

**THE FACTORS OF USER SATISFACTION ON ONLINE SHOPPING**

**BY**

**MD. SHOHANUR RAHMAN**

**ID: 192-25-763**

This Report Presented in Partial Fulfillment of the Requirements for the Degree  
of Master's of Science in Computer Science and Engineering

Supervised By

**MS.NAZMUN NESSA MOON**

Assistant Professor

Department of CSE

Daffodil International University



**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH**

**July 2020**

## APPROVAL

This Thesis titled “**The factors of user satisfaction on online shopping**”, submitted by Md. Shohanur Rahman, ID No: 192-25-763 to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of M.Sc in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 9<sup>th</sup> July, 2020.

### BOARD OF EXAMINERS



---

**Dr. Syed Akhter Hossain**  
**Professor and Head**

Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Daffodil International University

**Chairman**



---

**Gazi Zahirul Islam**  
**Assistant Professor**

Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Daffodil International University

**Internal Examiner**

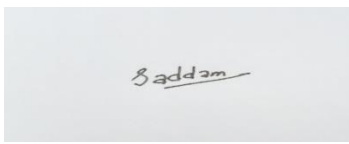


---

**Abdus Sattar**  
**Assistant Professor**

Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Daffodil International University

**Internal Examiner**



---

**Dr. Md. Saddam Hossain**  
**Assistant Professor**

Department of Computer Science and Engineering  
United International University

**External Examiner**

## DECLARATION

We hereby declare that, this thesis has been done by us under the supervision of **Ms.Nazmun Nessa Moon, Assistant Professor and Department of CSE** Daffodil International University.

We also declare that neither this thesis nor any part of this thesis has been submitted elsewhere for award of any degree or diploma.

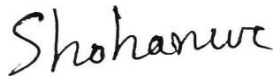
**Supervised by:**



---

**MS. NAZMUN NESSA MOON**  
**Assistant Professor**  
Department of CSE  
Daffodil International University

**Submitted by:**



---

**MD.SHOHANUR RAHMAN**  
ID: 192-25-763  
Department of CSE  
Daffodil International University

## ACKNOWLEDGEMENT

Firstly we express our heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete the final year thesis successfully.

We really grateful and wish our profound our indebtedness to **Ms. Nazmun Nessa Moon**, Assistant Professor Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of “*Onlineshopping*” to carry out this thesis. His endless patience ,scholarly guidance, continual encouragement , constant and energetic supervision, constructive criticism, valuable advice, reading many inferior draft and correcting them at all stage have made it possible to complete this thesis.

We would like to express our heartiest gratitude to **Dr. Syed Akhter Hossain**, Head, of Department of CSE, for his kind help to finish our thesis and also to other faculty member and the staff of CSE department of Daffodil International University.

We would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, we must acknowledge with due respect the constant support and patients of our parents.

## **ABSTRACT**

Our thesis “The factors of user satisfaction on online shopping” is based on online shopping which is a well-known phenomenon around the world. Bangladesh is not so far behind. A good number of online shops are getting launched. This study explores the acceptance of online shopping in Bangladesh from consumer’s perspective. The present scenarios and behaviors among the internet users of Bangladesh are presented in the study. The reasons and inhibitions are also analyzed. Online shopping is in a race with traditional shopping. Which one is winning in the current scenario, it has also been disclosed in this paper. A recommendation to the online shop owners has also been given at the end of this study.

## TABLE OF CONTENTS

### CONTENTS

APPROVAL .....	i
DECLARATION .....	ii
ACKNOWLEDGEMENT .....	iii
ABSTRACT.....	iv
LIST OF FIGURES .....	vi
LIST OF TABLES .....	vii
<b>CHAPTER 1:INTRODUCTION.....</b>	<b>1-2</b>
1.1 Introduction .....	1
1.2 Motivation .....	1
1.3 The rationale of the Study .....	1
1.4 Research Questions .....	1
1.5 Expected Output.....	2
1.6 Report Layout.....	2
<b>CHAPTER 2:BACKGROUND .....</b>	<b>4-6</b>
2.1 Introduction .....	4
2.2 Related Works .....	4
2.3 Research Summary.....	6
2.4 Scope of the Problem .....	6
2.5 Challenges .....	6
<b>CHAPTER 3:RESEARCH METHODOLOGY .....</b>	<b>7-10</b>
3.1 Introduction .....	7
3.2 Research Subject and Instrumentation .....	7
3.3 Data Collection Procedure .....	8
3.4 Statistical Analysis .....	9
3.5 Implementation Requirements .....	9
3.6 Conclusion.....	10
<b>CHAPTER 4:EXPERIMENTAL RESULTS AND DISCUSSIONS.....</b>	<b>11-33</b>
4.1 Introduction .....	11
4.2 Experimental Results.....	11
4.3 Descriptive Analysis .....	11
<b>CHAPTER 5:CONCLUSION AND FUTURE WORK .....</b>	<b>34-35</b>
5.1 Summary of the study .....	34
5.2 Conclusion.....	34
5.3 Recommendations .....	34
5.4 Implication for Further Study.....	35
<b>REFERENCES.....</b>	<b>36-37</b>
<b>PLAGIARISM.....</b>	<b>38-39</b>

## LIST OF FIGURES

<b>FIGURES</b>	<b>PAGE</b>
Figure 4.1: Gender	12
Figure4.2: Occupation	13
Figure4.3: Age group	14
Figure4.4: Monthly income	15
Figure4.5: Internet users	16
Figure4.6: Time duration of internet use	17
Figure4.7: Done online purchased	18
Figure4.8: What purchased	19
Figure4.9: Saves time	20
Figure4.10: Risk on online shopping	20
Figure4.11: Hesitate to give credit card no	21
Figure4.12: Time consuming	22
Figure4.13: Faced problem	22
Figure4.14: What problem	23
Figure4.15: Impact	24
Figure4.16: Last year shopping	25
Figure4.17: Prefer cash on delivery to credit card	26
Figure4.18: Safe transection	26
Figure4.19: Got cheated	27
Figure4.20: Received product timely	28
Figure4.21: Favorite site	29
Figure4.22: Satisfied or not	29
Figure 4.23: Naive Bayes on Weka	30
Figure 4.24: Naive Bayes on Weka	31
Figure 4.25: Apriori on Weka	32
Figure 4.26: Apriori on Weka	32
Figure 4.27: Apriori on Weka	33

## LIST OF TABLES

<b>TABLES</b>	<b>PAGE</b>
Table4.1: Gender percentage	11
Table4.2: Occupation percentage	12
Table4.3: Age group	13
Table4.4: Monthly income	14
Table4.5: Use internet	15
Table4.6: Using internet time	16
Table4.7: Purchased online	17
Table4.8: What purchased	18
Table4.9: Saves time	19
Table4.10: Risk on online shopping	20
Table4.11: Hesitate to give credit card no	21
Table4.12: Time consuming	21
Table4.13: Faced problem	22
Table4.14: What problem	23
Table4.15: Impact	23
Table4.16: Last year shopping	24
Table4.17: Prefer cash on delivery to credit card	25
Table4.18: Safe transection	26
Table4.19: Got cheated	27
Table4.20: Received product timely	27
Table4.21: Favorite site	28
Table4.22: Satisfied or not	29



# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Bangladesh is an overpopulated country and nowadays people are interested in using the internet since 2014. When the internet came, many companies started selling their product through the internet. Today, Bangladesh has a massive target customer for online shopping. There are different types of websites nowadays for online shopping in Bangladesh.

People are interested in online shopping because they can see their product, prize, color, size and they can buy it from other cities and easily can pay for that. But, there are problems while they are shopping online. So, we tried to find out that which factors are satisfied and unsatisfied for the users. In this chapter introduces the problems in that research paper.

### 1.2 Motivation

Nowadays, online shopping is a fast-growing phenomenon. Growing numbers of consumers shop online to purchase goods and services, gather product information browse for enjoyment. Online shopping environments are therefore playing an increasing role in the overall relationship between marketer's consumers. Most of the people fear to online shopping because they think the product is not good or price high and how they get that product.

We all know that Bangladesh is a Digital country. Everyone has an internet in their smartphones. In this internet world, it easy to find what they want. This online based shopping people can find their clothes, electronics, accessories and many things without going there.

### 1.3 The rationale of the Study

Nowadays there are huge shopping websites. Some of those are real and some of those are fake. Sometimes they did not get their product which they buy through the internet and sometimes they fear to give money through the online. Some people don't trust those websites and price of a product is high with shipping cost. So, we decided that how can them trust online shopping. For this, we choose this research.

### 1.4 Research Questions

This research will assist us to know what factors make users feel more reliable in shopping online. The following questions will help to get the idea of how we will be able to find the factors.

- a. What does make a buyer to shop online?
- b. What facilities make users to shop online?
- c. How can a user be made reliable in online shopping?
- d. When a user does is satisfied on online shopping?

## **1.5 Expected Output**

As it is a research-based topic so our expected outcome is following

- We tried to find out which ages are users mostly shopping on online and why they are preferred online shopping.
- Online shopping facility.
- Money transaction is safe or not on online shopping.
- While buying the product online they faced the problem or not.
- Quality of that product.
- How many times they have been cheated and did they receive the product on time.
- Giving card no when buying the product online safe or not and their identity was safe or not.

We tried to find out those in this research paper as much we expected.

## **1.6 Report Layout**

### **Chapter 1: Introduction**

In this chapter, we have discussed the motivation, Rationale of the Study and the expected outcome of the thesis. Later followed by the report layout.

### **Chapter 2: Background**

We discuss the background circumstances of our Research. We also talk about the related work, research summary, the scope of the problem and challenges of the thesis.

### **Chapter 3: Research Methodology**

This chapter is all about the requirements like research subject and instrumentation, data collection procedure, Statistical analysis and Implementation requirements.

### **Chapter 4: Experimental Results and Discussion**

In this chapter experimental results, descriptive analysis and summary.

### **Chapter 5: Summary, Conclusion, Recommendation and Implication for Future Research**

We discussed the conclusion and the scope for further developments which pretty much derive about the thesis.

## **CHAPTER 2**

### **BACKGROUND**

#### **2.1 Introduction**

Internet uses in Bangladesh increasing day by day. In Bangladesh Telecommunication Regulatory Commission (BTRC) report says that the total number of Internet Subscribers has reached **80.829 million** at the end of **January 2019**[1]. In this internet world, people are most dependent on online shopping. Online shopping websites and E-commerce sites are mostly using in those days.

Everyone wants the best product and there is lots of product online so it's quite a bit of challenge for those buyers to provide the good things. That's this we tried to work on this research.

