THE INFLUENCE OF SOCIAL MEDIA USE ON USERS' ONLINE PURCHASE

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project titled **"The influence of social media use on users' online purchase"**, submitted by Md. Tahmidur Rahman, ID No: 161-15-7030, Md. Amir Sohel, ID No: 161-15-7634 and Rayhan Hossen, ID No: 161-15-7615 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 B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 07-12-2019.

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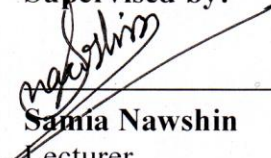
We would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

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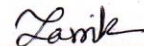
DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Samia Nawshin, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.
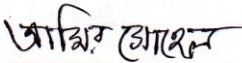
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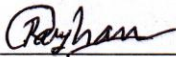Lecturer
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ABSTRACT

The purpose of the report is to find out the usual behavior of the people of Bangladesh in online shopping at different ages. The increasing number of online purchase day by day make it must to find out the purchasing behavior. Through collecting information of different people at different ages and using data mining techniques, we try to understand the online shopping behavior. Online shopping behaviors is also influenced by social media. By this study, it could be easier to provide better services to the people of Bangladesh in online shopping. On the contrary, service providers could freshly sort their commodity to the people in different categories for various people of Bangladesh.

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CHAPTER 1
INTRODUCTION

1.1 Introduction

The internet is changing the way of shopping and has rapidly evolved into a global phenomenon. Growing demand for various goods and services is being mitigated by the different online service providers which are known as online shop. In fact, with an estimated global population of 7.7 billion people, that's about 25 percent of the world's population shopping online. What's more, this number is rising rapidly and is expected to hit a massive 2.14 billion people in 2021[1]. In the meantime, analysts are predicting that Bangladesh's e-commerce market will surge to $20 billion by 2020[2]. By observing the circumstances, we are inspired to determine the present situation of online shopping in Bangladesh. In our research, we have tried to collect information about the people of different ages in our country and process them using data mining to find out the pattern of online shopping in recent times. We can also predict a new person's behavior in respect of online shopping by our work. Nonetheless, online service providers can use our work to provide better services for upcoming and existing consumers. Furthermore, we have tried to identify the effects of social media on online shop. Besides, we can find the effect of advertisement on online shopping.

1.2 Motivation

The rapid growth of online shopping in our country is mainly motivated us to work on this study. The increasing number of new online shops and customers is upgraded according to different factors. Nowadays, social media are alluring new customers to online shopping through easygoing advertisement. We are trying to find out the effect of social media on acquiring new customers.

1.3 Rationale of the Study

While surfing social media a large number of folks leaning towards online shopping. Around 30 millions of people are currently involved with social media in Bangladesh [3]. So, it's obvious, around 18 percent of country's people are active in social media which is a big plus point for digital and social media marketing. By manipulating this opportunity, some creative folks captured the market, which is mostly attracted by the mass people. From another study, it is estimated that, around 2 million people of our country are presumed in online shopping [4]. Here we are doing a study, finding out the relation between online shopping and usage of social media.

1.4 Research Questions

- Why do people involve in online shopping?

- Is there any effect of social media in online shopping?

- What are the effects of social media in online shopping?

- How does social media affect in online shopping?

1.5 Expected output

Nowadays people are making online purchases, frequently. From our study, we will try to find out whether a relation between online shop and social media, a consumer would buy a product or not, the preferences of online shop among people. It is very important to know about the behavior of the consumers with respect to online shopping.

1.6 Report Layout

In chapter one, we have denoted an introduction of the research with motivation, rationale of the study, research questions, expected output and report layout.

In chapter two, we have demonstrated briefly the background of this research. Here, we include, related work, comparative studies, scope of the problem and challenges.

In chapter three, we have discussed about the research methodology so far we have followed. It contains introduction, research subject and instrumentation, data collection procedure, statistical analysis and implementation requirements.

