frequently	0	0	0	0	15	15
All	14	46	71	15	123	269

*Project Report on Data Analysis of Customer Retention
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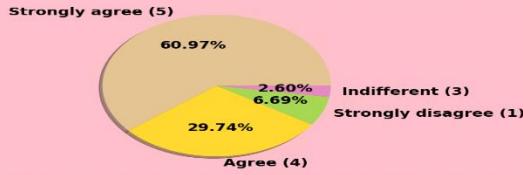
Observation:

- 171 Customers out of a total of 269 customers Sometimes abandon their shopping carts.
- Customers spend more than 15 mins on online shopping stores before making a purchase decision and have More Tendency to Abandon.
- Customer who spends less than 5 mins before making a purchase decision has seen very less tendency to abandon their cart, more specifically they never leave their cart or rarely abandon their cart.

Exploring Websites Usability, Performance, And Trust

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18 The content on the website must be easy to read and understand



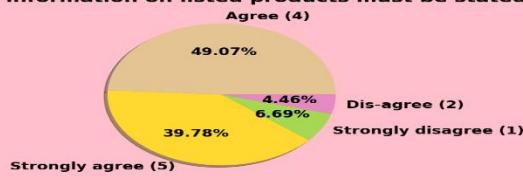
19 Information on similar product to the one highlighted is important for product comparison



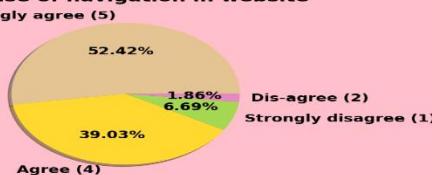
20 Complete information on listed seller and product being offered is important for purchase decision.



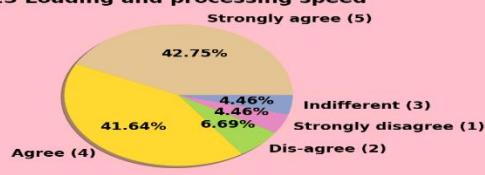
21 All relevant information on listed products must be stated clearly



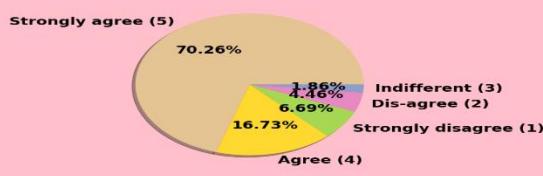
22 Ease of navigation in website



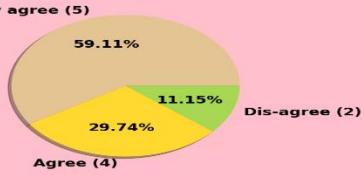
23 Loading and processing speed



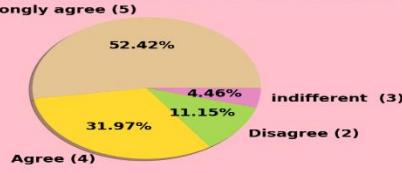
24 User friendly Interface of the website



25 Convenient Payment methods



26 Trust that the online retail store will fulfill its part of the transaction at the stipulated time



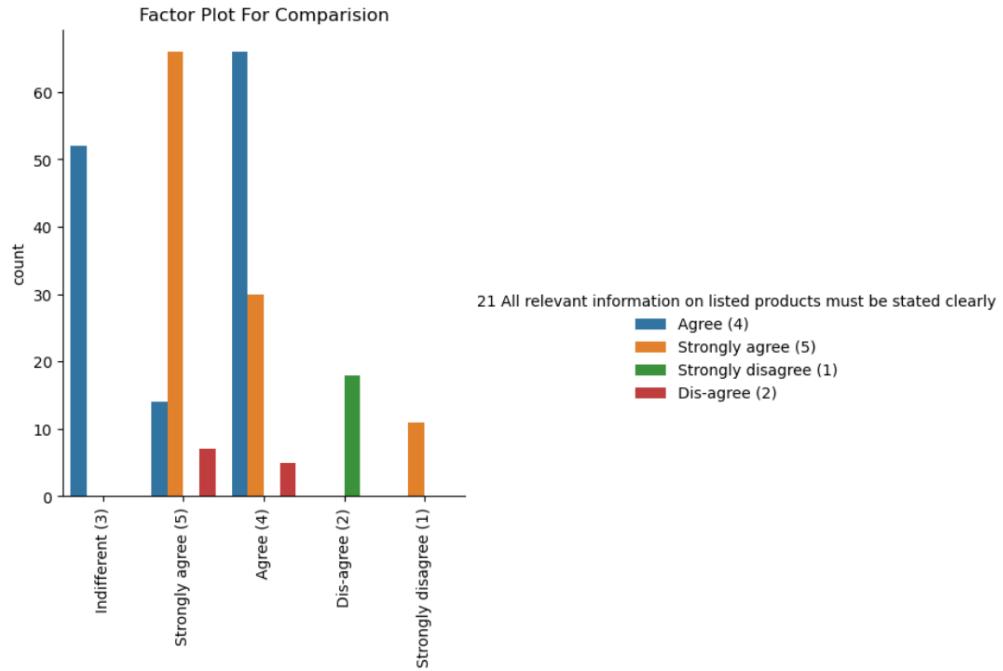
*Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector*

Observation:

- 61% Of customers strongly agree and 29.7% of customers agree that content on the website must be easy to read and understand.
- 43.1% of customers strongly agree and 34.2% of customers agree that information on similar products to highlighted on the website for product comparison.
- More than 60% of customers agree or strongly agree that complete information on the listed seller and product being offered is important for a purchase decision.
- More than 90% of customers agree or strongly agree that all relevant information on listed products must be stated clearly.
- Around 93% of customers agree or strongly agree that a website should be easy to navigate.

Factor Plot For Comparison

Project Report on Data Analysis of Customer Retention in the Ecommerce Sector



Exploring Online Shopping Store For Customer Service Requirements

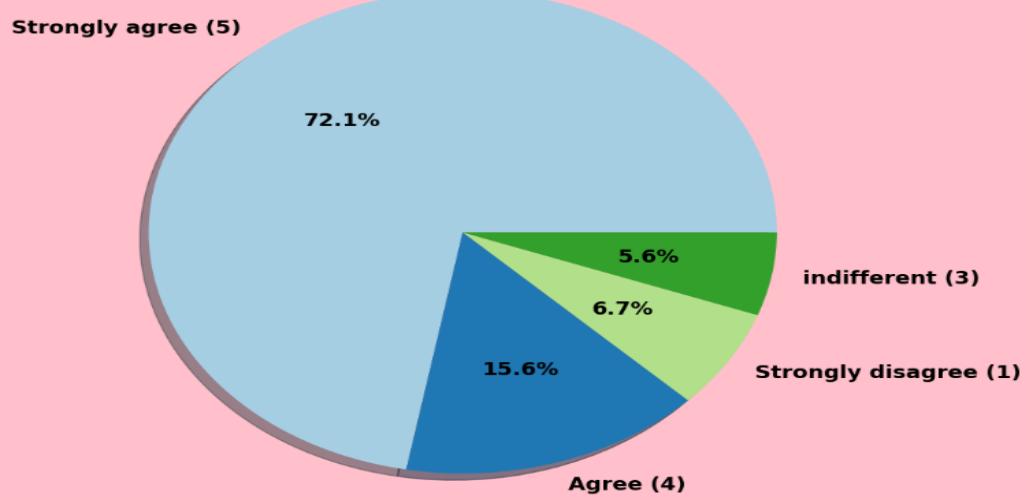
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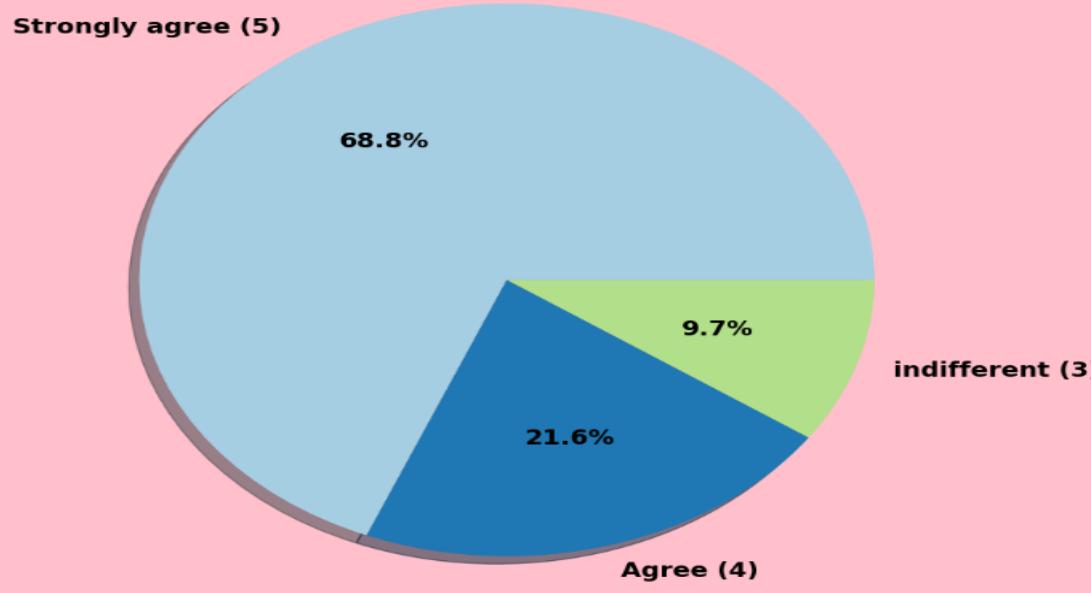
27 Empathy (readiness to assist with queries) towards the customers	28 Being able to guarantee the privacy of the customer	29 Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.)	30 Online shopping gives monetary benefit and discounts	31 Enjoyment is 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
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**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

27 Empathy (readiness to assist with queries) towards the customers

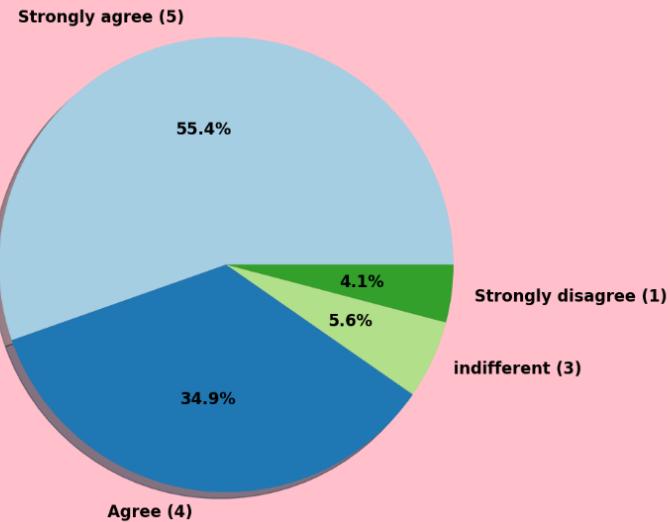


28 Being able to guarantee the privacy of the customer

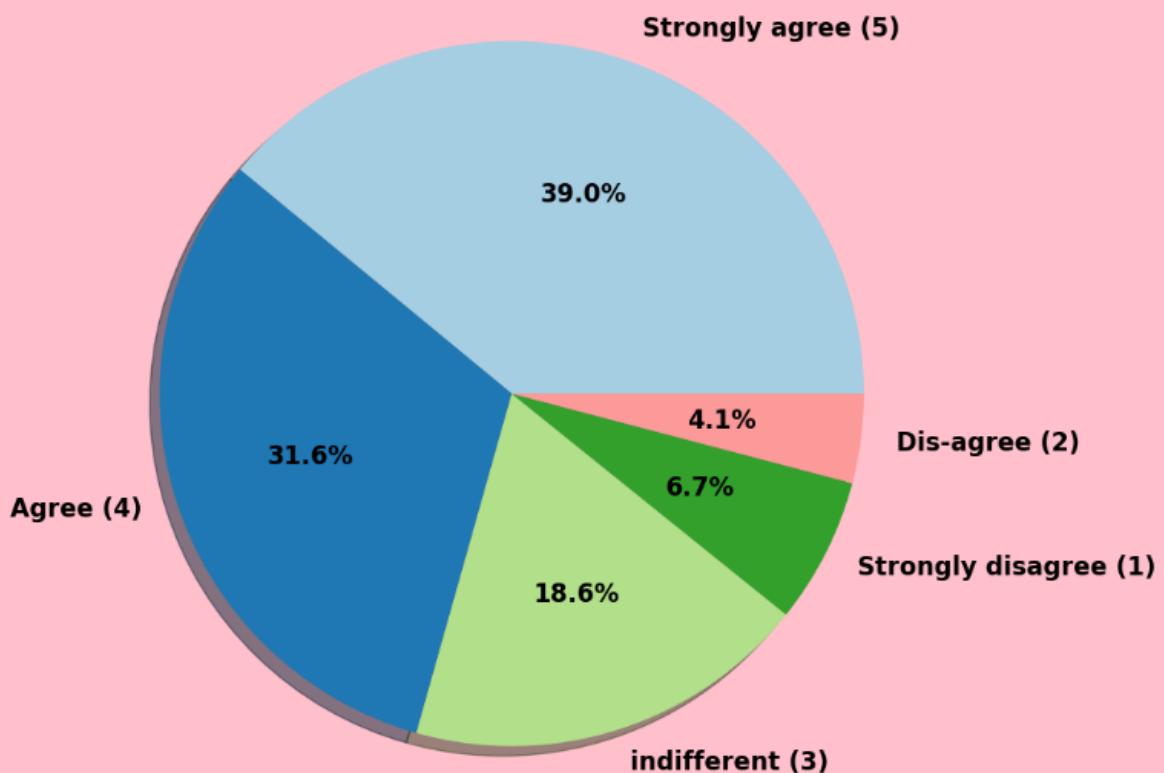


**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

29 Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.)