#### **2.2 Related Works**

Internet retailing is a more helpful shopping channel for purchasers in light of the fact that online stores offer more noteworthy time reserve funds. That is a standout amongst the most prime reason individuals need to incline toward internet shopping. However, there is another prime issue which is 'Trust'. Absence of trust is a standout amongst the most much of the time referred to explanations behind customer's not shopping on the web [2]. Customers may not purchase because of the dangers related with web shopping, for example, the likelihood of Visa misrepresentation, the failure to contact or feel something before getting it [3]. Wee et.al has said in their examination that the purposes behind not purchasing from online are absence of security, absence of physical contact, vulnerability about item quality and doubt of retailer[4]. These reasons are like the examinations which depended on the trust issue. To settle this trust issue, Lee and Turban proposed a hypothetical model for researching the four primary predecessor impacts on buyer trust in Internet shopping, which are reliability of the web trader, dependability of the web as a shopping medium, infrastructural factors and other factors[5]. They host considered security third get-together confirmation as relevant factors and friends size and statistic factors as different components. Wang, et.al said in their investigation that online exercises and learning are especially related and connected with the trust of buyers [6]. The more the buyer thinks about the exercises of web based shopping the more they will confide in it [6]. Karim appeared in his examination that the restraints for web-based shopping were conveyance framework flaws, online installment frameworks, individual security and

individual client administrations. Then again, the helpers for web based shopping were accessible every minute of every day, simple utilize, less pressure and time saving[7]. Ahn et.al ordered the exercises of web shopping in two different ways. One is Online (System, data and administration quality) and the other one is disconnected (Product delivery)[8]. A few expenses of purchasing from an online store, for example, sending and taking care of charges, or postponed utilization amid the conveyance time frame surpass those expenses related with purchasing from a customary store [9]. It is dependably a major issue that the season of the item conveyance and the charge of the item conveyance ought to be less. Coordination, item conveyance and client benefit have been a standout amongst the most vital variables of web-based shopping [10] [11] after the trust issue. Liu et.al has isolated the exercises of e-business as 'Pre', 'On the web' and 'Aftersales'[15]. Numerous specialists have done their exploration chip away at the premise of the states of mind of the online customers. Based on the conduct states of mind of the buyers, specialists have ordered the online customers. As per Kau, Tang, and Ghose, there are six sorts of online customers. They are on-off customer, examination customer, conventional customer, double customer, e-slow poke and information surfers. Jaillet HF said that the conduct of the purchasers can change whether the shoppers are 'master' or 'tenderfoot'. 'Master' customers are the individuals who know their item well. 'Learner' customers are the individuals who don't have that much information about the item. Their practices fluctuate on their item information [12].

A ton of research work has been done on Online Shopping from Bangladeshi viewpoint. Chowdhury et.al proposed a model got from Technology Acceptance Model (TAM) to clarify purchaser acknowledgment of e-shopping in Bangladesh.Howladar, Mohiuddin & Islam additionally demonstrated a subjective report where they demonstrated to create web based shopping expectation among Bangladeshi individuals [13].

Online shopping has been on its climb in Bangladesh. This paper will encourage the future analysts and web based business webpage proprietors to comprehend the dread and disadvantages of web based shopping.

## **2.3 Research Summary**

There is a lot of Internet user in Bangladesh BTRC report told us that. In this research, we tried to find out the problem and solution while shopping online. How to attract users to online shopping and why they prefer online.

## **2.4 Scope of the Problem**

- We have to know how many consumers prefer online shopping.
- How many times they buying product form online shopping.
- A product is the same or not.
- Collecting huge amount of data.
- After collecting data using the decision tree to get our outcome.
- Outcome result will be shown in the descriptive analysis.
- Then we can find our expected outcome.

## **2.5 Challenges**

Our research will have some challenges:

- Collecting a lot amount of data.
- After collecting manage the data.
- Data procedure is our main problem in this research.
- Experimental result and outcome result also a problem.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the methodology that was the factors of user satisfaction on online shopping. This chapter will include the Research Subject and Instrumentation, Data Collection Procedure, Statistical Analysis and finally Implementation Requirements. Google form and printout question was used to collect primary data for this research.

Google form was easy to used collect data from the user. They don't need much time to fill out the form. The user can access it through their smartphone, laptop and any device that supports internet. This strategy was picked as a favored technique since it wide achieves respondents comfort, minimal effort speed that gathering and fit that it has with the investigation. A web study is a self-administrated survey posted on site.

#### **3.2 Research Subject and Instrumentation**

Calls attention to that a study is just in the same class as an inquiry it asks, henceforth the poll is a basic stage in the study examined the process, the survey must be important and exact in attempting to catch the embodiment of the exploration objective. To accomplish these finishes, an analyst will be required to settle on a few choices:

- What method would it be a good idea for him to inquire?
- By what method should each inquiry be expressed?
- In what succession should the inquiries be masterminded?
- What survey format will best serve the examined destinations?
- In what capacity should the survey be pre-tried?
- Should the survey be amended?

The survey that was utilized examination depended on the web shopping. The survey was marginally acclimated to guarantee that it caught the quintessence of shopping on the web, the instrument included among others inquiries on web-based shopping how they purchase the item, and how they give the cash. The dimension which was internet shopping service like how

many times they shopping online, safety their data and money, how much money transaction is safe or not was excluded from this study.

**Satisfaction:** is about when a user buys anything on the internet they get the real product or not.

**Trust:** refers to confidence in the online shopping and how trustworthy the website for online shopping.

**Privacy:** no misuse of personal information that gets exchanged on the online interaction.

**Transaction:** how much money transaction is safe for the user and the transaction process is trustworthy.

### 3.3 Data Collection Procedure

Contentends that in light of the fact that there is numerous examination strategies it makes sense that there will likewise be distinctive courses gathering of the information. Respondent might be offered the poll to fill or they may associate with survey and reviews. A web review is one such poll where respondent takes a self-regulated survey posted on Google from. The speed reaction cost of social occasion essential information and the scope of the web study of some favorable position of this strategy for gathering information.

One different favorable circumstances that the data accumulation and catching should be possible continuously.

The significant purpose behind utilizing this strategy was that the idea of the theme web-based shopping thus the overview test was effortlessly reachable through this system and was likewise all the more eager to take the poll on the web. The promised some of the good reaction rates. Some of the favorable position of utilizing on the web survey from essential information gathering is:

- The speed of information accumulation relatively quick.
- Respondent's investments would be higher.
- Versatile question.
- No polls and study impact questions.



- The anonymity of respondents can be ensured.
- Low cost of essential information accumulation.

### **3.4 Statistical Analysis**

The information was gathered online continuously. As respondents presented their survey the information was consequently sent out in graphical form. Each inquiry answer was introduced in the Google shape. Google made this examination to be simpler. A portion of the administration that Google from finished include:

- Ensuring that respondent just had one open door for taking the poll. This was finished by Google from.
- The unwavering quality and legitimacy test.
- Providing the capture attempt of the measurable outcome.

### **3.5 Implementation Requirements**

Collect the data from Google form and include there in the graphical form. Collect this data and then convert into Microsoft Excel worksheet. It helps to see the user data and further work. Actually, this data has to convert into CSV file for implementation on Weka. Their need to two data set to analysis the data on Weka. There are:

- Training data (which is the collect data from Google form).
- Text data

Text data is the sample of main data. Then the sample data(Test data) should be less than 70% and the training data should be more that 75%. If the two data set are rights then applying some algorithm to see their relation.

The Apriori Algorithm is an influential algorithm for mining frequent item sets for Boolean association rules. Apriori is designed to operate on database containing transactions (for example, collections of items bought by customers, or details of a website frequentation).

Applying this Algorithm Found the best ten rules find for this analysis. The final result will be shown in the Descriptive analysis.

### **3.6 Conclusion**

The point of this examination was investigating client fulfillment on internet shopping. The quantitative approach took into account factual investigation of the information. The examination took after a quantitative research approach. The mix of the quantitative approach and the overview technique was proper for the exploration question in this examination, the review populace was all internet shopping client like understudies, instructors, and independently employed.

## CHAPTER 4

### EXPERIMENTAL RESULTS AND DISCUSSIONS

#### 4.1 Introduction

The introduction and examination of the aftereffects of the directed majestic study will be done in this part. The aftereffects of the overview incorporate the examination of test results, descriptive investigation and outline of this part.

#### 4.2 Experimental Results

Six hundred respondents were welcome to take an interest in the review.

The inquiries are critical parts of any study. Inquiries are intended to help overview looks into figure out what elements may impact a respondent's answers, interests, and conclusions. Gathering data will empower you to cross-arrange and contrast subgroups with perceive how reactions to perceive how reactions shift between these gatherings.

#### 4.3 Descriptive Analysis

The percentage of data we collected by using Google form:

##### 4.1 Gender percentage

Table 4.1: Gender percentage

	Frequency	Percent
Male	296	71.67
Female	117	28.33

Table 4.1 shows that the percentage of male is 71.67% and female is 28.33% which is shown in the figure 4.1.

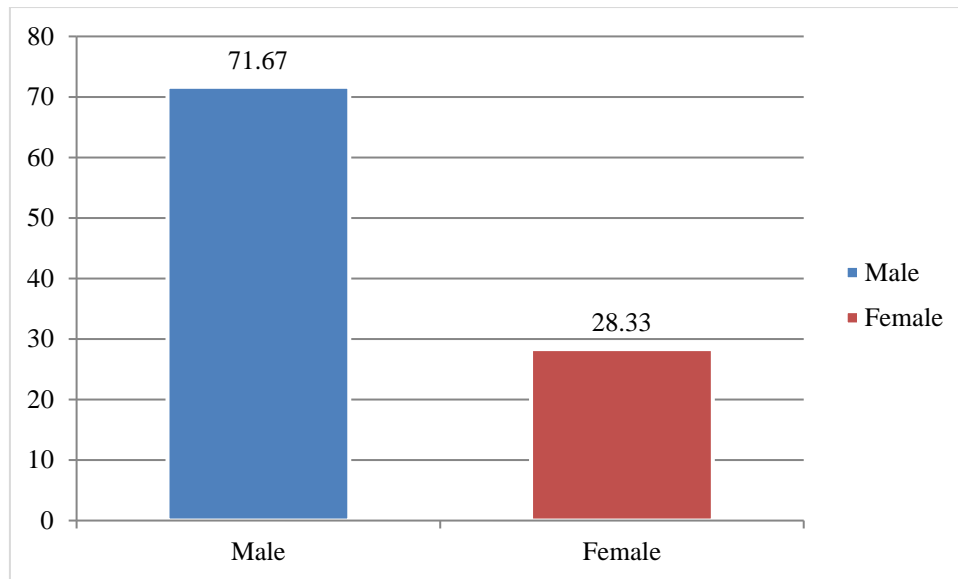


Figure 4.1: Gender

## 4.2 Occupation percentage

Table 4.2: Occupation percentage

	Frequency	Percentage
Student	192	46.49
Self-employed	95	23
Unemployed	23	5.57
Businessman	47	11.38
Teacher	46	11.14
Other	10	2.42