In chapter four, we have denoted an experimental result and discussion. It carries introduction, experimental result, descriptive analysis and proposed method.

In chapter five, we have described the conclusion segment. Here we conducted the summary of the study, conclusion, recommendation and implication for further study.

CHAPTER 2
BACKGROUND

2.1 Introduction

The research on consumer's decisions in online purchasing focused primarily on understanding the factors affecting consumers' propensity to purchase around the Internet. Whereas social media are playing a vital role in online shopping through advertising. There are some work considering social media and online addiction. It is assumed that online shopping have connection with social media. Social media can be effective for online shopping. Because people involved with social media can also be found interested in online shopping. At the end, scholars have tried to presume the shopping behavior and social media addiction.

2.2 Related Works

There are several research have been done on e-shop, e-marketing, social media and Internet addiction. The obtained data is the basis for the analysis of appropriate interventions. Consumers' attitude towards online shopping is a prominent factor affecting actual buying behavior. We study the perceptions of 228 potential online shoppers regarding trust and technology and their attitudes and intentions to shop online at particular websites [5]. "It appears that people more engaged in social media tend to be more efficient in shopping," Trusov says [6].

2.3 Research Summary

Our research is to find out the relation between internet addiction and online shopping. Online shopping is an emerging medium in our country that build the connection between consumer and seller. But we are assuming that there significant amount of influence in online shopping by social media. So we are trying to figure out a statistical explanation regarding this thought.

2.4 Scope of the Problem

It is a fact that, the number of user in social media is increasing significantly, which effects the enhancement of online shopping. People who are involved in social media have a great chance to make online shopping. By this research we will try to figure out about this. Hereby, we have encountered with 512 sets of data of different people in our country to form our statistics based on shopping attitude and intention. The understanding of the threat of consumers has been demonstrated as the key discriminator between online buyers and non-online buyers.

2.5 Challenges

Although we expected a better outcome, we couldn't meet our objective properly. We had faced lots of difficulties in our journey. Some of these are highlighted below:

- Lack of proper knowledge as it is our first work.

- Lack of extensive experience in primary data collection we faced some difficulties.

- An insufficient amount of data could not meet our expectations whereas, we were needed a large amount of data for better performance.

- Since our research goals were broad, we could not reduce their formulation.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

In this research, we try to implement different types of data mining techniques to extract information from our survey dataset. We have collected data of different types using Google form that include survey questionnaires. We have spread our form out in different social media and collected data by asking in person to fill-up the form. We have analyzed the data by using different data mining algorithms in Weka [7]. This is the application for implementing different methods in our dataset. We use different methods to predict one or more discrete variables, based on the other attributes in the dataset. Furthermore, we can make a preview of tree from our dataset using methods.

3.2 Research Subject and Instrumentation

We are trying to reflect people's online shopping behavior in our research. We have tried to create a survey that includes online shopping preferences, the problem of online shopping, time spent in the online shop, and so on to find out the desired result. We are trying to reflect the online shopping behavior of people in our research. We have tried to create an online shopping survey that involves interests, online shopping issues, shopping expenditures in the online shop and so on to get the desired outcome. The questions were above all too easy to answer, but successful for our research. By using these data sets, we can see whether or not a new client would purchase a product online. On the contrary, we may view our information to represent the people of our country statistically and to extract their actions.

3.3 Data Collection Procedure

We have designed the question according to our objective to extract better outcome from the survey. In our survey form we have included multiple choice question, single answer question and text box to collect our data accurately. We preferred to collect data of student, employee, house-wife and businessman. Nonetheless, participants

must have to have basic knowledge of internet browsing. We have conducted our surveys by phone, mail and mostly by social media and in person. It took approximately 5 to 10 munities to fill-up the form. Finally, we have collected 512 sets of data from the survey. We have turned the responded data into Excel data format. Then, the file was converted into ARFF format for implementing different algorithms in WEKA.