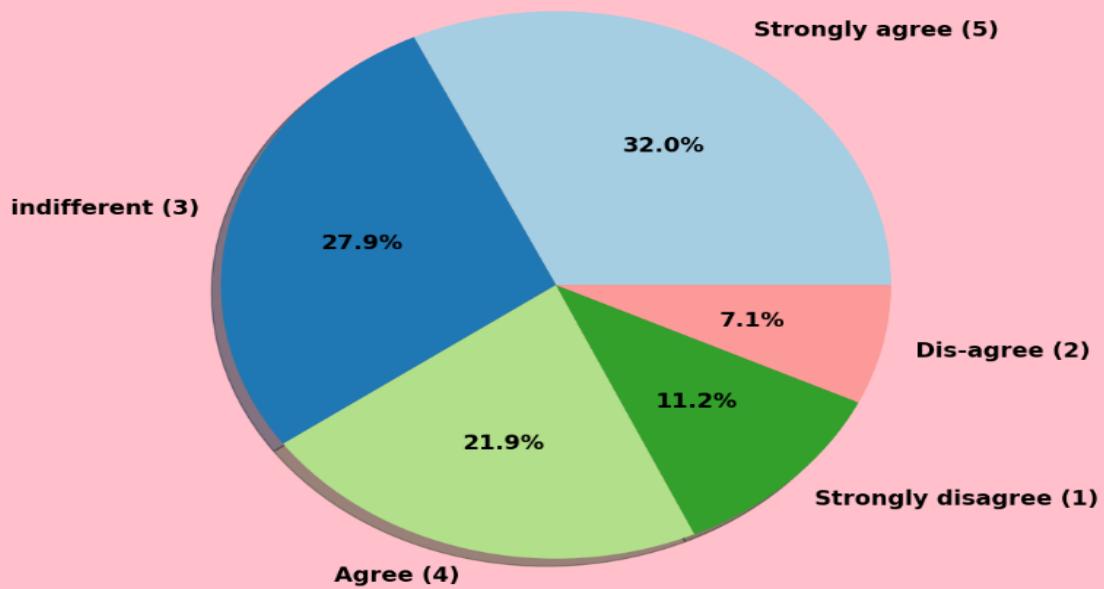


30 Online shopping gives monetary benefit and discounts



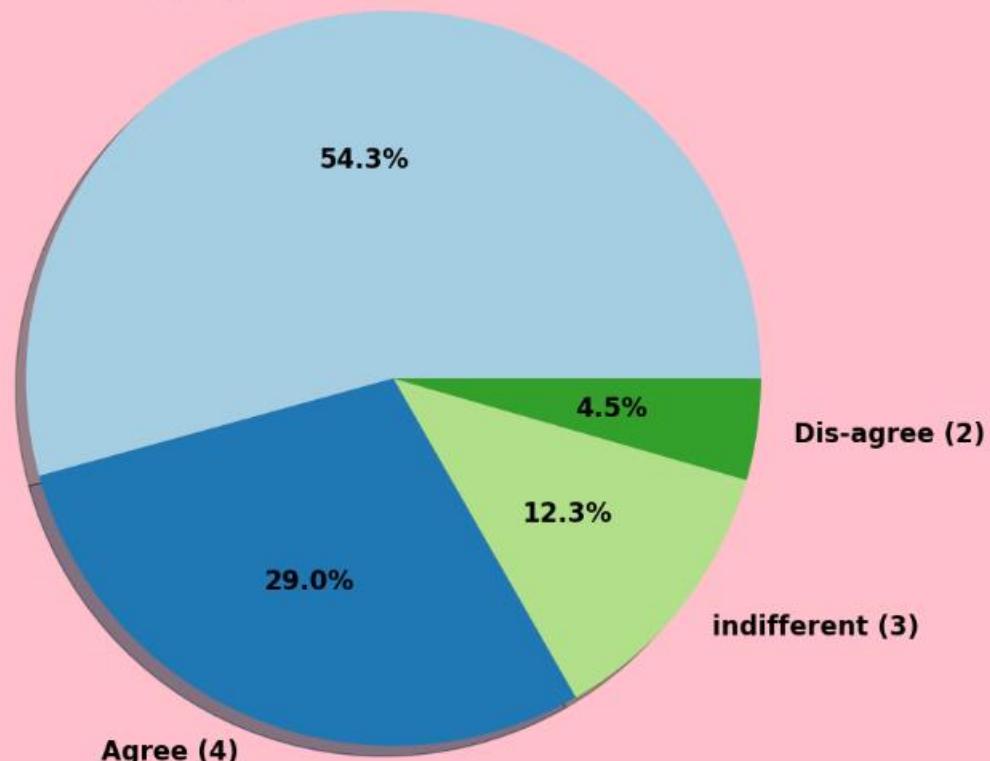
**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

31 Enjoyment is derived from shopping online



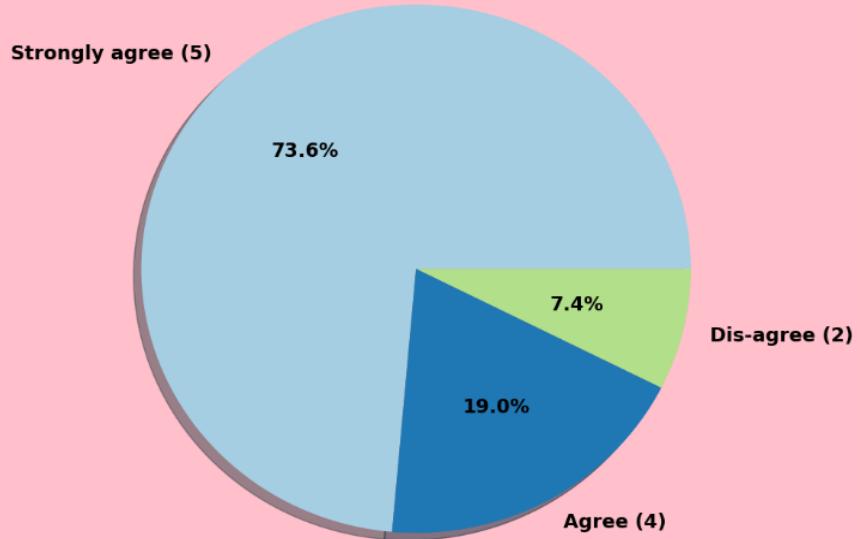
32 Shopping online is convenient and flexible

Strongly agree (5)