Table 4.2 shows that 46.49% of students which indicates that students are more interested in online shopping. After then the self-employed with the percentage of 23% which is shown in the figure 4.2

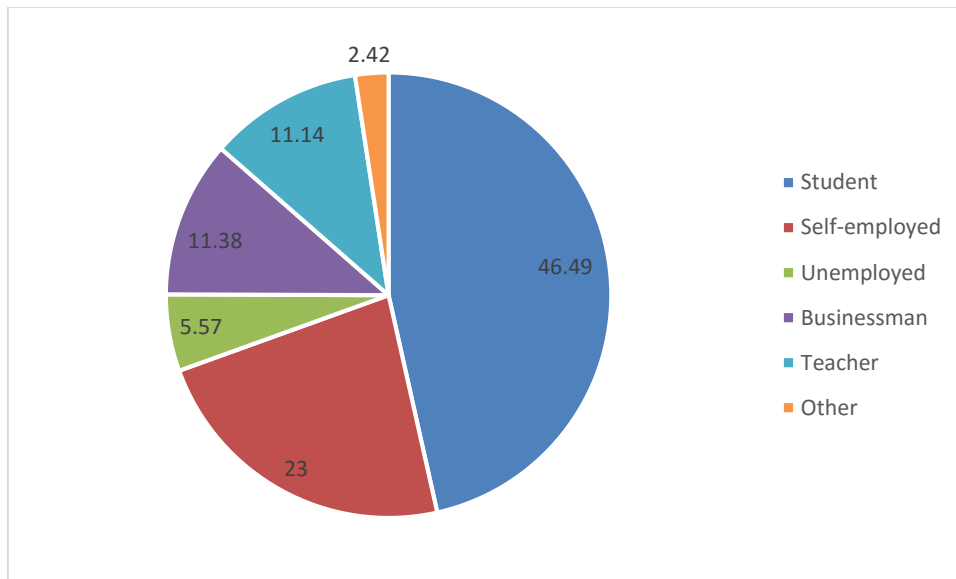


Figure 4.2: Occupation

### 4.3: Age group

Table 4.3: Age group

	Frequency	Percentage
Fifteen to twenty five years	240	58.35
Twenty five to forty five years	139	33.66
Forty five to sixty years	34	8.23

Table 4.3 shows that age from fifteen to twenty five years old prefer more to shop online. Twenty five to forty five is 33.66% and other ages are 8.23%. Figure 4.3 show the age group.

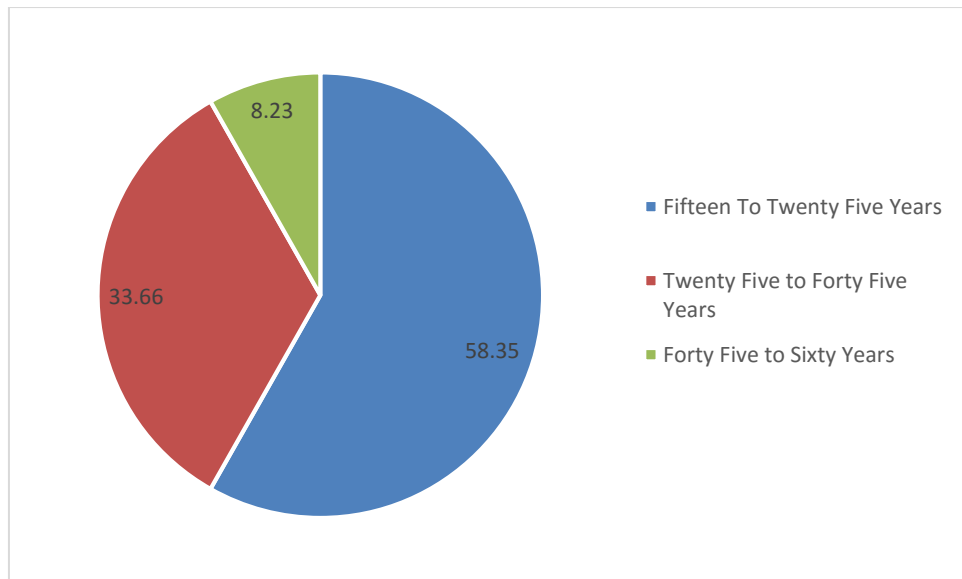


Figure 4.3: Age group

#### 4.4: Monthly income

Table 4.4: Monthly income

	Frequency	Percentage
Below ten thousand taka	145	35.11
None	44	10.65
Ten thousand to twenty five thousand taka	83	20.09
Thirty thousand taka	96	23.24
Thirty five to forty five taka	37	8.96
Forty five thousand to above in taka	8	1.94

Table 4.4 show the age monthly income of different ages people. Below ten thousand takas is 35.11%, None is 10.65%, ten thousand to twenty-five thousand is 20.09%, twenty-five to thirty-five thousand is 23.24%, thirty-five to forty five is 8.96% and above all is 1.94%.

The figure 4.4 show the monthly income.

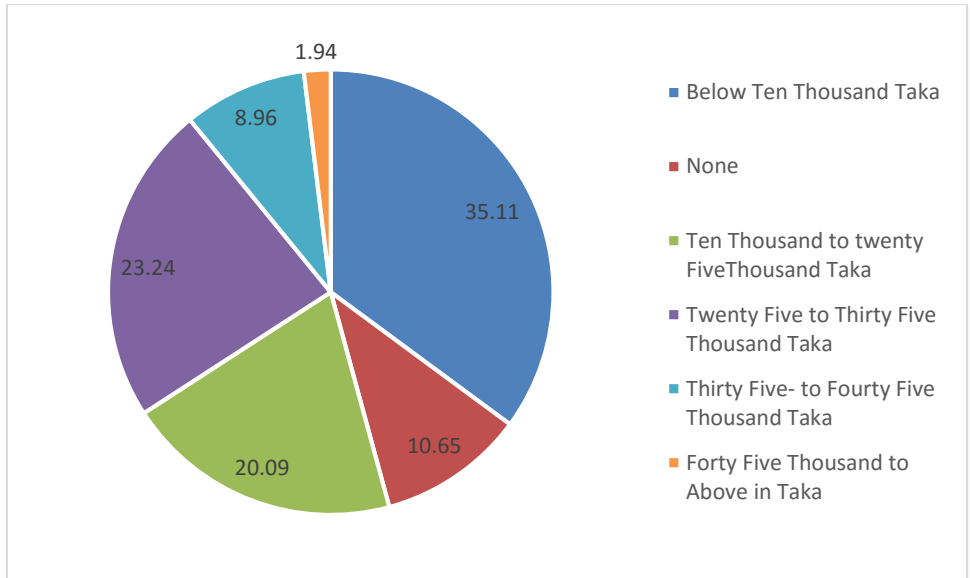


Figure 4.4: Monthly income

**4.5:Do you use the internet?**

Table 4.5: Internet users

	Frequency	Percentage
Yes	395	95.67
No	18	4.36

Table 4.5 shows that 96% are use internet and rest of the users are not continuous using internet. Figure 4.5 show the result.

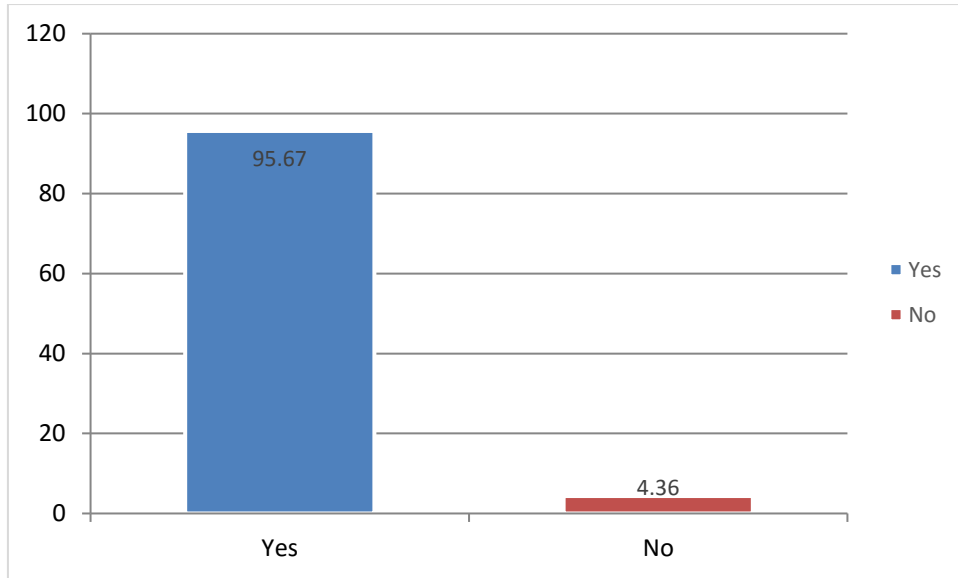


Figure 4.5: Internet users

#### 4.6: How long have you been using the internet?

Table 4.6: Time duration of internet use

	Frequency	Percentage
More than five years	213	51.57
Three to five years	147	35.59
One three years	39	9.44
Less than one year	14	3.39

Table 4.6 shows that more than five years their percentage are 51.57% which are the highest. Less than three years are 35.59% and less than one year is 3.39%. This will show in the figure 4.6



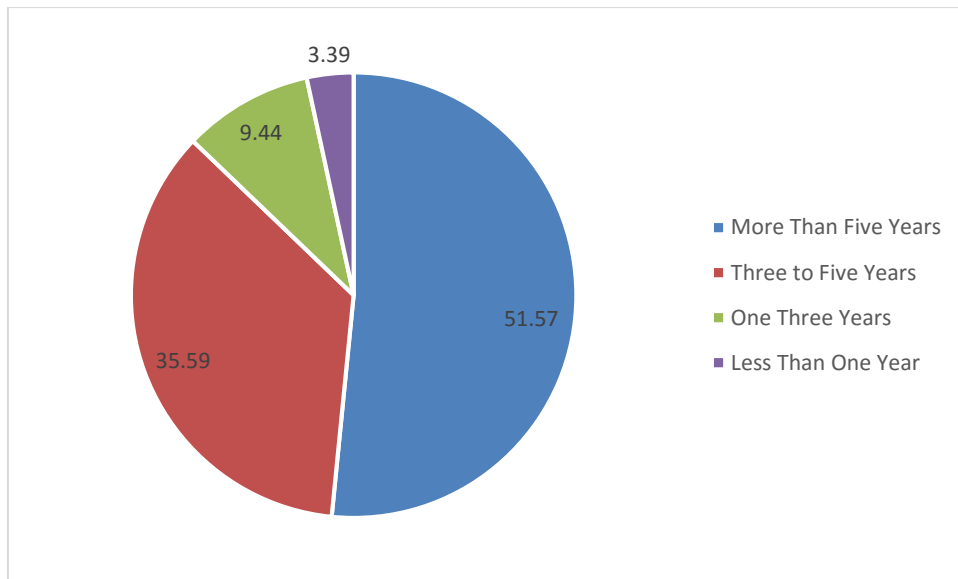


Figure 4.6: Time duration of internet use

#### 4.7: Have you done online purchase?

Table 4.7: Purchased online

	Frequency	Percentage
Yes, Continue Buying	129	31.23
Yes, But Not Continuous	216	52.3
Never	68	16.46

Table 4.7 shows that 52.3% are shopping but not continuous, 31.23% are continuing buying and 16.46 are never shopped.