3.4 Statistical Analysis

We have 512 sets of data with 28 attributes. Apart from 28 attributes we have worked with 25 attributes to reach our objectives. These are,

3.4.1 Age

In this attribute we have collected the age of our participants to find out the online shopping behavior of different age. For more and better analysis we have categorized this attribute in 6 different parts with the range of 10 years. Which is shown on figure 4.1.
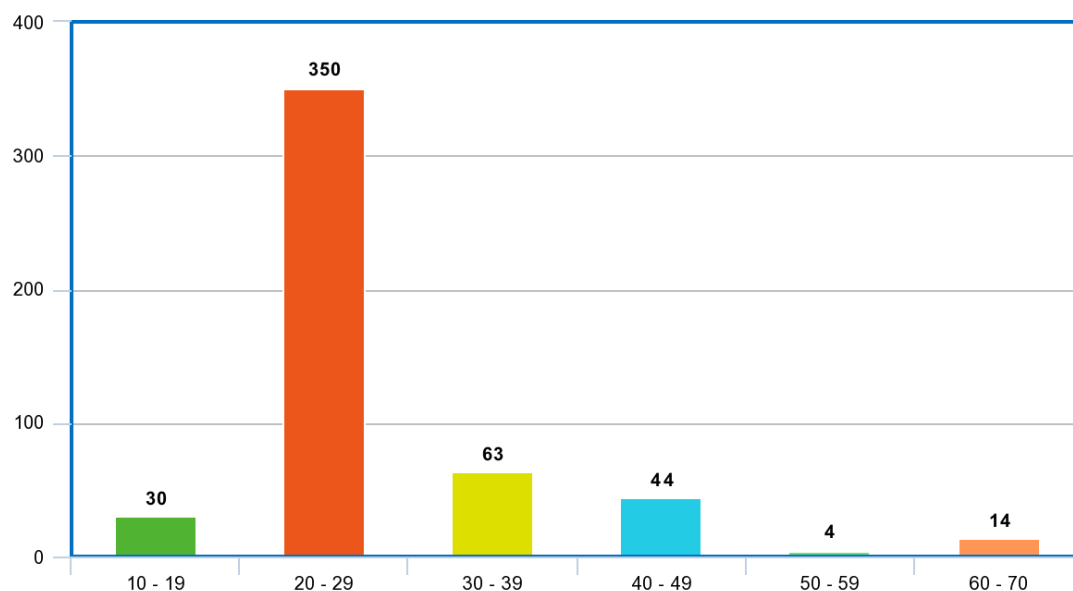

Figure 4.1: Age

3.4.2 Gender

We have gathered different kinds of statistics from various people, while 60% are men, while others are women. After analysis of the data, the potential for a new

customer to be men or women can be estimated. We can also know the likelihood of men shopping online and women shopping online.
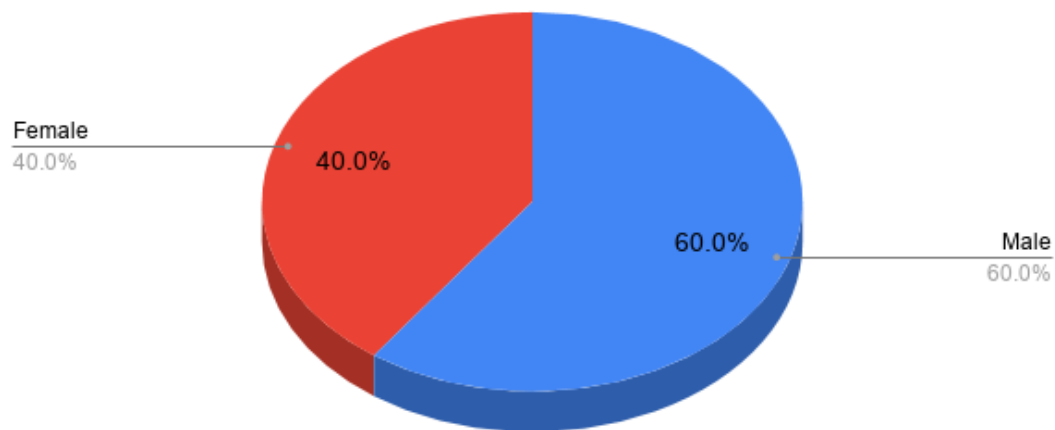