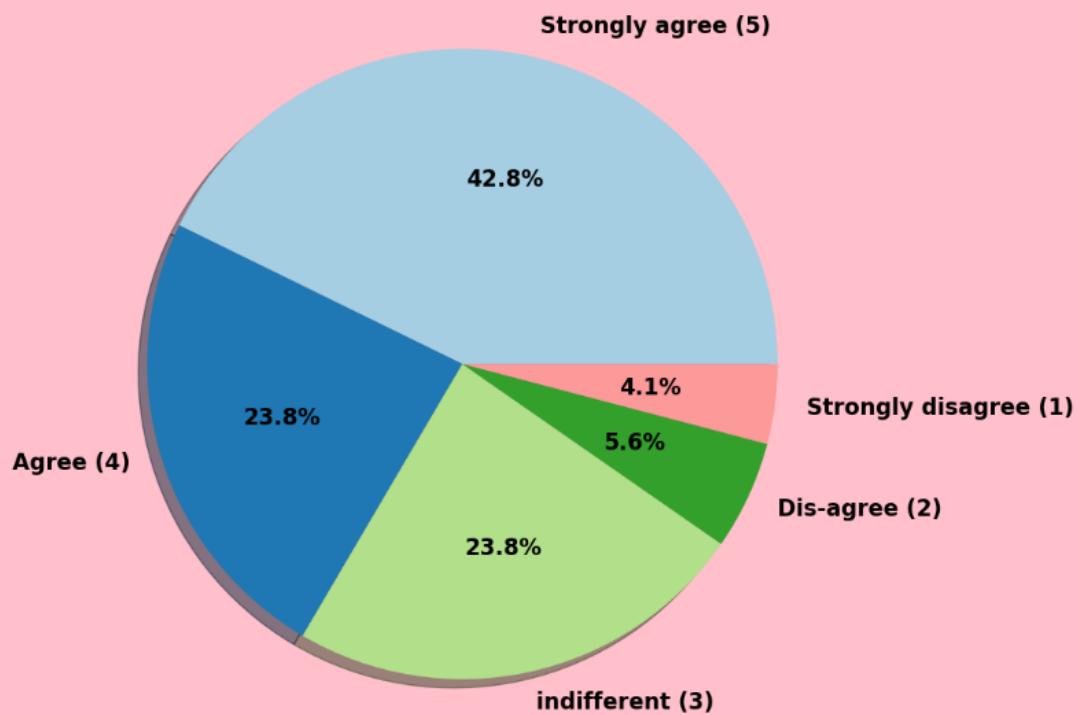


**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

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

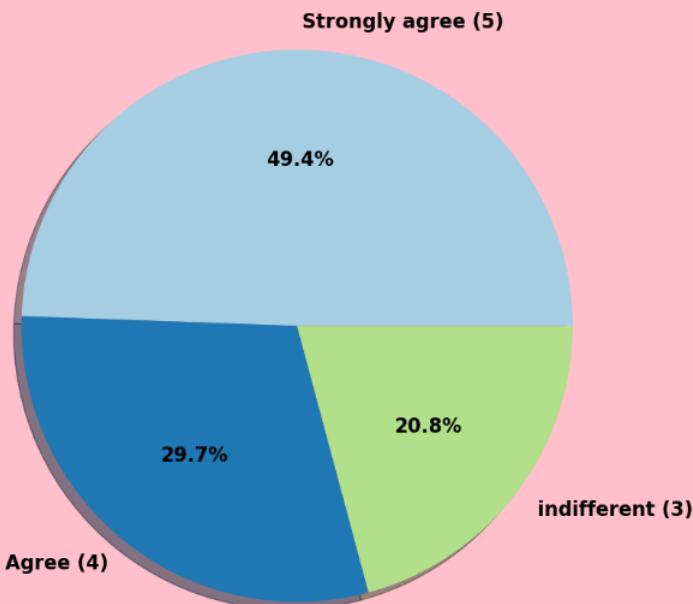


34 Gaining access to loyalty programs is a benefit of shopping online

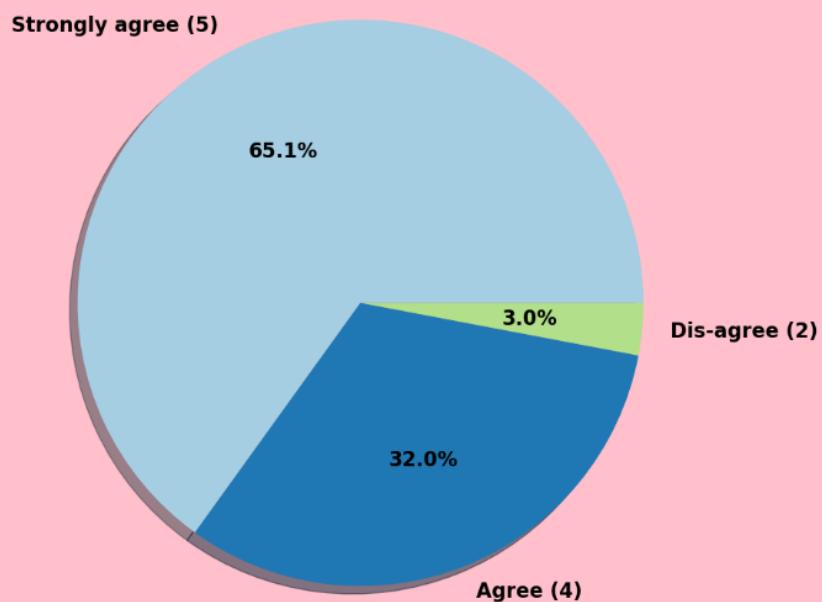


**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

35 Displaying quality Information on the website improves satisfaction of customers

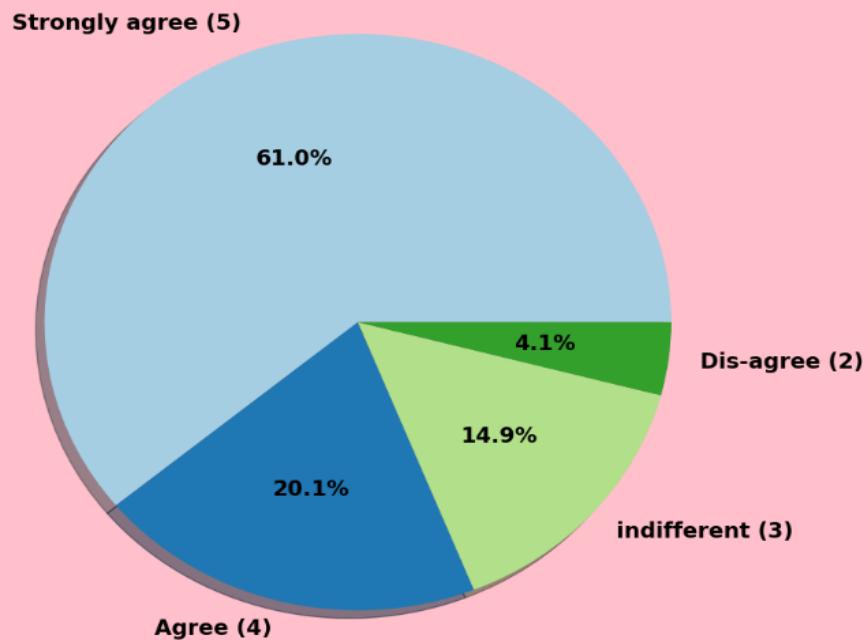


36 User derive satisfaction while shopping on a good quality website or application

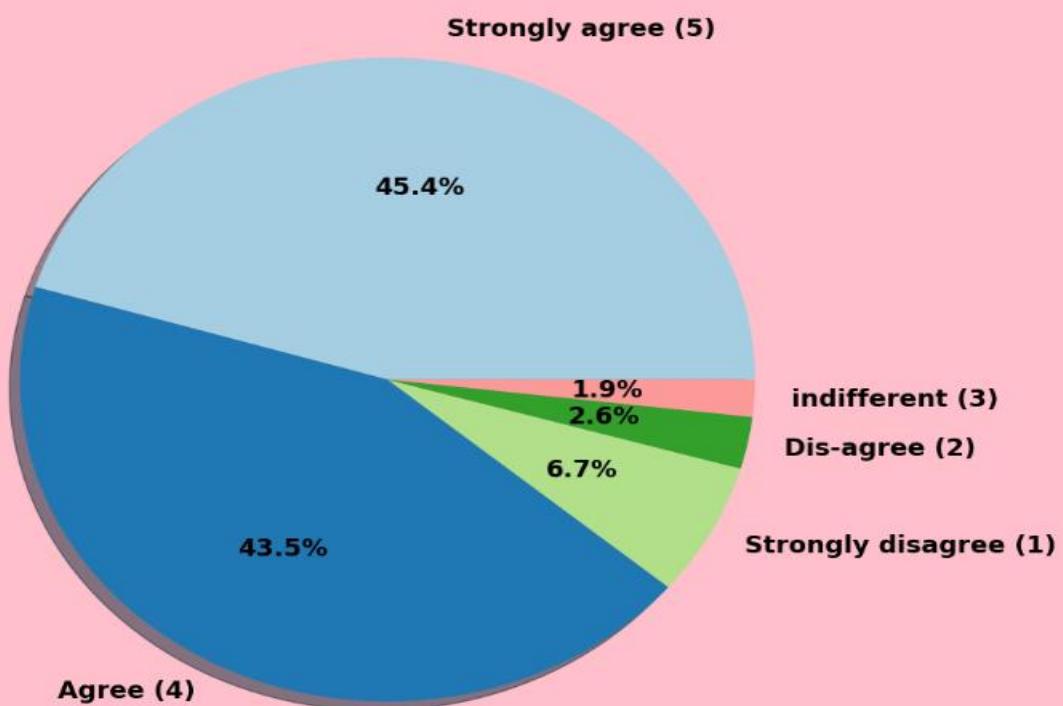


**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

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



38 User satisfaction cannot exist without trust



***Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector***

Observation:

- 72.1% of Customers strongly agree thinks that the company's readiness to assist customer queries related to products is important factor in purchase decisions.
- Pie plot also show that being able to guarantee the privacy of the customer is important silent feature for product selection.
- Another most important for product companies is availability of communication channels.
- Most people enjoy physical shopping, we can see that 32% of customer enjoyment of online shopping strongly matter and for around 46% of customer this online shopping enjoyment does not matter.
- Online shopping is 24/7 available with a lot of varieties of products and with a product return facility. This led to the thinking among almost 85 % of customer thinks, online shopping is more convenient & flexible than physical shopping.
- 73.6% of customer thinks that the return & replacement policy of e-seller is an important factor in making a purchase decision.
- 49.4% of customers strongly agree and 29.7% of customers agree that displaying quality information on a website helps in decision making in turn improves customer satisfaction.

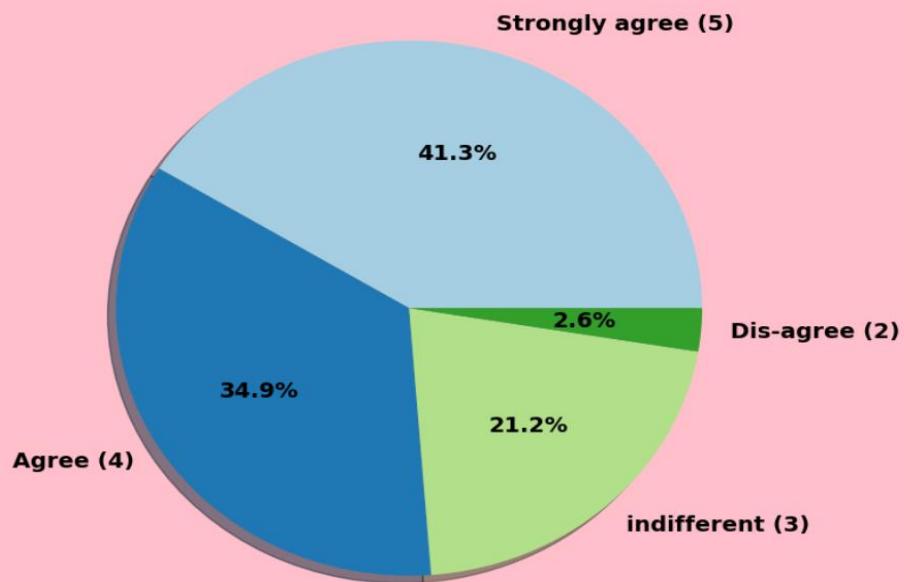
Exploring Customer Online Shopping Experiences

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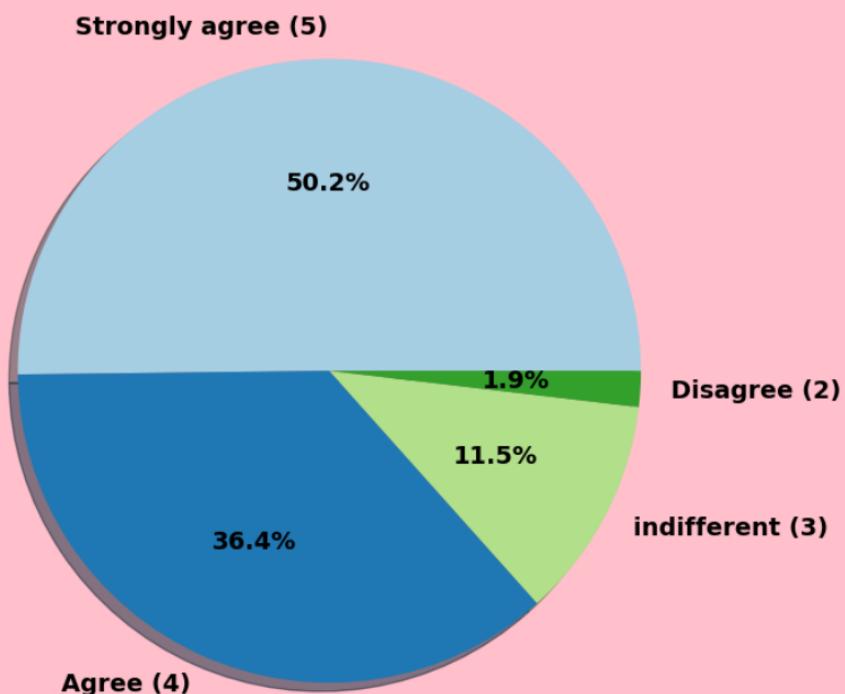
39 Offering a wide variety of listed product in several category	40 Provision of complete and relevant product information	41 Monetary savings	42 The Convenience of patronizing the online retailer	43 Shopping on the website gives you the sense of adventure	44 Shopping on your preferred e-tailer enhances 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
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*Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector*