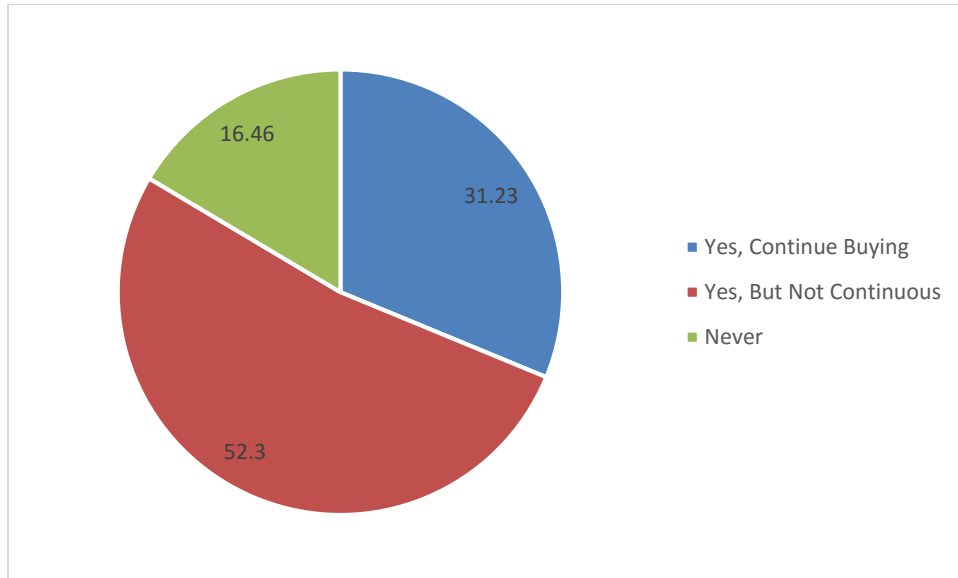


Figure 4.7: Purchased Online

#### 4.8: What would purchase through online shopping?

Table 4.8: What purchased

	Frequency	Percentage
Electronics	50	12.1
Accessories	117	28.33
Never-shopped	66	15.98
Clothes	104	28.18
Others	76	18.4

Table 4.8 shows that 12.1% are shopping Electronics, 28.33% are shopping Accessories, 15.98% are never shopped, 28.18% are shopping Clothes, 18.4% are shopped other things. Figure 4.8 show the most purchased online things.

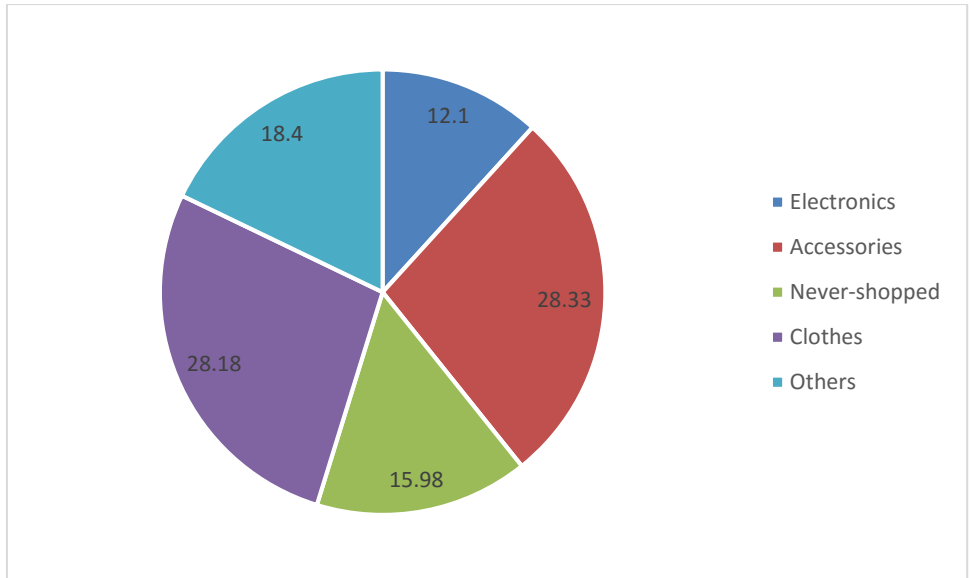


Figure 4.8: What purchased

#### 4.9: Do you think shopping on the internet saves time?

Table 4.9: Saves time

	Frequency	Percentage
Agree	324	78.45
Disagree	21	5.08
Neutral	68	16.46

Table 4.9 shows that online shopping 78.45% users are agree on internet shopping saves time. 5.08 % are not agreeing about that and the rest of 16.46% Neutral. Figure 4.9 show the percentage who believes internet shopping.

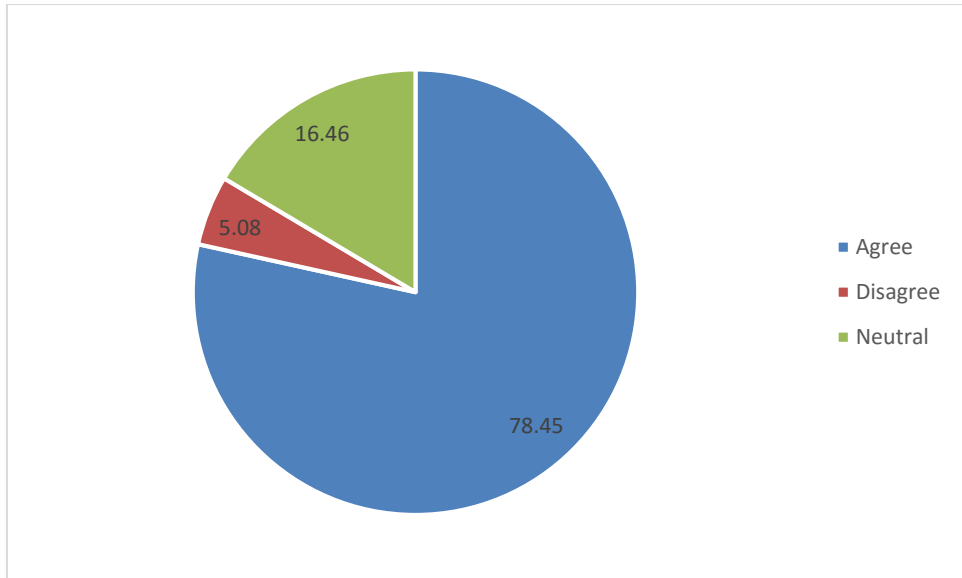


Figure 4.9: Saves time

#### 4.10: Do you think online shopping is risky?

Table 4.10: Risk on online shopping

	Frequency	Percentage
Disagree	181	43.83
Agree	109	26.39
Neutral	123	29.78

Table 4.10 shows that agree on online shopping 26.39%, Disagree 43.83% and 29.78% Neutral.

Figure 4.10 show the percentage whose agree on risky or not.

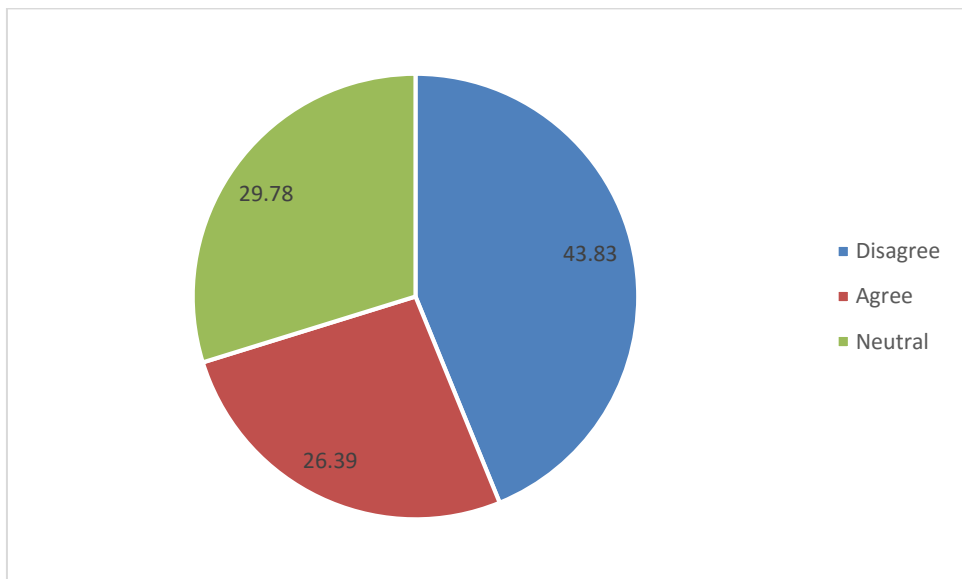


Figure 4.10: Risk on online shopping

### 4.11: While shopping online you hesitate to give your credit card no?

Table 4.11: Hesitate to give your credit card no

	Frequency	Percentage
Agree	125	30.27
Never-shopped	68	16.46
Disagree	131	31.72
Neutral	89	21.55

Table 4.11 shows that agree 30.27% are hesitated to give credit card no, Disagree are 31.72%, never shopped are 16.46% and Neutral are 21.55%. Figure 4.11 show the results.