Figure 4.2: Gender

3.4.3 What is your occupation?

In this attribute, we have four types of categories. In this figure 4.3, we can see that 40.2% of students, 20% of housewives, 19.9% of businesses and 19.7% are employees of our 512 datasets.
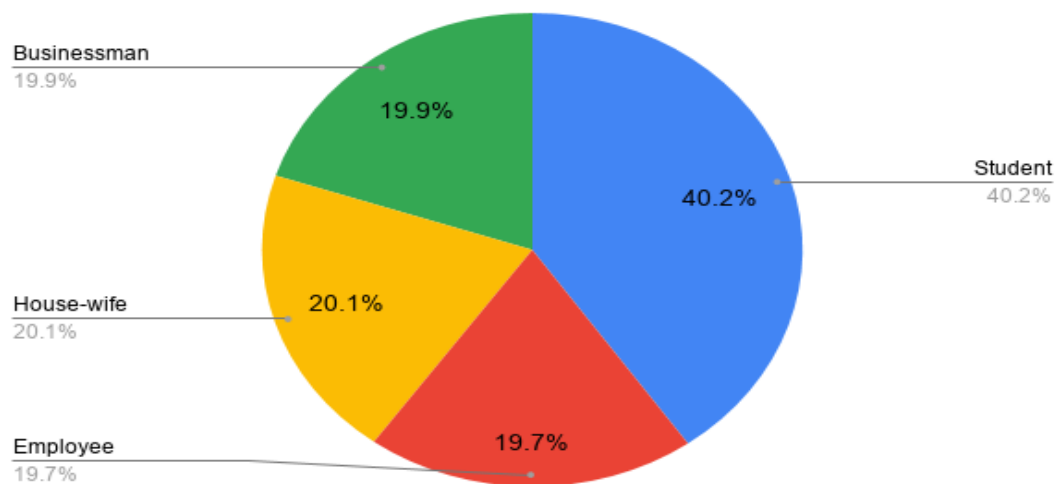

Figure 4.3: Occupation of participants

8

3.4.4 Monthly Income

Various personal data of different occupations with different monthly revenues have been collected. Afterwards, we categorized them into 4 section. Which is shown in figure 4.4.
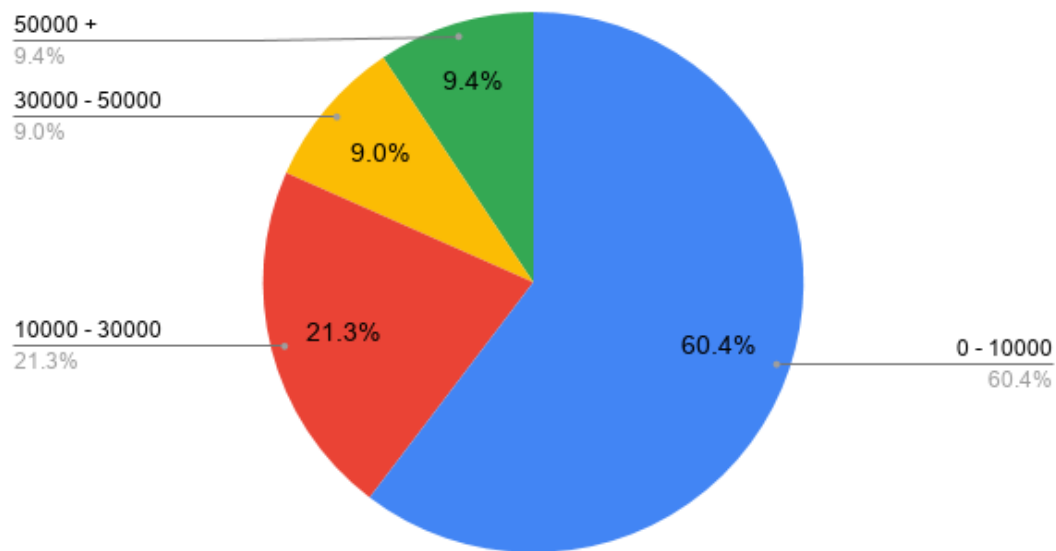