39 Offering a wide variety of listed product in several category

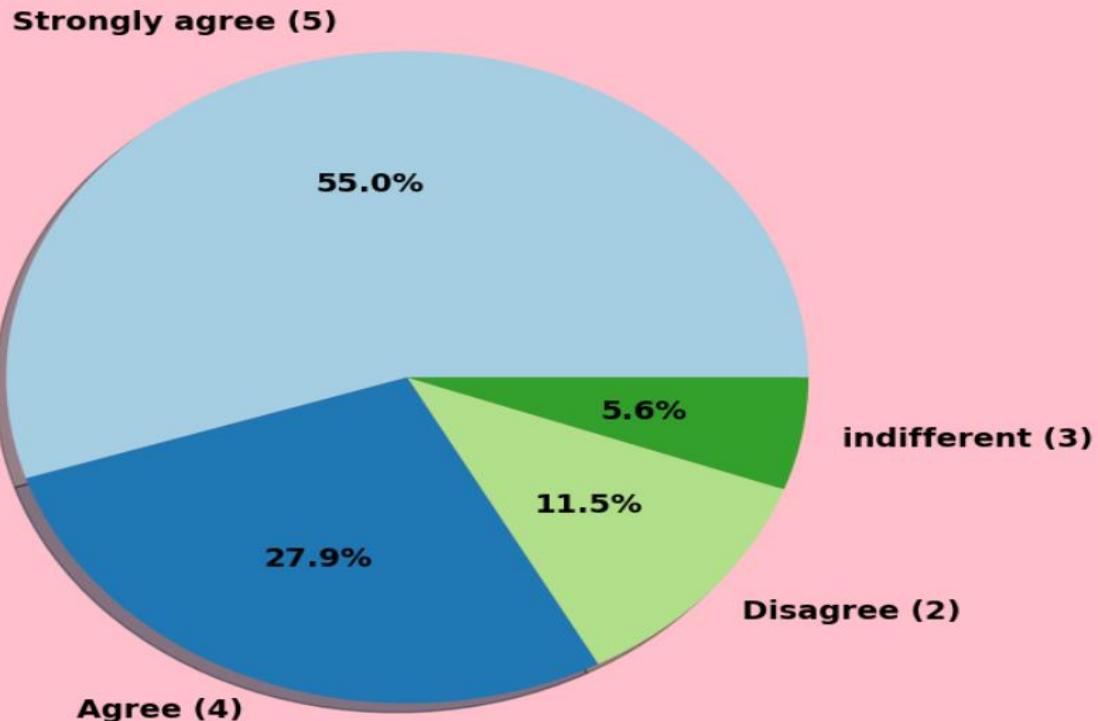


40 Provision of complete and relevant product information

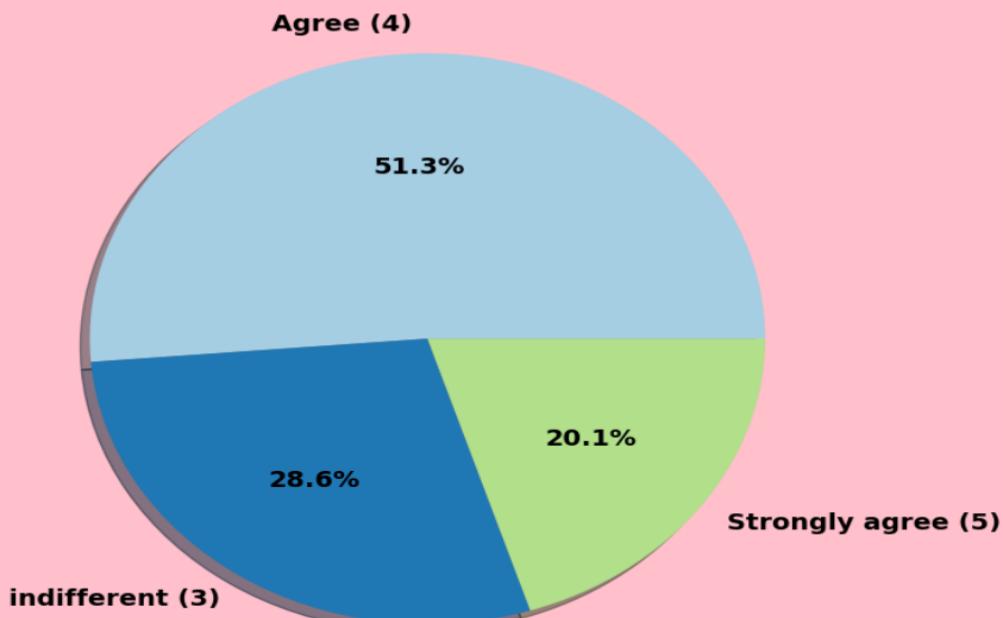


**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

41 Monetary savings

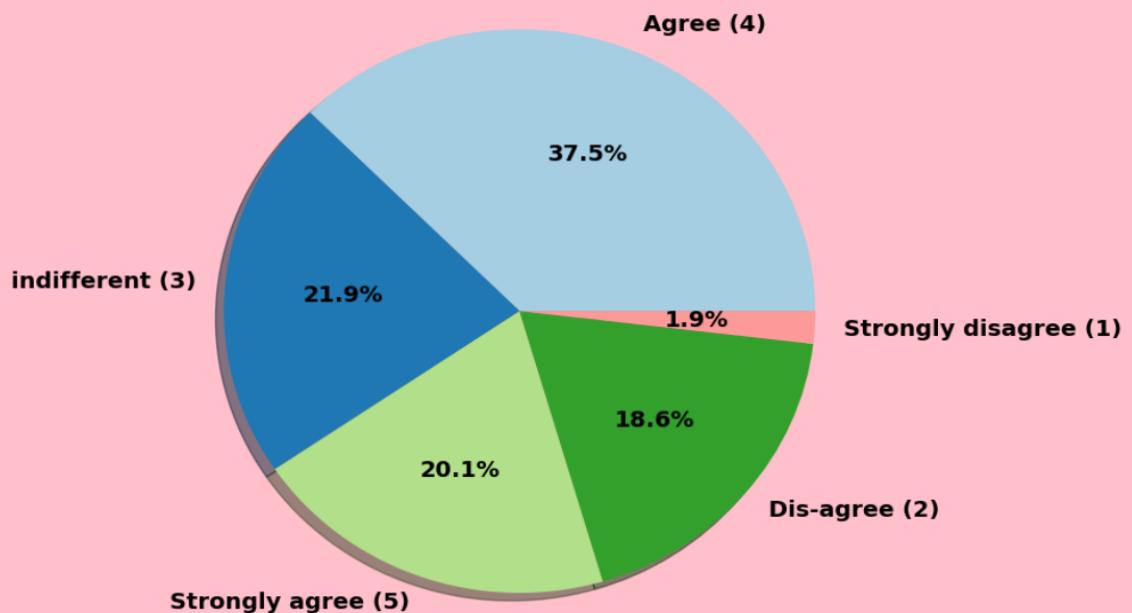


42 The Convenience of patronizing the online retailer

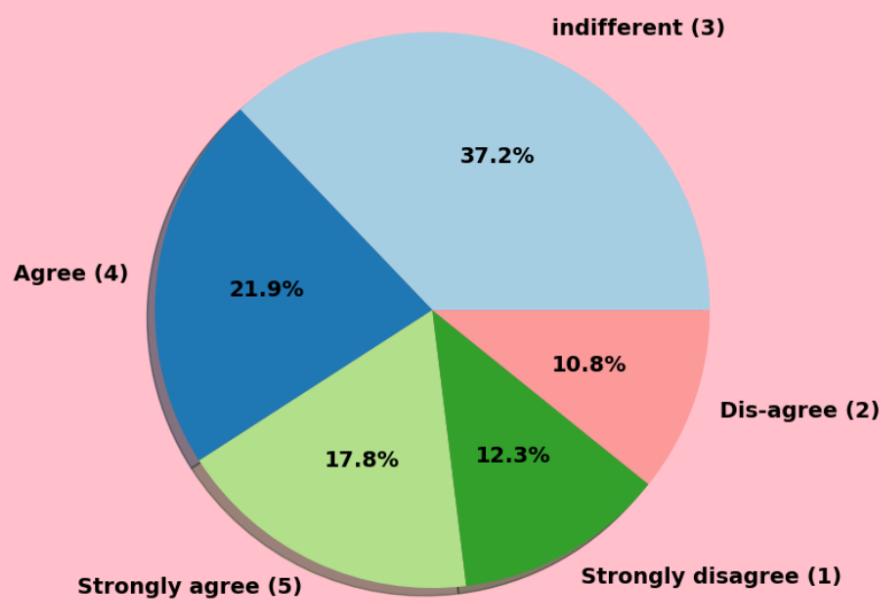


**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

43 Shopping on the website gives you the sense of adventure

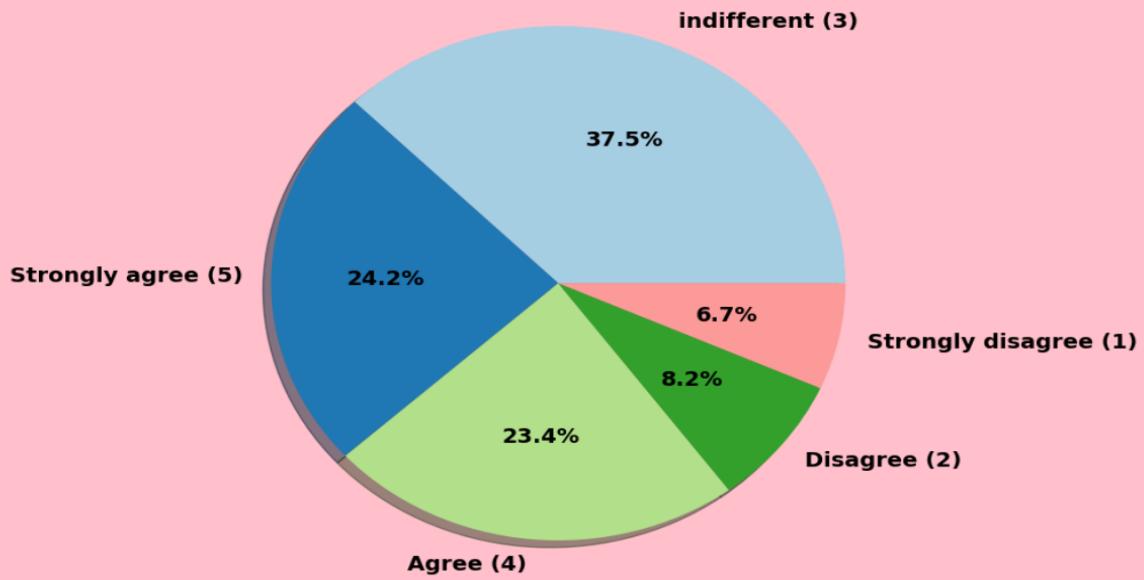


44 Shopping on your preferred e-tailer enhances your social status

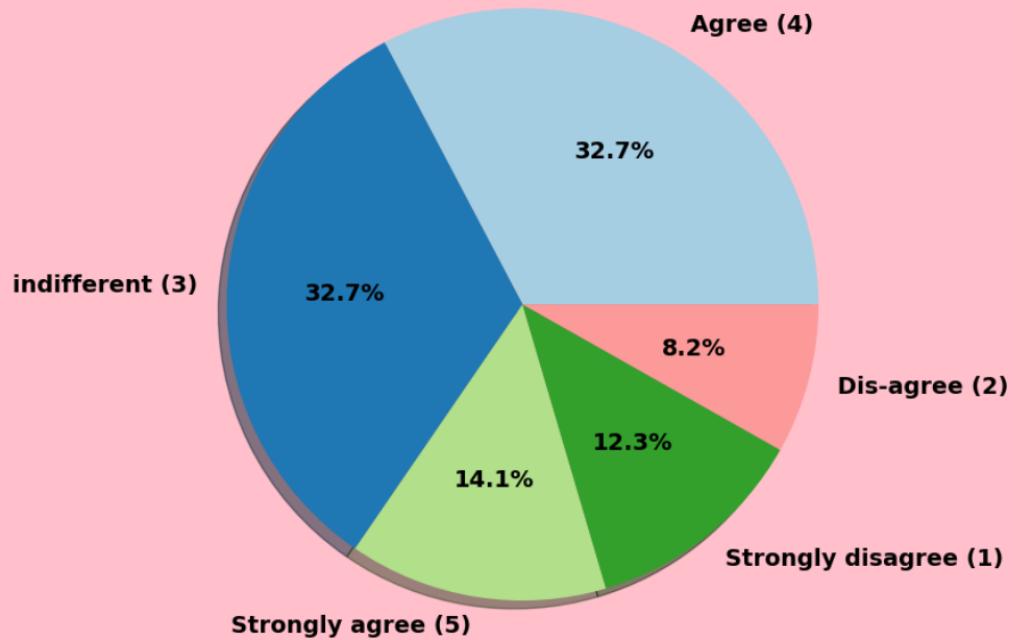


**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

45 You feel gratification shopping on your favorite e-tailer

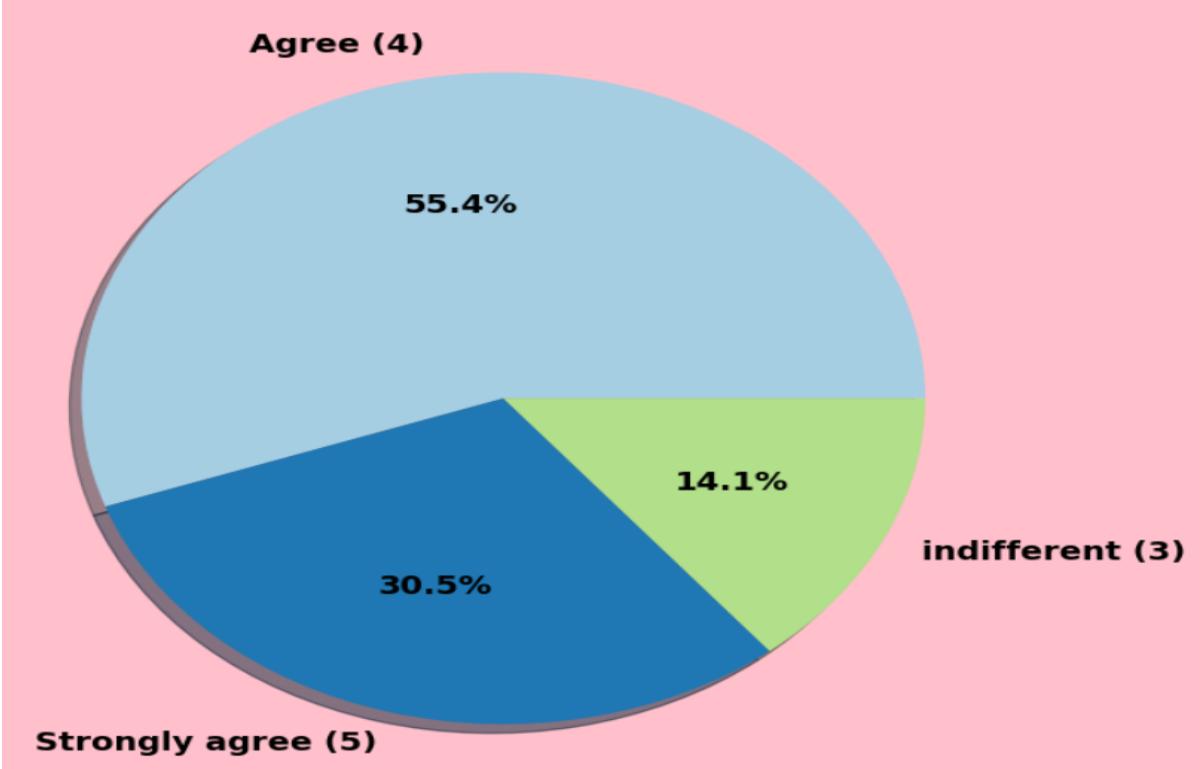


46 Shopping on the website helps you fulfill certain roles



**Project Report on Data Analysis of Customer Retention
in the Ecommerce Sector**

47 Getting value for money spent



Observation:

- 50.2% of Customers strongly agree & 36.4% of customers agree that for good online shopping complete and relevant product information.
- Around 83% of customers pursue online shopping for Monetary Savings.
- For 37.5 % of customers, Online shopping on website strongly gives the sense of adventure.
- 55.4% of people strongly agree and 30.5% of people agree that they prefer online shopping because they get value of money spent.