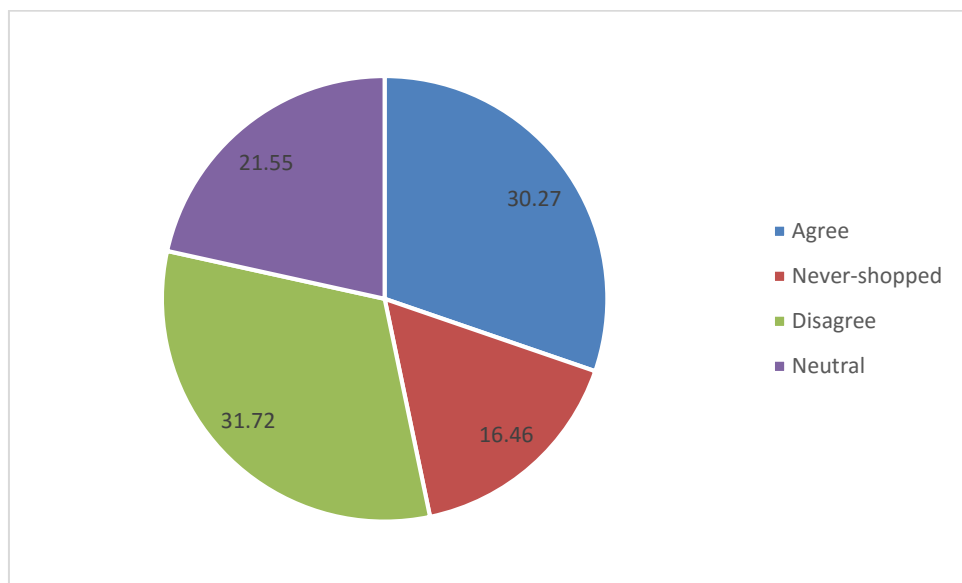


Figure 4.11: Hesitate to give credit card no

### 4.12: In shopping delivery of goods is more time consuming or not?

Table 4.12: Time consuming

	Frequency	Percentage
Yes	230	55.69
No	115	27.85
Never-shopped	66	15.98

Table 4.12 shows that 55.69% are response is no about time consuming, 27.85% are agreed about that and 15.98% are never shopped. Figure 4.12 show the time consuming result.

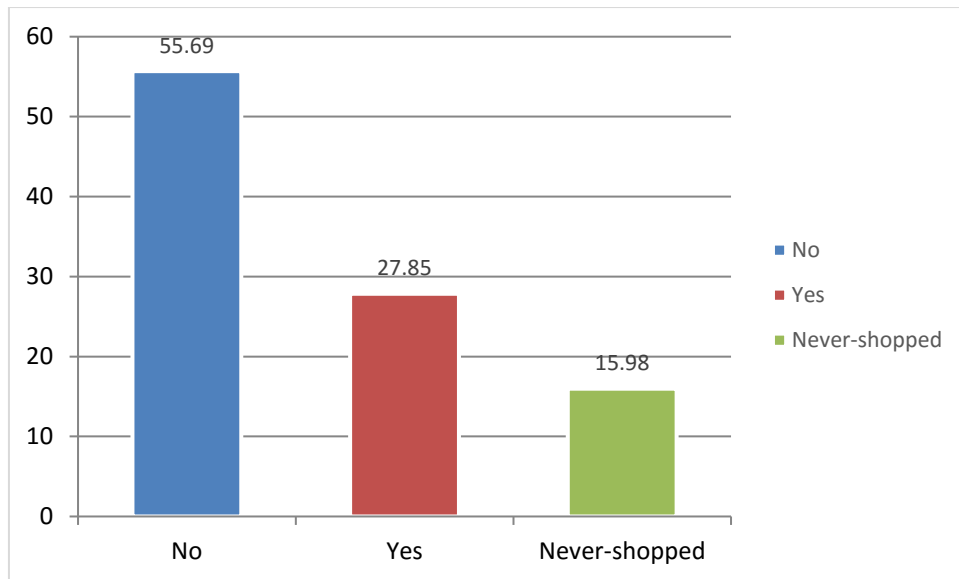


Figure 4.12: Time consuming

### 4.13: Did you face any problems while making online shopping?

Table 4.13: Faced problem

	Frequency	Percentage
No	174	42.13
Yes	171	41.4
Never-shopped	68	16.46

Table 4.13 shows that 42.13% are not facing problem while online shopping, 41.4% are facing problem and 16.46% are never shopped. Figure 4.13 show this

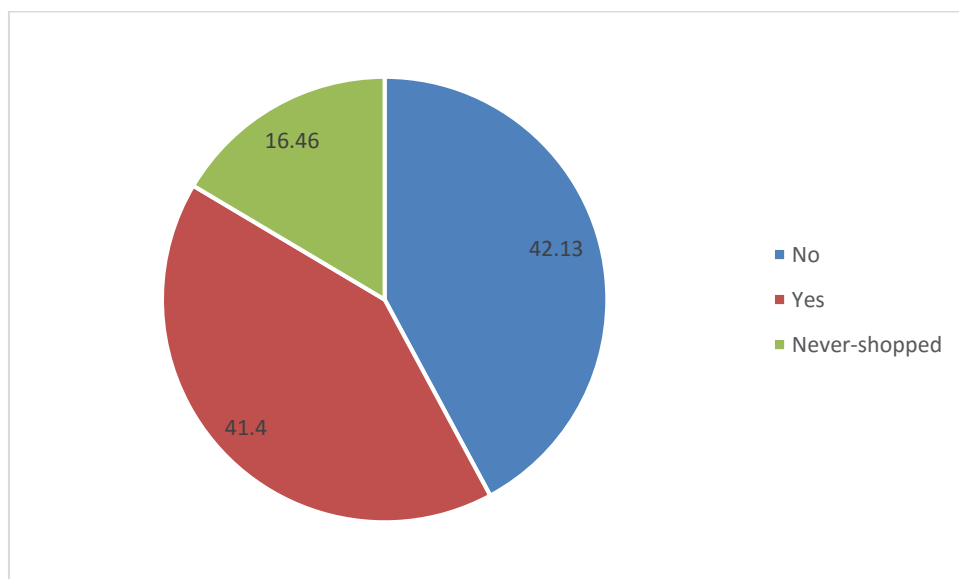


Figure 4.13: Faced problem

#### 4.14: What kind of problem do you face on online shopping?

Table 4.14: What problem

	Frequency	Percentage
No-problem	126	30.51
Products are not the same	151	36.56
Never-shopped	68	16.46
Delivered product is not available	39	9.44
Failed to contact consumer service	29	7.02

Table 4.14 shows that 36.56% are complain that product are not the same, 30.51% are not facing any problem, Delivered product are not available are 9.44%, 7.02% are failed to contact consumer service. Figure 4.14 show the facing problem on online shopping.

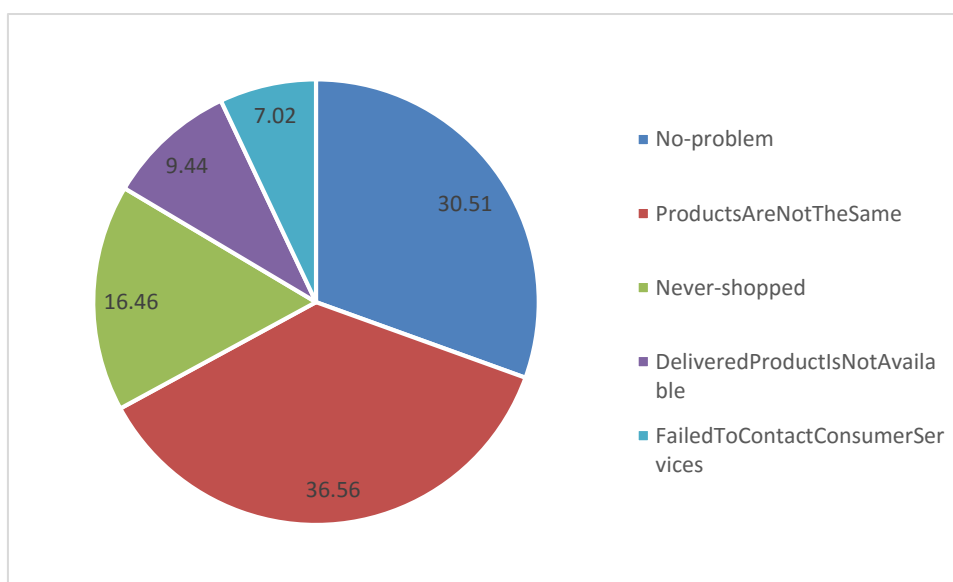


Figure 4.14: What problem

#### 4.15: What was the impact on your online shopping behavior in general?

Table 4.15: Impact

	Frequency	Percentage
Others	180	43.58
Stopped shopping but specific of products	145	35.11
Never-shopped	70	16.95
Stopped shopping online	18	4.36

Table 4.15 shows when they did not get their product 4.36% are stopped online shopping, 35.11% are shopping but specific product, 43.58% are others. Figure 4.15 is show the percentage of online shopping behavior in general.

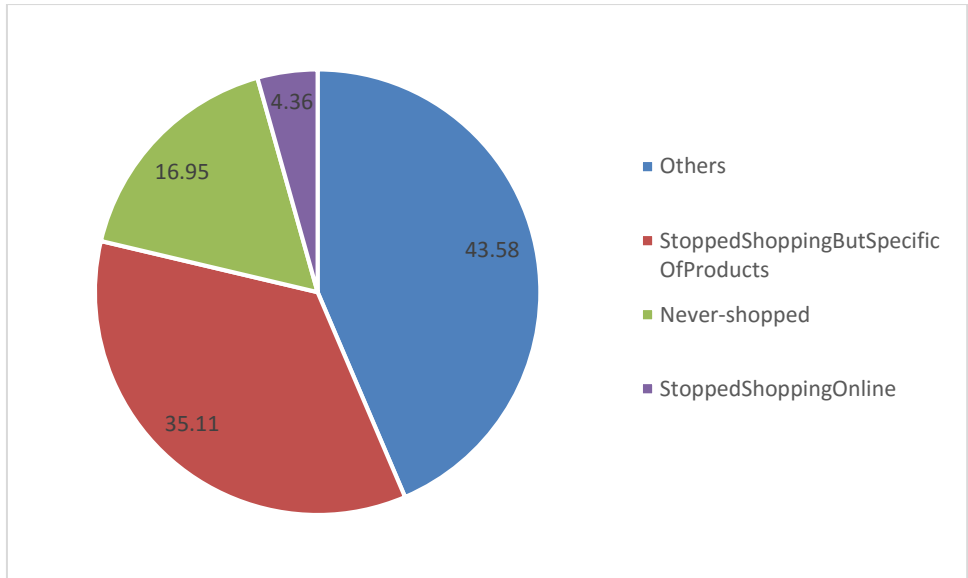


Figure 4.15: Impact

#### 4.16: How many times did you have online shopping during last year?

Table 4.16: Last year shopping

	Frequency	Percentage
Five to ten	118	28.57
Below five	114	27.6
Never-shopped	116	28.09
Ten to fifteen	41	9.93
Above fifteen	24	5.81

Table 4.16 shows that last year shopping is 27.6% below the product, 5.81% are five to ten shopping, 28.09% are never shopped, 9.93% are ten to fifteen shopping on last year. Figure 4.16 is show the last year of shopping.