Figure 4.4: Monthly Income

3.4.5 How you come to know first of your online shop?

Online shopping is still in the premature stage in our country. So it is not well known to everyone. Apart from this circumstance, our participants knows about online shopping in various way. Here, we can see in figure 4.5 majority of our participants knows about it from social media with a ratio of 57%. 27.9% people know from their friends and 15% know in other ways.

Figure 4.5: Source of knowing online shop
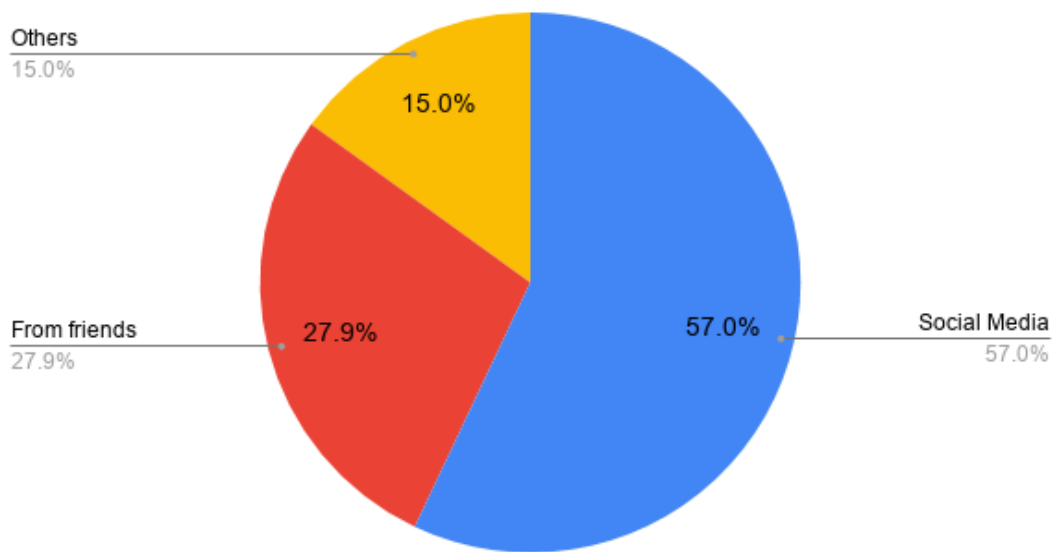
3.4.6 How much time do you spend on social media or browsing internet?