**Exploring Belief On Online Shopping Platform
Websites By Customer**

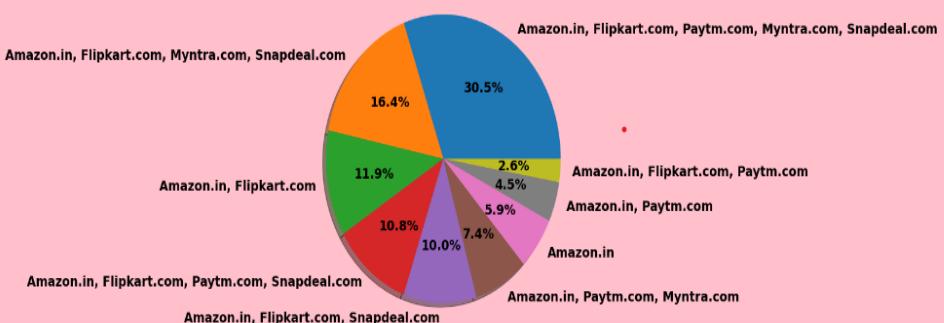
Project Report on Data Analysis of Customer Retention in the Ecommerce Sector

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Use_Col_6

	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	Wide 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
0	Amazon.in, Paytm.com	Paytm.com	Flipkart.com	Flipkart.com	Snapdeal.com	Snapdeal.com	Paytm.com	Paytm.com	Paytm.com	Amazon.in
1	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Myntra.com	Flipkart.com, Myntra.com	Amazon.in, Flipkart.com, Myntra.com	Amazon.in, Flipkart.com, Myntra.com	Myntra.com	Amazon.com, Flipkart.com, Myntra.com	Amazon.in, Flipkart.com, Myntra.com	Amazon.in, Flipkart.com
2	Amazon.in, Paytm.com, Myntra.com	Amazon.in, Paytm.com, Myntra.com	Amazon.in, Paytm.com, Myntra.com	Amazon.in, Myntra.com	Amazon.in, Paytm.com, Myntra.com	Amazon.in, Paytm.com	Amazon.in, Paytm.com, Myntra.com	Amazon.com, Paytm.com, Myntra.com	Patym.com, Myntra.com	Amazon.in
3	Amazon.in, Flipkart.com, Paytm.com, Myntra.com...	Amazon.in, Flipkart.com, Paytm.com, Myntra.com...	Amazon.in, Flipkart.com, Paytm.com, Myntra.com...	Amazon.in, Flipkart.com	Amazon.in, Flipkart.com	Amazon.in, Flipkart.com, Snapdeal.com	Amazon.in, Flipkart.com, Paytm.com	Amazon.com, Flipkart.com, Paytm.com	Amazon.in, Flipkart.com, Myntra.com	Amazon.in, Flipkart.com, Snapdeal.com
4	Amazon.in, Flipkart.com, Paytm.com, Myntra.com...	Amazon.in, Flipkart.com, Paytm.com, Myntra.com...	Myntra.com	Myntra.com	Amazon.in, Flipkart.com, Paytm.com, Myntra.com...	Amazon.in	Amazon.in, Paytm.com, Myntra.com	Amazon.com, Flipkart.com, Paytm.com, Myntra.co...	Amazon.in, Flipkart.com, Patym.com, Myntra.com...	Amazon.in
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266	Amazon.in, Flipkart.com, Snapdeal.com	Amazon.in	Amazon.in	Amazon.in	Amazon.in	Amazon.in	Amazon.in	Amazon.com	Amazon.in, Flipkart.com	Amazon.in
267	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com	Flipkart.com, Myntra.com, Snapdeal.com	Flipkart.com, Myntra.com, Snapdeal.com	Flipkart.com, Myntra.com, Snapdeal.com
268	Amazon.in	Amazon.in	Amazon.in	Amazon.in	Amazon.in	Amazon.in	Amazon.in	Amazon.com	Amazon.in	Amazon.in

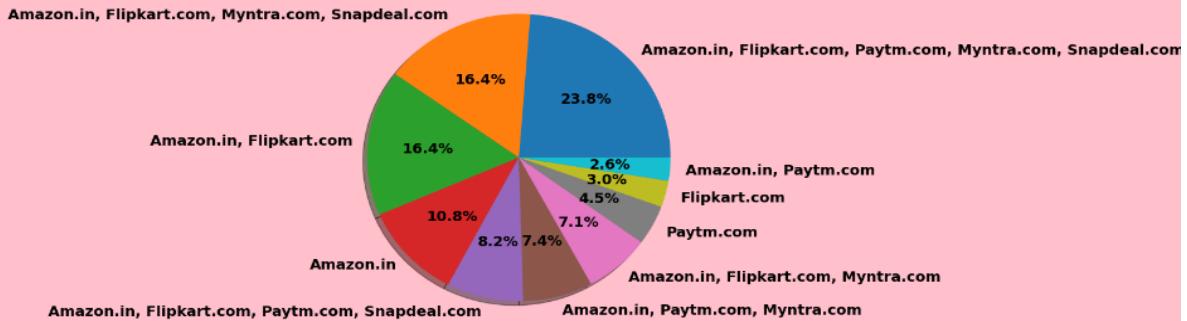
269 rows × 10 columns

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

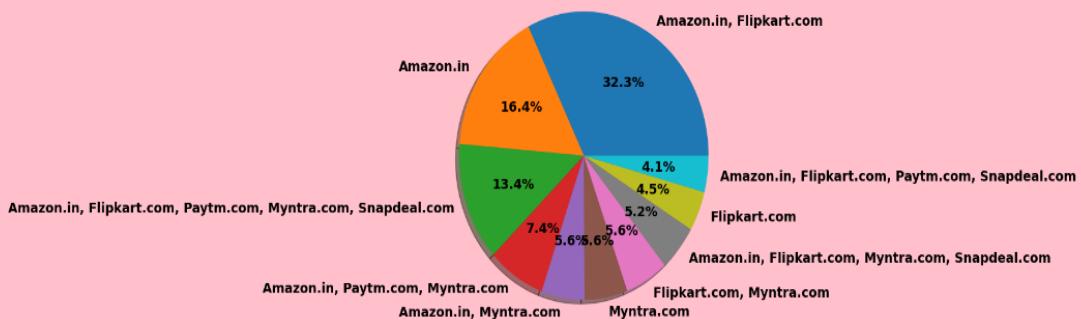


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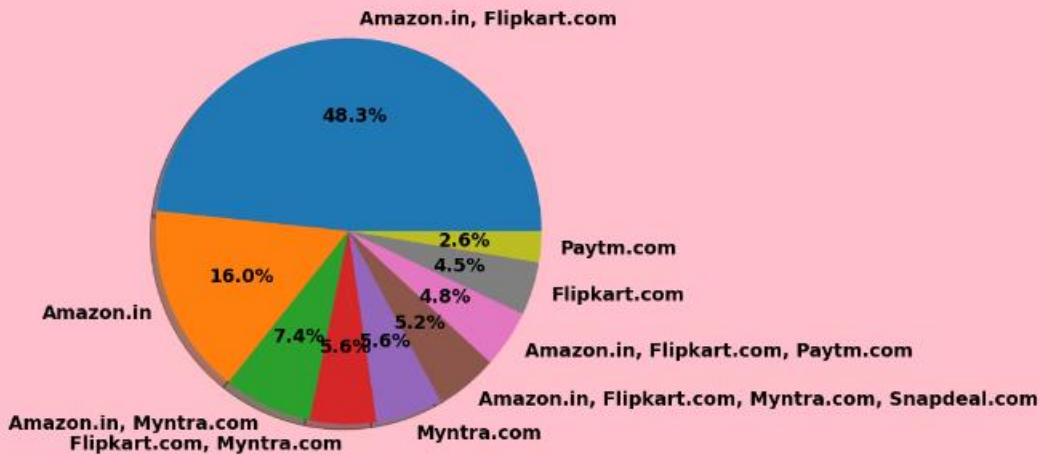
Easy to use website or application



Visual appealing web-page layout

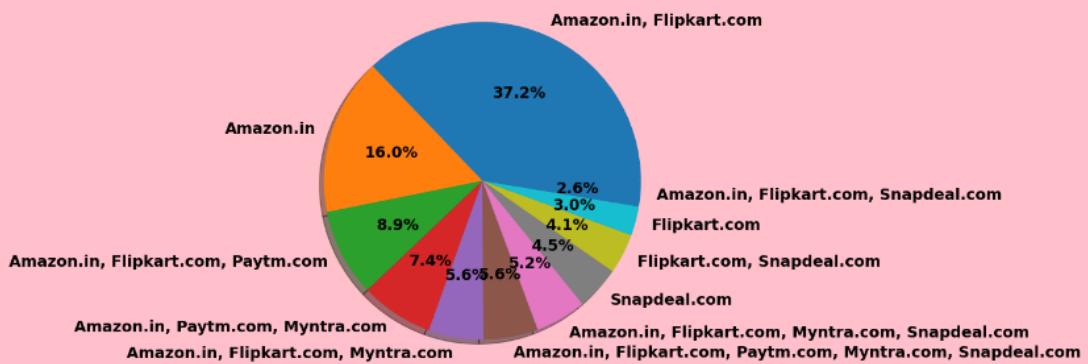


Wild variety of product on offer

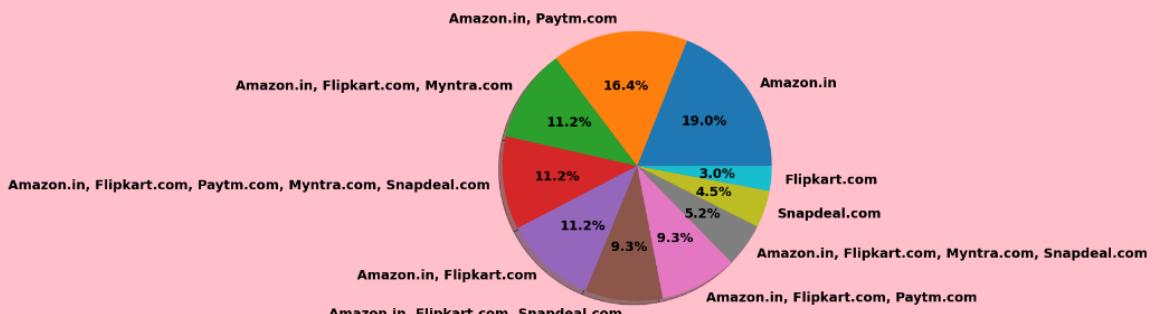


Project Report on Data Analysis of Customer Retention in the Ecommerce Sector

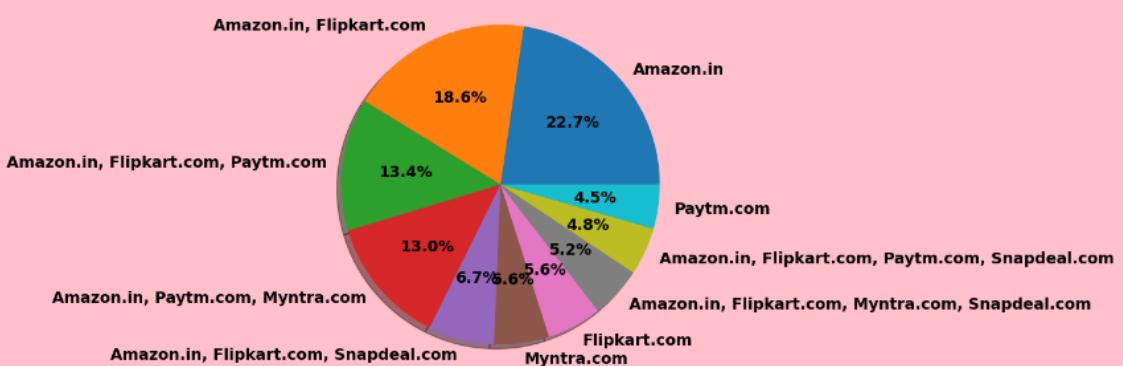
Complete, relevant description information of products



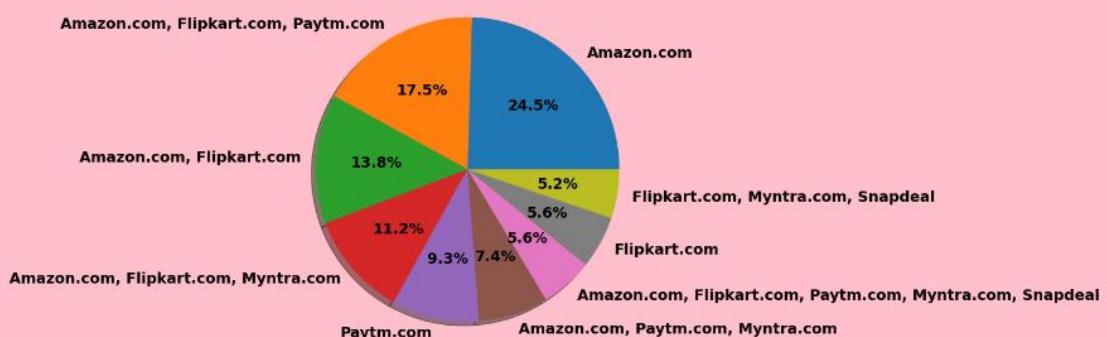
Fast loading website speed of website and application