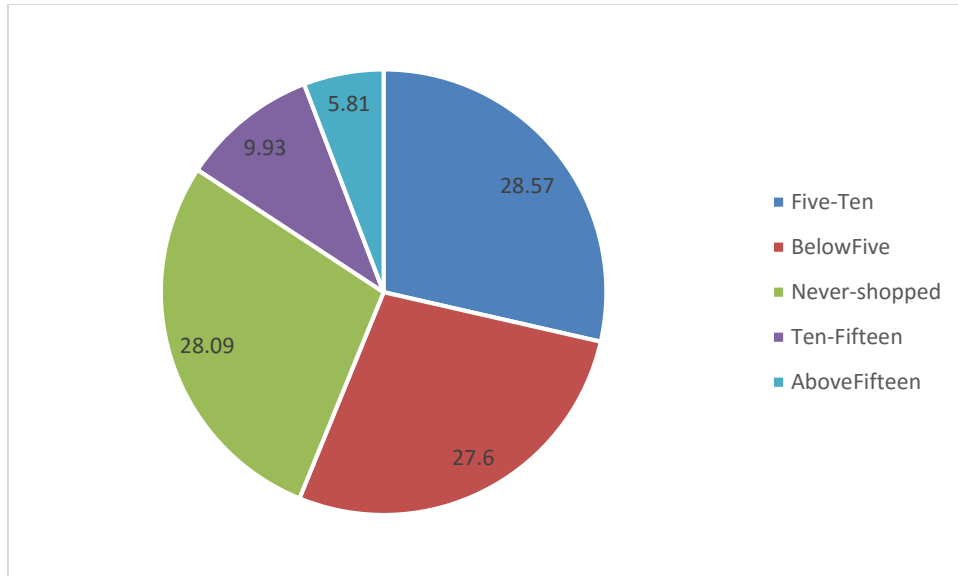


Figure 4.16: Last year shopping

#### 4.17: Would you prefer cash on delivery than payment via credit card?

Table 4.17: Prefer cash on delivery

	Frequency	Percentage
Agree	319	77.24
Neutral	46	11.14
Disagree	48	11.62

Table 4.17 shows that 77.24% are agreeing to prefer cash on delivery, 11.62% are disagreeing and 11.14% are neutral. Figure 4.17 show the result.

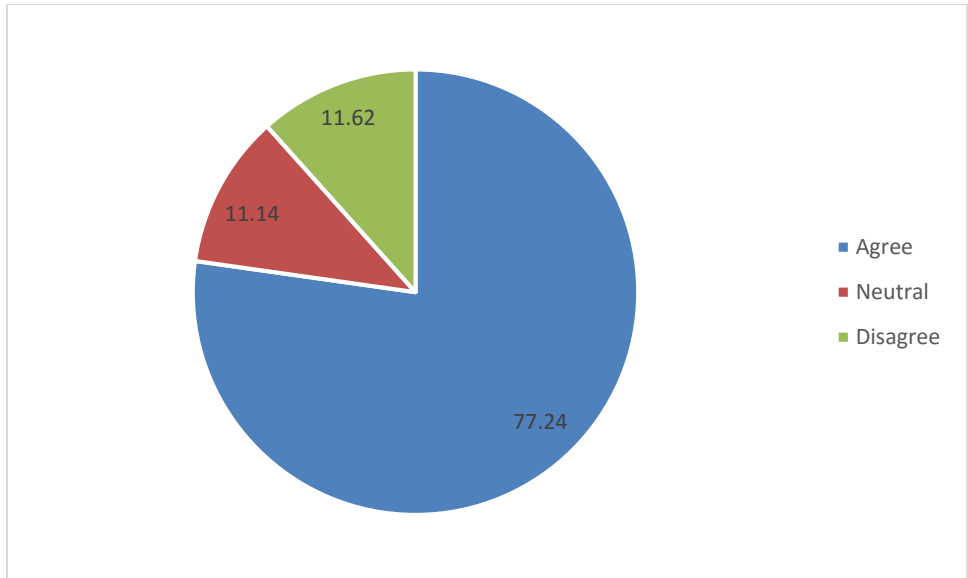


Figure 4.17: prefer cash on delivery to credit card

#### 4.18: Do you think online shopping money transaction is safe or not?

Table 4.18: Safe transaction

	Frequency	Percentage
Yes	244	59.08
No	169	40.92

Table 4.18 shows that 59.08% are thinking safe transaction on online shopping and 40.92% are not agree about the transaction. Figure 4.18 show the result.

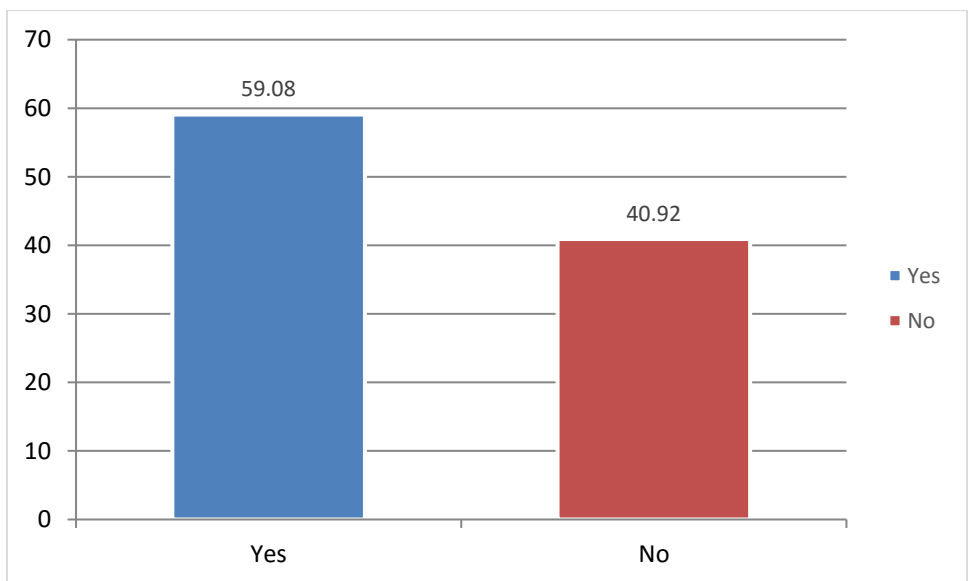


Figure 4.18: Safe transection

#### 4.19: How many times were you cheated while online shopping?

Table 4.19: Got cheater

	Frequency	Percentage
Never	139	33.65
One-time	145	35.11
Never-shopped	68	16.46
Three to six	47	11.38
Six to nine	12	2.91

Table 4.19 shows that 35.11% are cheated while online shopping, Never cheated is 33.65%, three- six times cheated are 11.38% and above six 2.91% are cheated. Figure 4.19 show the all result how many times they are cheated.

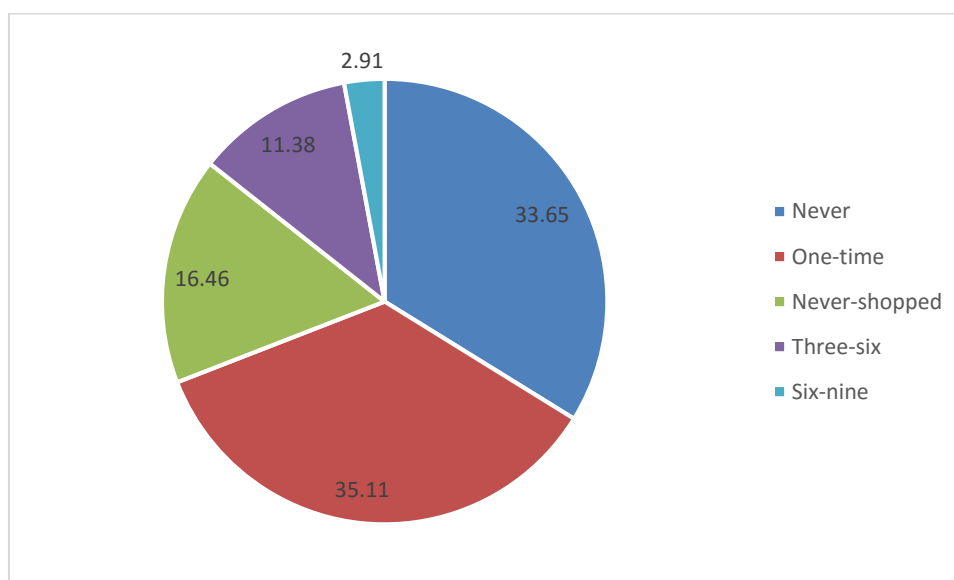


Figure 4.19: Got cheated

#### 4.20: Do you receive your product on time?

Table 4.20: Received product timely

	Frequency	Percentage
Yes	255	61.75
No	157	35.59
Never-shopped	11	2.66

Table 4.20 shows that 61.75% are receive their product on timely, 35.59% are not receiving their product on timely and 2.66% are not shopped. Figure 4.20 show the result.

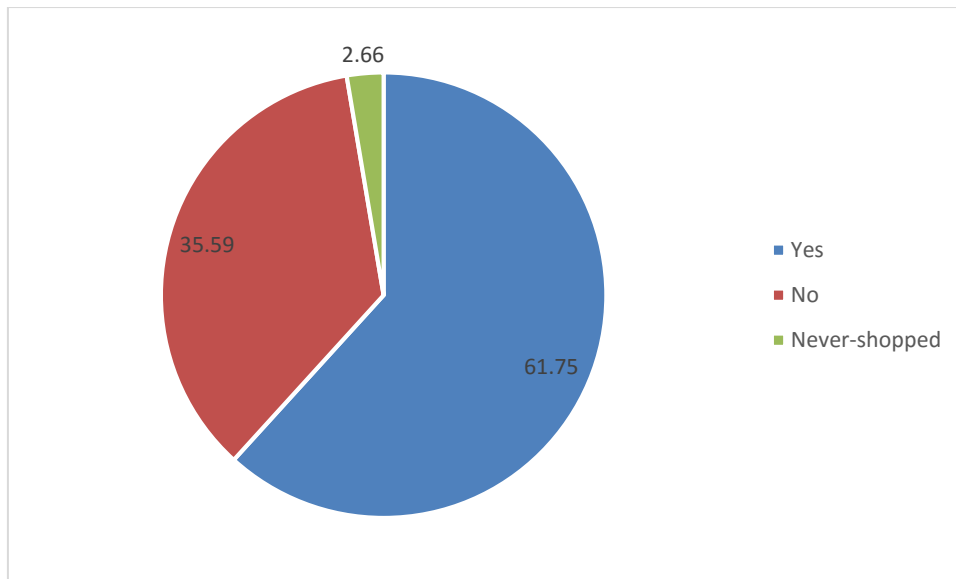


Figure 4.20: Received product timely

#### 4.21 : Which is your favorite site for online shopping?

Table 4.21: Site

	Frequency	Percentage
<a href="http://www.daraz.com">www.daraz.com</a>	60	14.53
<a href="http://www.bikroy.com">www.bikroy.com</a>	56	13.56
Others	137	33.17
<a href="http://www.rokomari.com">www.rokomari.com</a>	64	15.5
<a href="http://www.ajkerdeal.com">www.ajkerdeal.com</a>	36	8.72
<a href="http://www.ekhanei.com">www.ekhanei.com</a>	26	6.3
<a href="http://www.othba.com">www.othba.com</a>	31	7.51

Table 4.21 shows that different types of website for online shopping. 33.17% are not using those websites for online shopping. 14.53% are using daraz, 13.56% are using bikroy, 8.72% are using ajkerdeal, 15.5% are using rokomari and 7.51% are using othoba. Figure 4.21 show that which website are using for internet most of the time.