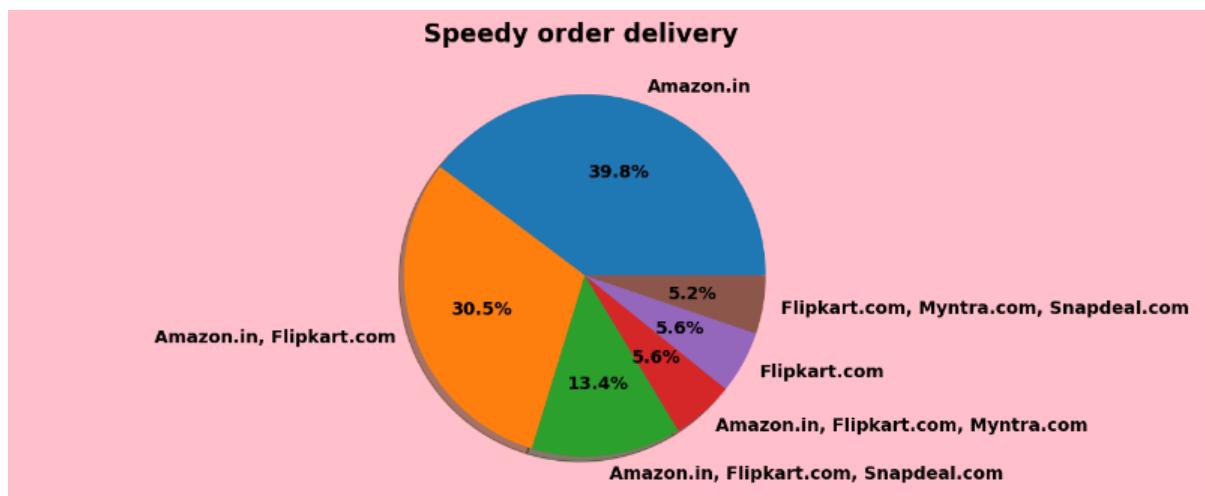
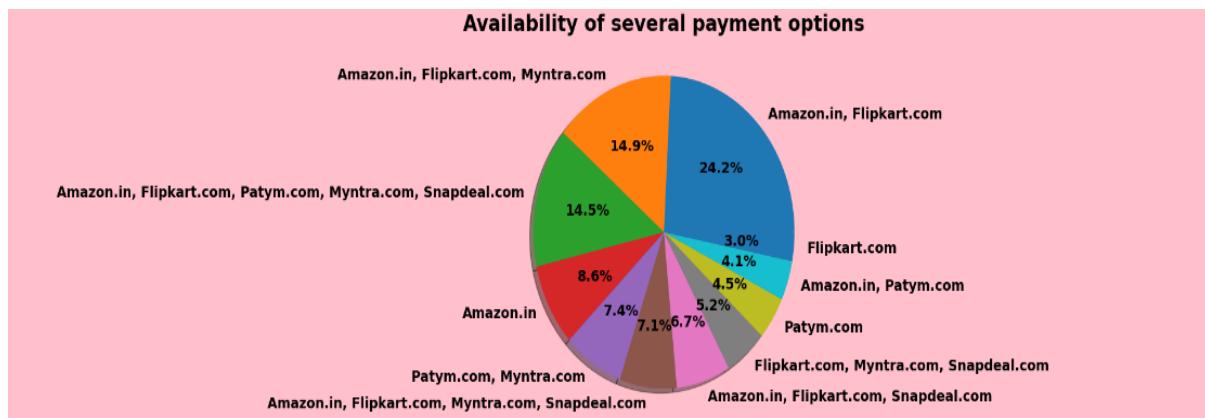
Reliability of the website or application



Quickness to complete purchase



Project Report on Data Analysis of Customer Retention in the Ecommerce Sector



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 amazon.in is a first rank.
- 87 customers agree that Amazon. in, Flipkart.com have Visually appealing web-page layout than most other market players.
- According to 125 people Amazon. in, Flipkart.com provides a wide variety of offers on products.
- Previously we know that 42.8 % of customers strongly agree and 41.6 % customer agree over high loading & processing speed of website.

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in the Ecommerce Sector***

Here we can see Majority of people think that the loading speed of Amazon is the fastest while Flipkart.com slowest website to load.

- In terms of Reliability of website or application again Amazon top list.
- The majority of people also think that Amazon tops the chart in terms of quick purchase process compare to others.
- The majority of customers think that Amazon and Flipkart.com provide several payment options compared to others.
- Safe & Speed delivery very much deciding factor in terms of purchase. In terms of speed of delivery, Amazon is much better than other online shopping platforms and Flipkart.com is the worst among all in terms of speedy delivery of the product.
- We already know more than 90% of Customer thinks that guaranteeing the privacy of their information is important for them. The majority of customers trust Amazon more than other shopping platforms for the Privacy of customers information
- The majority of customer trust Amazon followed by Flipkart over the Security of their financial information. We also see very few peoples trust the payment platform Paytm.
- Amazon, Flipkart.com, Myntra.com, and Snapdeal.com provide assistance through different multi-channel.
- A longer time to get logged in can annoy customers. Amazon intakes a longer time to log in while Flipkart.com take the least time among all.
- The majority of people agree that Amazon., and Flipkart.com takes longer time in displaying and photos.
- Myntra.com followed by Paytm.com take longer page loading time.

Project Report on Data Analysis of Customer Retention in the Ecommerce Sector

- Most people want a shorter delivery time frame, majority of customers agree that Paytm.com takes the longest time for delivery compared to others.
- Amazon's website is as efficient as earlier after upgradation.
- Majority 80 peoples recommended Amazon.in to their friends.

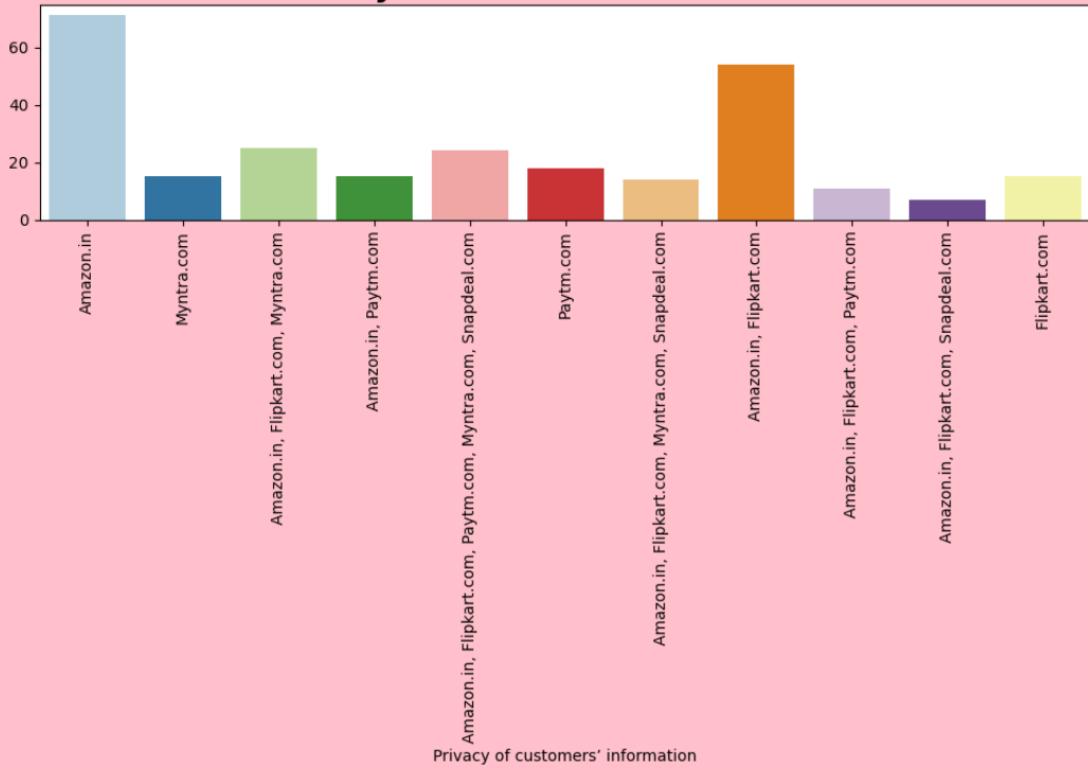
Privacy and security information of customers

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	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?	
0	Amazon.in	Amazon.in	Flipkart.com	Paytm.com	Amazon.in	Amazon.in	Flipkart.com	Flipkart.com	Amazon.in	Paytm.com	Flipkart.com	Amazon.in	Amazon.in	Flipkart.com	
1	Myntra.com	Myntra.com	Myntra.com	Amazon.in, Flipkart.com, Myntra.com	Amazon.in, Flipkart.com	Myntra.com	snapdeal.com	Snapdeal.com	Snapdeal.com	Snapdeal.com	Amazon.in	Myntra.com	Amazon.in, Flipkart.com	Amazon.in, Myntra.com	
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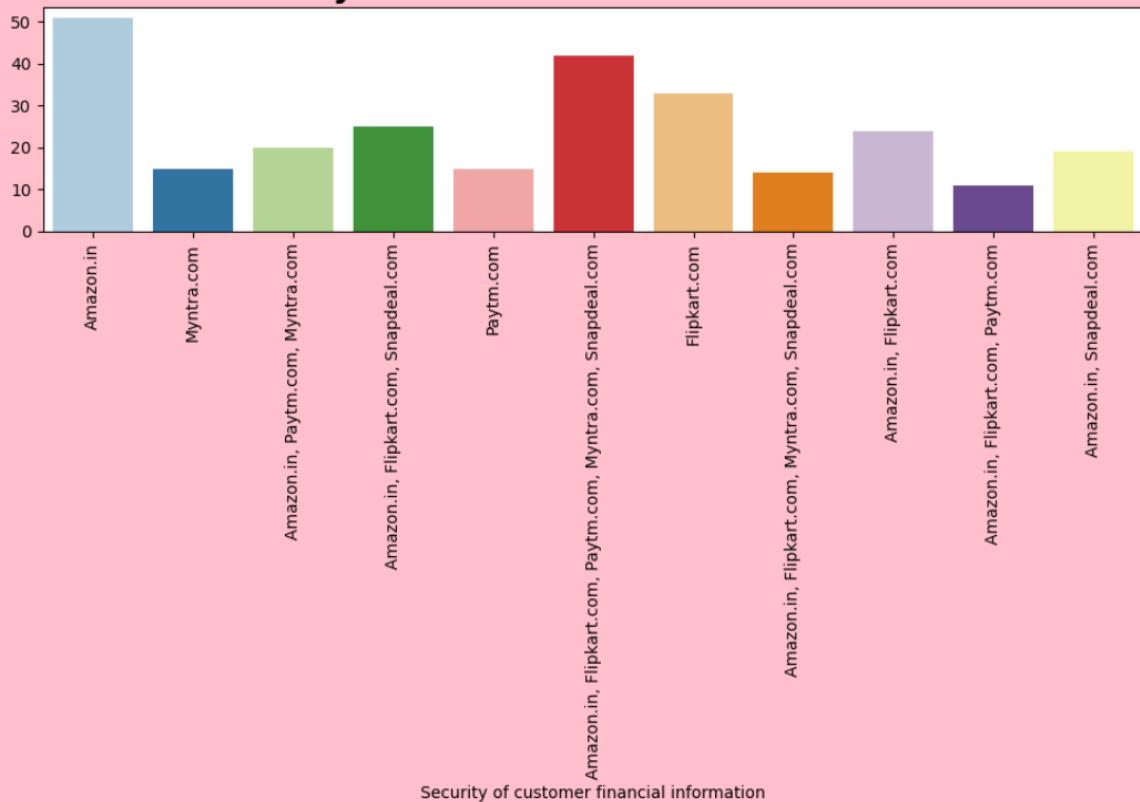
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Privacy of customers' information