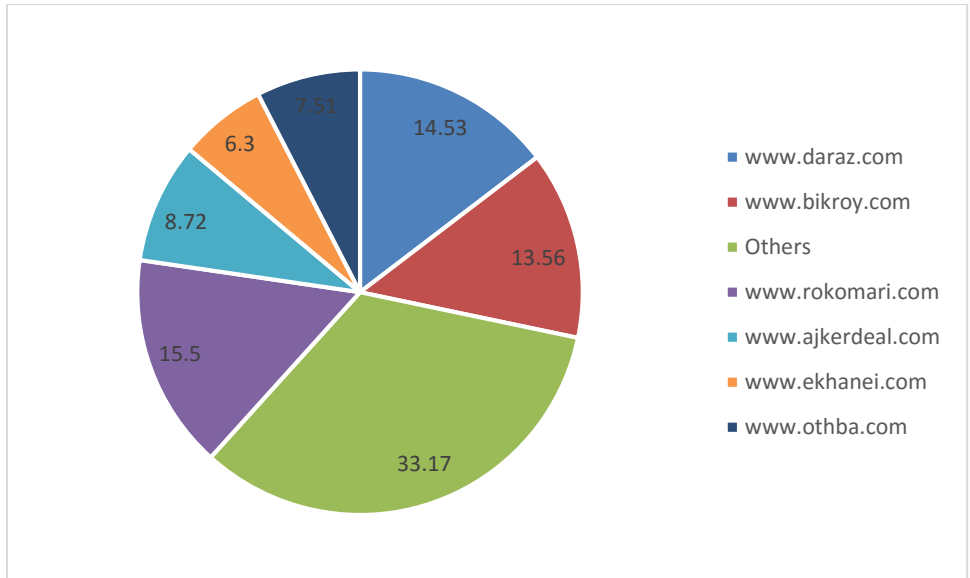


Figure 4.21: Favorite site

#### 4.22: Are you satisfied with your experience of online shopping?

Table 4.22: Satisfied

	Frequency	Percentage
Yes	319	49.39
No	46	26.63
Never-shopped	48	15.98
Neutral		7.99

Table 4.22 shows that 49.39% are satisfied on online shopping, 26.63% are not satisfied, 7.99% are neutral and 15.98% are not shopping online. Figure 4.22 show the result.

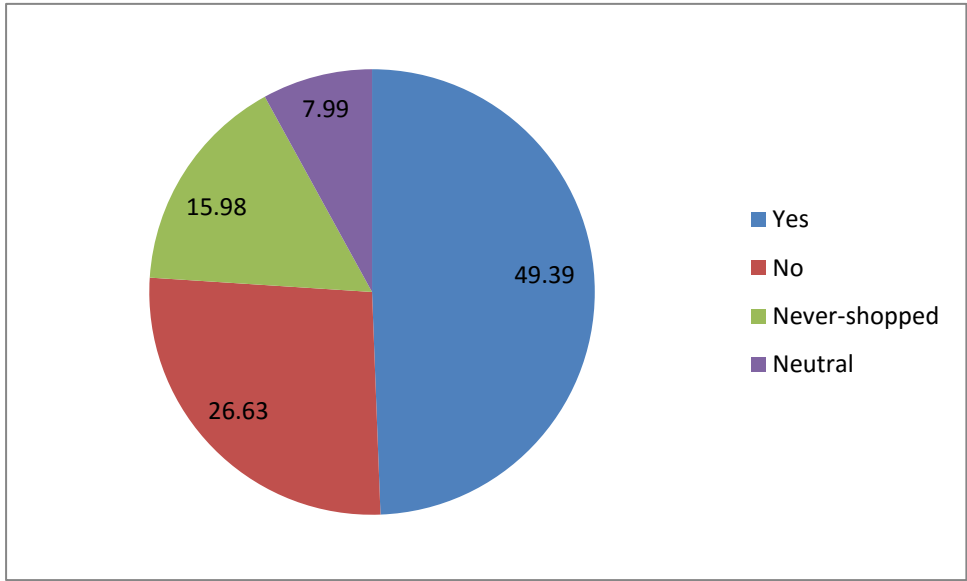


Figure 4.22: Satisfied or not

After when we got the data in Google form then we cleaned the data as there were some invalid data. Then we load the data file to Weka. We chose Naive Bayes classifier which gave us 81.5981 % correctly classified instances by selecting satisfied column as class attribute.

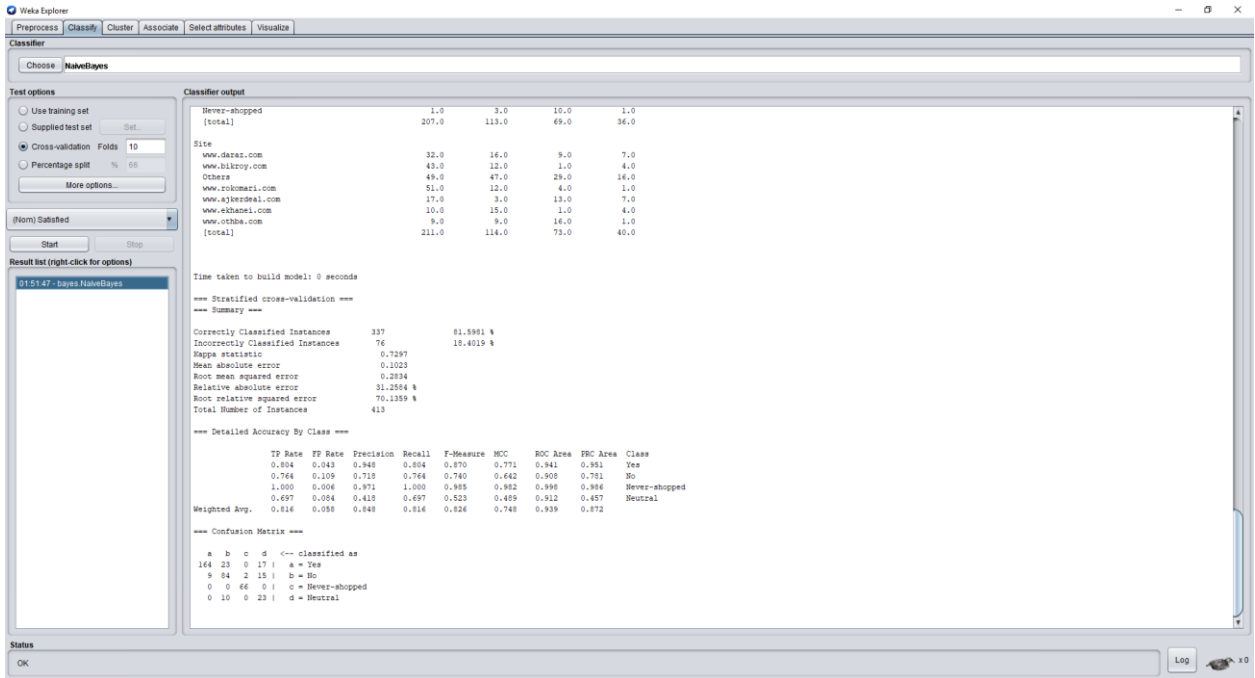


Figure 4.23: Naive Bayes on Weka

```

=== Stratified cross-validation ===
=== Summary ===
Correctly Classified Instances      337           81.5981 %
Incorrectly Classified Instances    76           18.4019 %
Kappa statistic                    0.7297
Mean absolute error                0.1023
Root mean squared error            0.2834
Relative absolute error            31.2584 %
Root relative squared error        70.1359 %
Total Number of Instances          413

=== Detailed Accuracy By Class ===
                TP Rate  FP Rate  Precision  Recall   F-Measure  MCC      ROC Area  PRC Area  Class
                0.804   0.043   0.948     0.804   0.870     0.771   0.941    0.951    Yes
                0.764   0.109   0.718     0.764   0.740     0.642   0.908    0.781    No
                1.000   0.006   0.971     1.000   0.985     0.982   0.998    0.986    Never-shopped
                0.697   0.084   0.418     0.697   0.523     0.489   0.912    0.457    Neutral
Weighted Avg.   0.816   0.058   0.848     0.816   0.826     0.748   0.939    0.872

=== Confusion Matrix ===
  a  b  c  d  <-- classified as
164 23  0 17 |  a = Yes
  9 84  2 15 |  b = No
  0  0 66  0 |  c = Never-shopped
  0 10  0 23 |  d = Neutral

```

Figure4.24: Naïve Bayes on Weka

After validating that the correctly classified instances are above 70% we saved that model. Then we load the test data and evaluated with the model that we have saved earlier.

The results are shown here:

When we applied Apriori algorithm for association rule mining, we found some relation between the attributes.