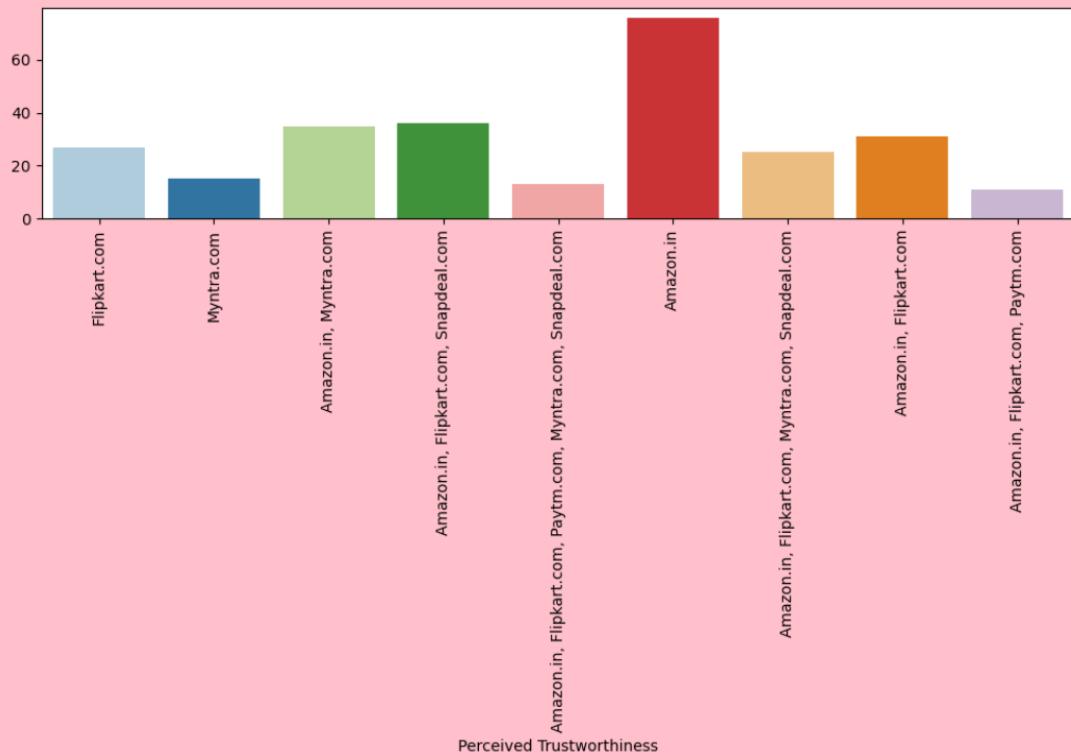


Security of customer financial information

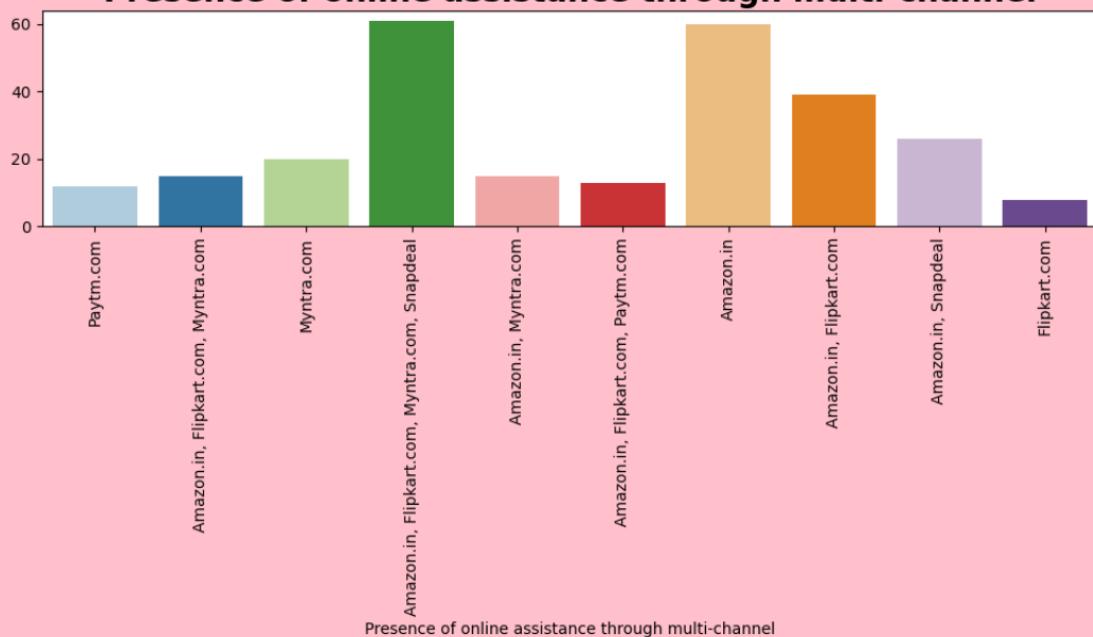


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Perceived Trustworthiness

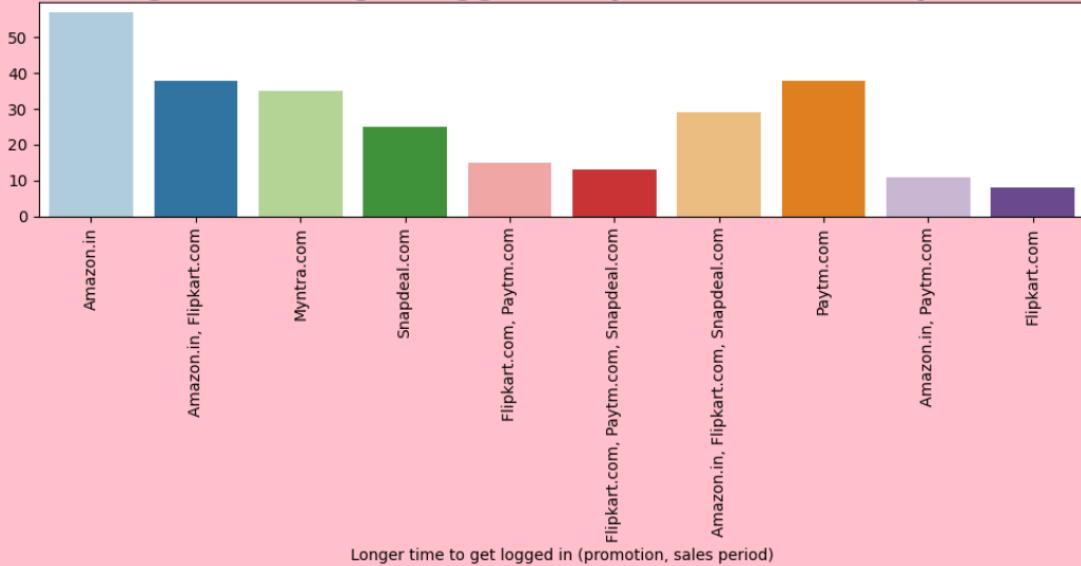


Presence of online assistance through multi-channel

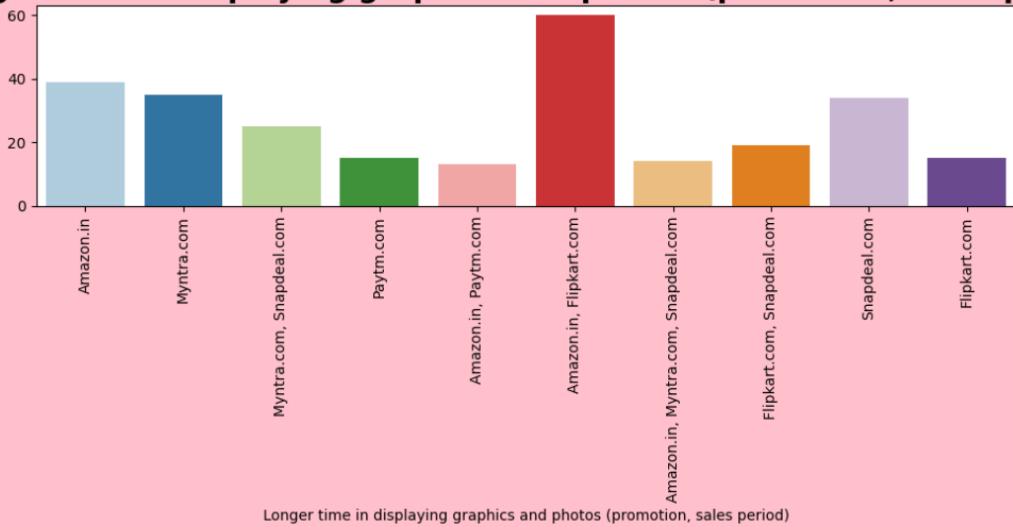


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Longer time to get logged in (promotion, sales period)

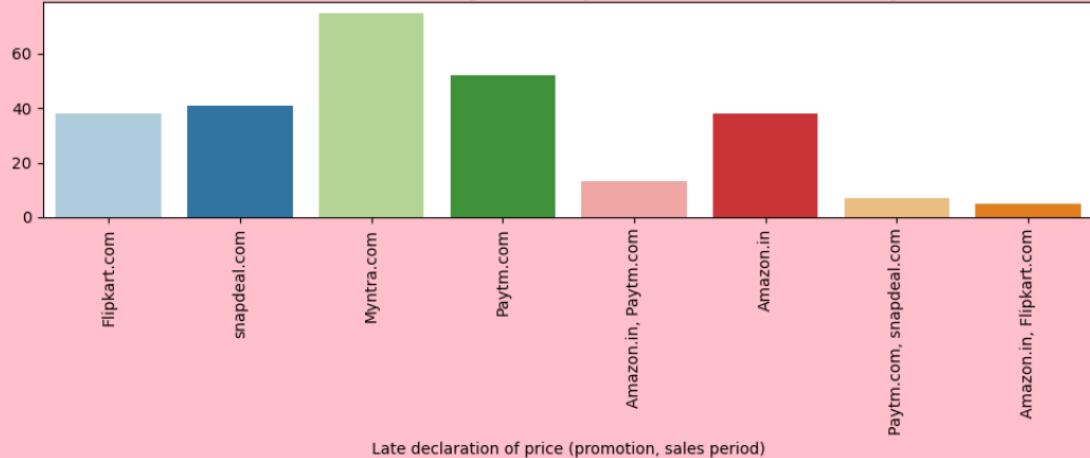


Longer time in displaying graphics and photos (promotion, sales period)

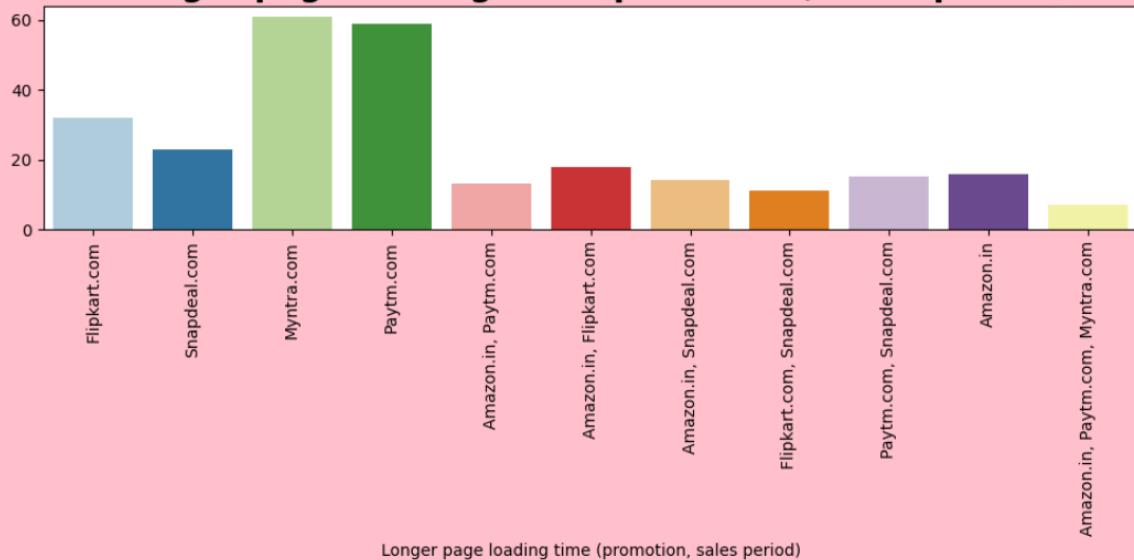


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Late declaration of price (promotion, sales period)

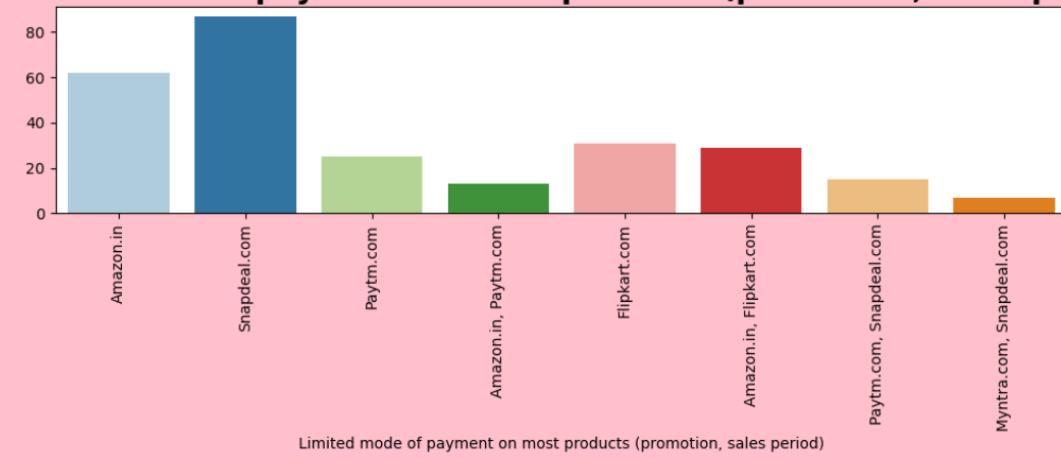


Longer page loading time (promotion, sales period)

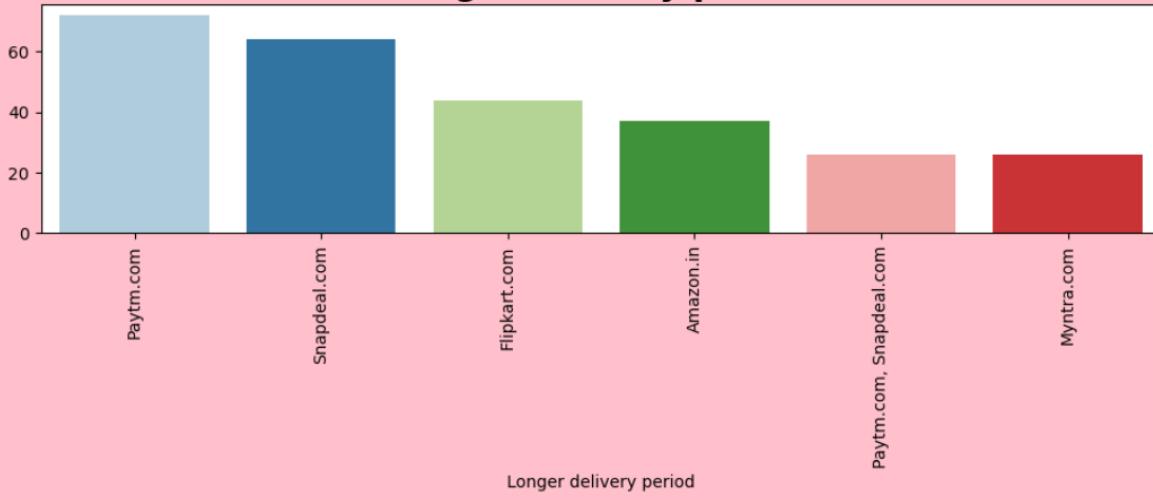


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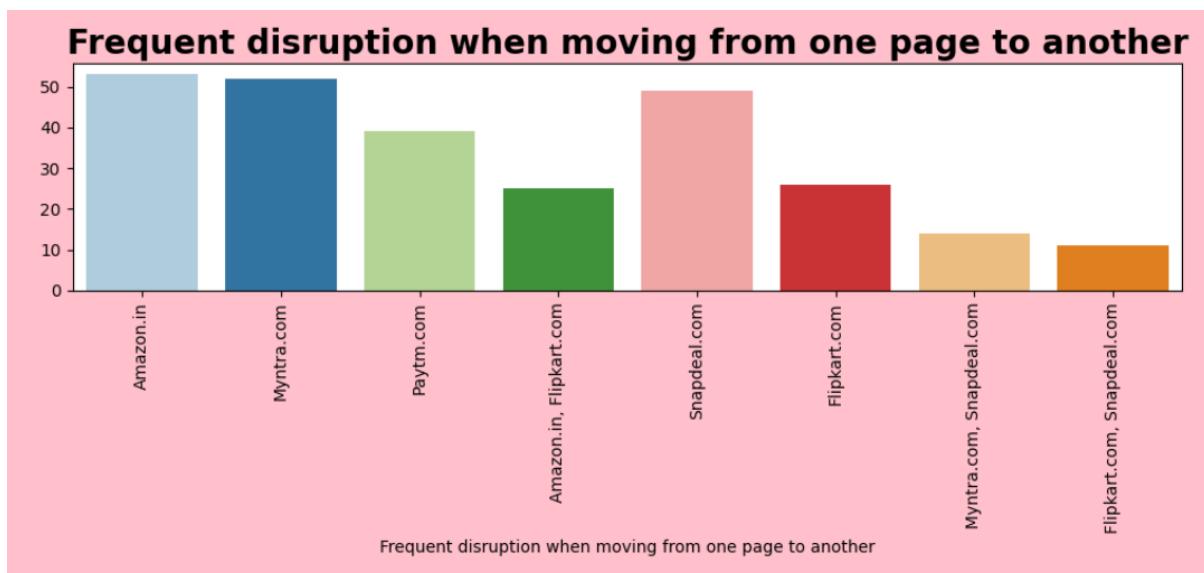
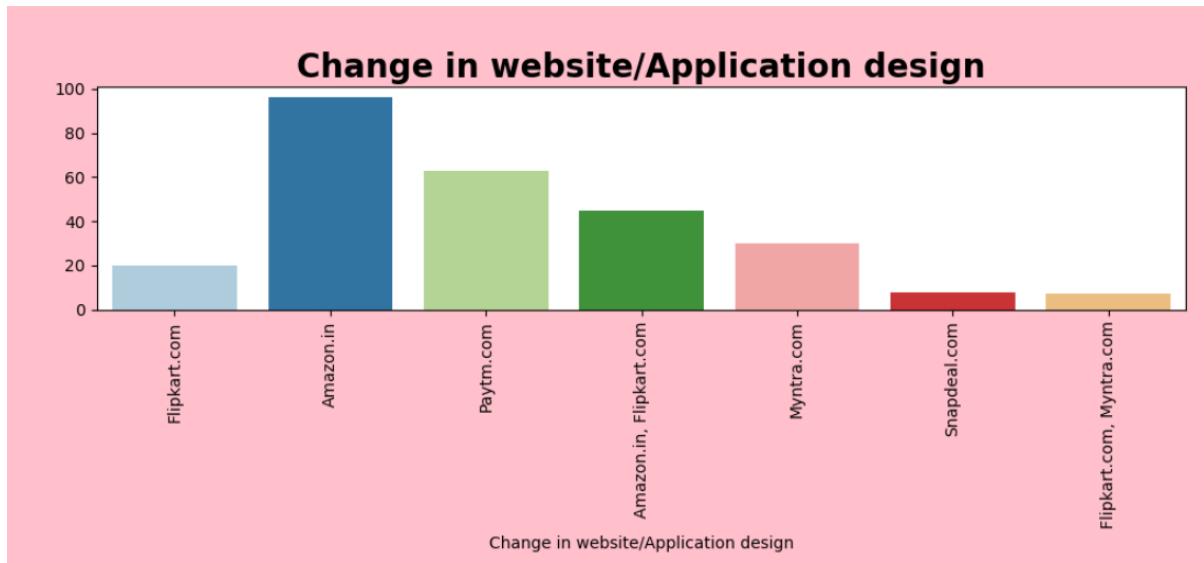
Limited mode of payment on most products (promotion, sales period)



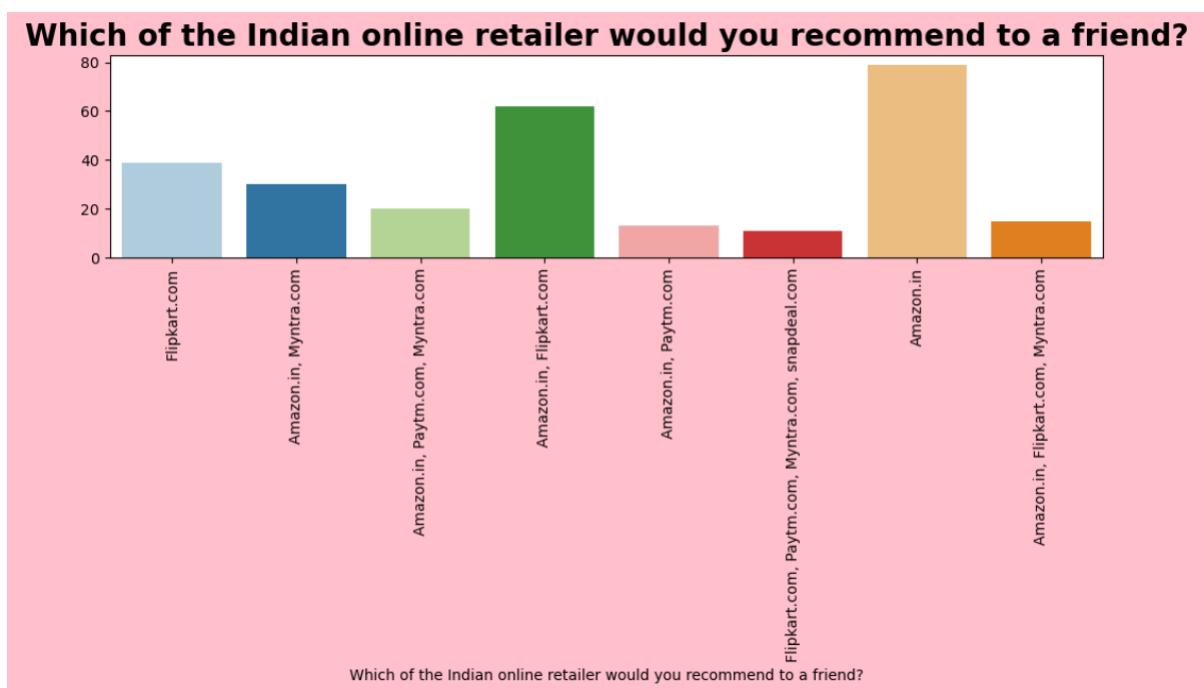
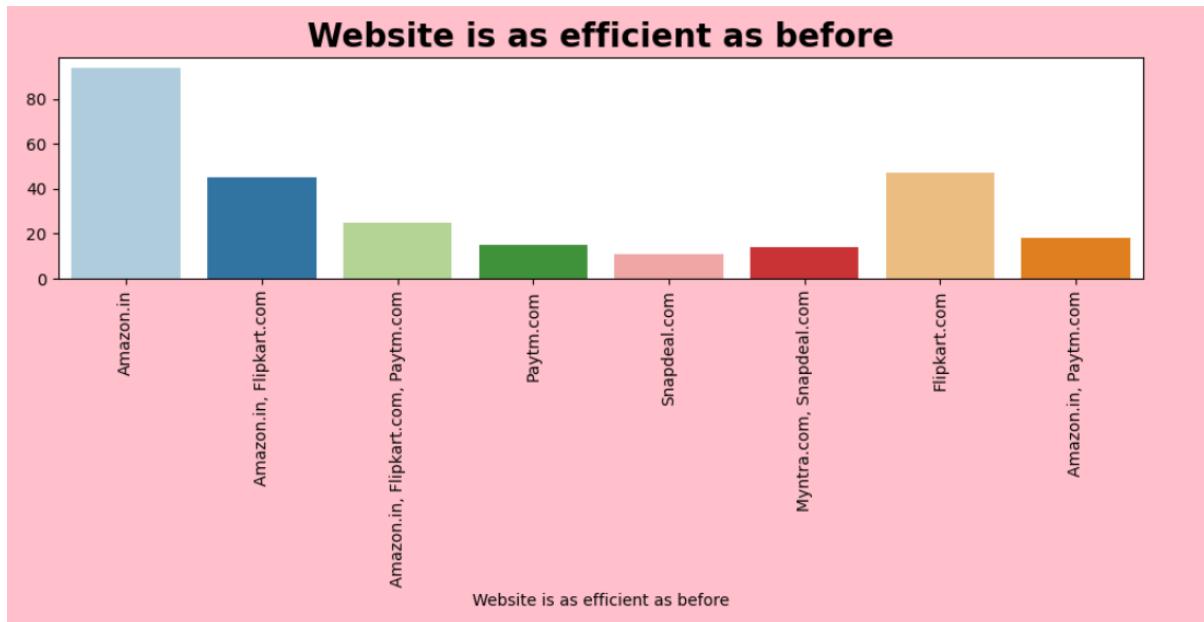
Longer delivery period



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Based on the analysis we have the following Recommendations for E-commerce companies

1. Amazon.com

- ❖ During promotions, try to disturbance-free shopping experience for customers.
- ❖ Give more payment options to customers.
- ❖ Try to give the price early during the promotion.
- ❖ Reduce the delivery time of the products.

2. Flipkart.com

- ❖ During promotions, try to disturbance-free shopping experience for customers.
- ❖ Give more payment options to customers.
- ❖ Try to give the price early during the promotion.
- ❖ Reduce the delivery time of the products.
- ❖ Flipkart and Amazon almost share the same feedbacks with varying percentages as the only difference.

3. Myntra.com

- ❖ During promotions, try to disturbance-free shopping experience for customers.
- ❖ Give more payment options to customers.
- ❖ Try to give the price early during the promotion.
- ❖ Reduce the delivery time of the products.

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in the Ecommerce Sector***

- ❖ Convenient to use and also a good website.
- ❖ Availability of several payment options.
- ❖ Faster product delivery.
- ❖ Complete information on product availability.
- ❖ Wild variety of products to offer.

4. Paytm

- ❖ Convenient to use and a good website
- ❖ Quickness to complete a purchase.
- ❖ About 64% of the customers feel that either web or app is reliable
- ❖ Around 20% of the customers believe that Paytm has a wild variety of products on offer.

5. Snapdeal

- ❖ Reduce the delivery time of the products during promotions
- ❖ Try to give the price early during promotion.

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in the Ecommerce Sector*

- ❖ During promotions, try to give a disturbance-free shopping experience to customers.
- ❖ No one has expressed to recommend Snapdeal to contact as it has the most negative feedback among all other websites
- ❖ 54% of the customers are happy about the availability of financial information security

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in the Ecommerce Sector*

CONCLUSION

Key Findings and Conclusions of the Study

- 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.
- people who have been shopping for more then 3-4 years are the ones who frequently shops
- Then customers will find their way back and continue buying stuff from the best company