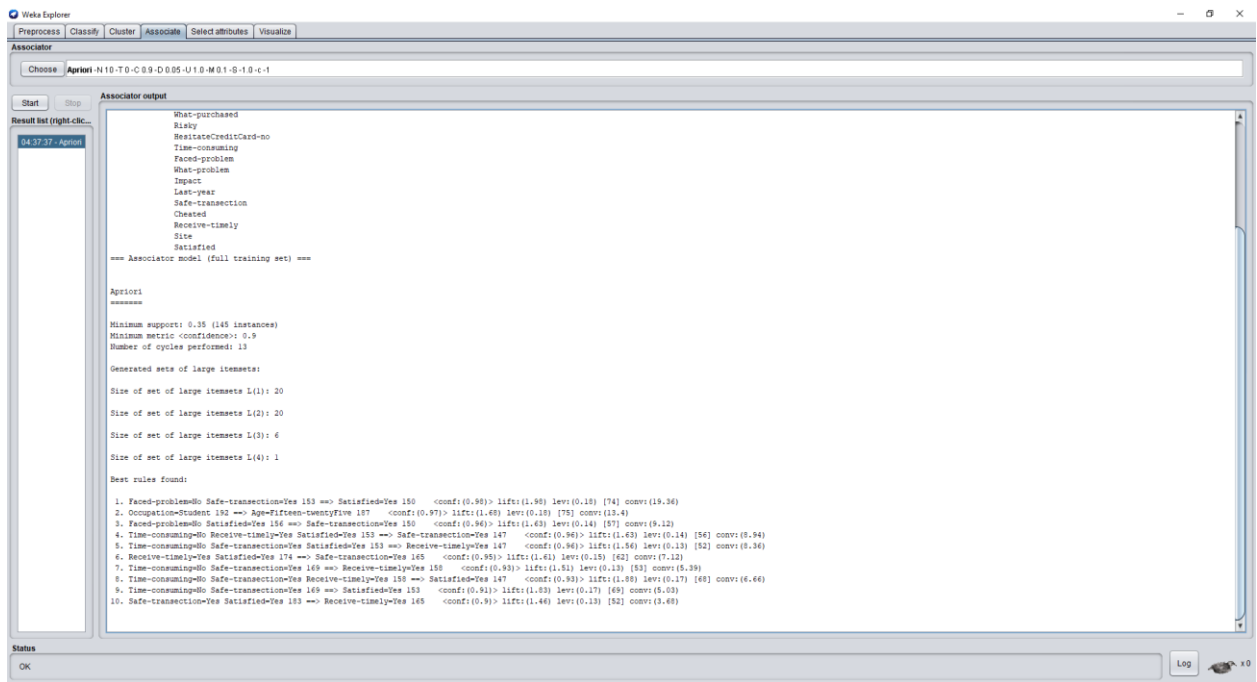


Figure4.27: Apriori on Weka

By using Apriori algorithm on Weka, it reveals relationship between attributes. If the website of online shopping is responsive and not time consuming and if the offers a secure transaction, user finds that it saves time. If the transaction is safe and online shopping saves time then user is satisfied. If it is not time consuming and safe transaction then they prefer cash on delivery to credit cards. If the user did not faced any problem while online shopping and satisfied then they find the transaction safe.

The statistics shows us that ages from fifteen to twenty five years prefer most on shopping online.

- Online shopping supports credit card and cash on delivery methods.
- User finds the transaction safe.
- The percentage of user faced problem is almost identical.
- User does not like to give credit card no.
- User gets cheated while shopping online.

## **CHAPTER 5**

### **CONCLUSION AND FUTURE WORK**

#### **5.1 Summary of the study**

Internet shopping refers to systems those customers to buy their product through personal computer or other intelligent device. If they get any problem to buy their product they can contact the dealer. The products quality and delivery time is the main fact of online shopping. Building trust, secure payment gateway and the delivery return policy also include the factors of user satisfaction.

#### **5.2 Conclusion**

The point of this paper was to demonstrate the present situation of internet shopping in Bangladesh. The mental effect of the buyers is appeared here. Future specialists can utilize the discoveries of this paper for additionally investigate. Bangladesh is still in a learning procedure in the online business. Shoppers to buyer sites are getting extremely famous here. The installment framework still should be progressed. The most difficult issue would manufacture the trust among the shoppers about the online shops. Individuals of Bangladesh do know the positive sides of internet shopping. They realize that web based shopping spares time and it is extremely helpful. In any case, they don't know whether their protection or security is there or not.

#### **5.3 Recommendations**

The behavior of consumers when they buy any product from online shopping. The design quality of that shopping website and the transaction method is the weakness of that shopping websites. They have to improve their product quality and Transaction and return policy.

- The shopping site should be made responsive and easy to use.
- Payment method should be made cash on delivery.
- Delivery method should be fast.
- Products are not the same is the main problem but the sellers don't solve this problem in that time.

## **5.4 Implication for Further Study**

There are numerous opportunities for future research in this area. Comparison studies could be conducted to compare online buying in to other countries . Others countries are most involved online shopping rather than us.

- How to deal with customers when they are not satisfied.
- Return policy.
- Online shopping websites compares their cost the product.

## REFERENCES

- [1]. Szymanski, David M and Hise, Richard T(2000), 'E-satisfaction: An initial examination', *Journal of retailing*, 76 (3), 309-322.
- [2]. Lee, MKO and Turban E L (2001), 'A trust model for consumer internet shopping', *International Journal of Electronic Commerce* 6, pp 75-91,2001.
- [3]. Bhatnagar, A., Misra,S and Rao, RH (2000) 'On risk, convenience and internet shopping behavior', *Association for Computing Machinery. Communication of the ACM*; Nov 2000 43,ii,ABI/IN FORM Global pg.98.
- [4]. Wee, K.N.L. &Ramachandra, R, 'Cyberbuying in china, hongkong and Singapore: tracking the who, where, why and what of online buying', *International Journal of Retail & Distribution Management*, vol-28, no.7,pp 307-16.
- [5]. Wang, CC., Cheng CA & Jiang JC, 'the impact of knowledge and trust on E-Consumer's Online Shopping Activities: An empirical study' *Journal of Computers*, Vol 4, No.1, January 2009.
- [6]. Karim, R A. 'Customer Satisfaction in Online Shopping: a study into the reasons for motivation and inhibitions', *IOSR Journal of Business and Management*, Vol-11, Issue 6 (Jul-Aug 2013) pp 13-20.
- [7]. Ahn, T., Ryu, S & Han, I, 'The impact of the online and offline features on the user acceptance of internet shopping malls', *Electronic commerce research and application*, 3, 405-420 (2004)
- [8]. Liang, T P. & Huang, J S, ' An empirical study on Consumer Acceptance of Products in Electronic Markets: A transaction cost model', *Decision Support Systems*,24,29-45.
- [9]. Grewal,D., Iyer,GR. & Levy, M, 'Internet retailing: Enablers, Limiters and Market consequences', *Journal of Business Research*,5743/2002, pp-1-11.
- [10]. Gurau, C., Ranchod,A& Hackney R, 'Internet transactions and physical logistics: Conflict or Complimentary?', *Logistic Information Management*,14(1/2), 2007, 33-43.
- [11]. Liu, C & Arnett K.P. (2000), 'Exploring the factors associated with website success in the context of electronic commerce', *Information & Management*, 38 (2000), pp-23-33.
- [12]. Kau, AK., Tang, YE &Ghose, S. (2003), 'Typology of Online Shoppers', *Journal of Consumer Marketing*, vol.20,no.2, 2003. Pp 139-156.
- [13]. Jaillet HF (2003), 'Web Metrics: Measuring Patterns in Online Shopping', *Journal of Consumer Behavior*, Vol-24, pp 369-381.
- [14]. Schneider G.P(2007), 'Electronic Commerce', (Thomson Learning Inc., 7<sup>th</sup> Edition, 2007), p-178.
- [15]. Ranganathan, C. &Ganapathy, S. (2002), 'Key dimensions of Business-to-Consumer websites', *Information and Management*, 38 (2002), pp 457-465.
- [16]. Koo DM &Ju SH (2010), 'Interactional effects of atmospherics and perceptual curiosity on emotions and online shopping intentions', *Computers in Human Behavior*, 26 (2010), pp 377-388.
- [17]. Pachauri M (2002), 'Researching online consumer behavior: Current position and future perspectives', *Journal of Customer Behavior* (2002)1, pp 269-300.
- [18].[http://dSPACE.bracu.ac.bd/xmlui/bitstream/handle/10361/8144/12104044\\_BBA.pdf?sequence=1&isAllowed=y](http://dSPACE.bracu.ac.bd/xmlui/bitstream/handle/10361/8144/12104044_BBA.pdf?sequence=1&isAllowed=y)

- [19].<https://www.slideshare.net/themsaha/customer-satisfaction-on-online-shopping-in-bangladesh>
- [20].[https://www.researchgate.net/publication/316919017\\_Online\\_shopping\\_in\\_bangladesh\\_a\\_study\\_on\\_the\\_motivational\\_factors\\_for\\_ecommerce\\_that\\_influence\\_shopper's\\_affirmative\\_tendency\\_towards\\_online\\_shopping](https://www.researchgate.net/publication/316919017_Online_shopping_in_bangladesh_a_study_on_the_motivational_factors_for_ecommerce_that_influence_shopper's_affirmative_tendency_towards_online_shopping)
- [21].<http://www.theinternationaljournal.org/ojs/index.php?journal=tij&page=article&op=view&path%5B%5D=2084>
- [22]. Chowdhury, M.F.E &Hossain, M.S (2013), 'A Theory-based Model for explaining consumer shopping acceptance of the e-stores in Bangladesh', International Journal of Economics & Social Science. (2013).

# PALAGIARISM

Master's_Shohan			
ORIGINALITY REPORT			
<b>6%</b>	<b>6%</b>	<b>2%</b>	<b>%</b>
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
<b>1</b>	<a href="https://dspace.daffodilvarsity.edu.bd:8080">dspace.daffodilvarsity.edu.bd:8080</a> <small>Internet Source</small>	<b>3%</b>	
<b>2</b>	K. Dhanalakshmi, I. Samuel Sundar Singh. "Online Purchasing in Nagercoil", International Journal of Management Studies, 2018 <small>Publication</small>	<b>1%</b>	
<b>3</b>	<a href="http://ijates.com">ijates.com</a> <small>Internet Source</small>	<b>1%</b>	
<b>4</b>	Sharon Rudansky-Kloppers. "Investigating Factors Influencing Customer Online Buying Satisfaction In Gauteng, South Africa", International Business & Economics Research Journal (IBER), 2014 <small>Publication</small>	<b>&lt;1%</b>	
<b>5</b>	<a href="http://livrepository.liverpool.ac.uk">livrepository.liverpool.ac.uk</a> <small>Internet Source</small>	<b>&lt;1%</b>	
<b>6</b>	<a href="http://eprints.utar.edu.my">eprints.utar.edu.my</a> <small>Internet Source</small>	<b>&lt;1%</b>	
<b>7</b>	<a href="http://www.btrc.gov.bd">www.btrc.gov.bd</a>		

Internet Source		<1%
8	repository.out.ac.tz Internet Source	<1%
9	planningcommission.gov.in Internet Source	<1%
<hr/> <p>Exclude quotes <input type="checkbox"/> Off      Exclude matches <input type="checkbox"/> Off  Exclude bibliography <input type="checkbox"/> Off</p>		