In this 21st century maximum people are evolved with the Social media and Internet. We have gathered the information of time expenditure, by means of, we can understand the effect of social media and internet in online shopping. Which is shown in figure 4.6.
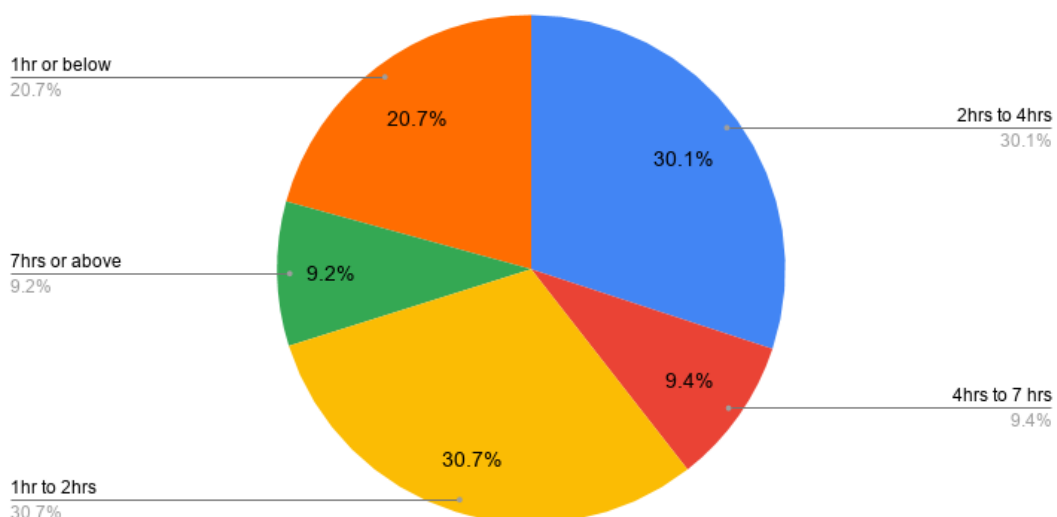

Figure 4.6: Time Spend in social media

3.4.7 How often do you visit online shop?

In this section, we have tried to find out the tendency of people to visit online shop. Whereas, 22.9% of our participants visits online shop in a daily basis, 55.7% participants visits at least once in a week. On the contrary, 16% of them does not visit online shop at all and 5.5% of them only visits once per month is shown in figure 4.7.
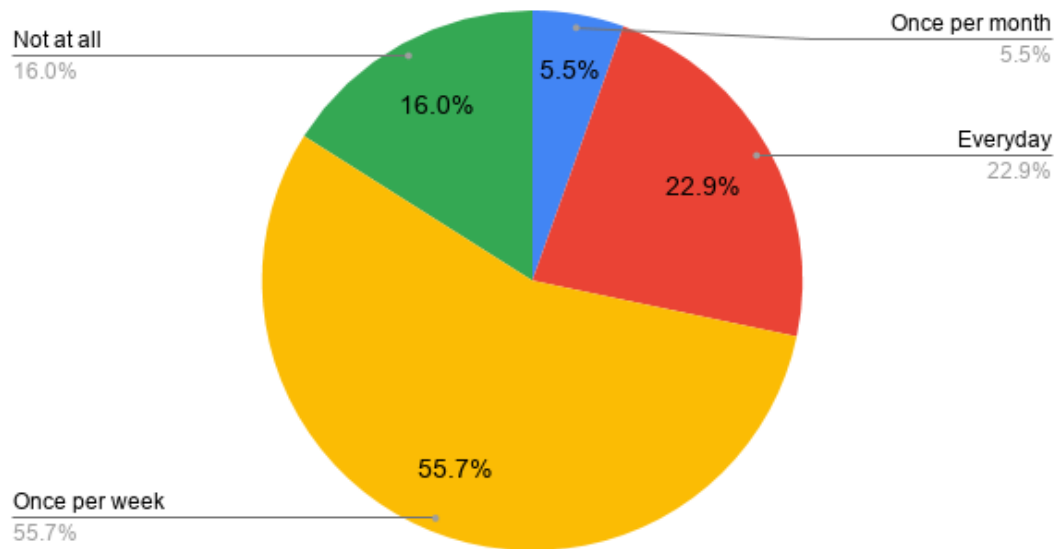
Figure 4.7: Encounter with online shop

3.4.8 Do you visit advertisement of different offers?

We realized that we are usually attracted by online shops using different publicity policies. In that attribute, we have tried to determine the tendency of participants to visit various ads from various online shops. According to the data collected in figure 4.8, 55.4 percent of our participants usually visit ads, while 44.6 percent do not have the desire to visit online shop ads.

Figure 4.8: Visiting advertisement of different offers

3.4.9 Do you like product from online shop?

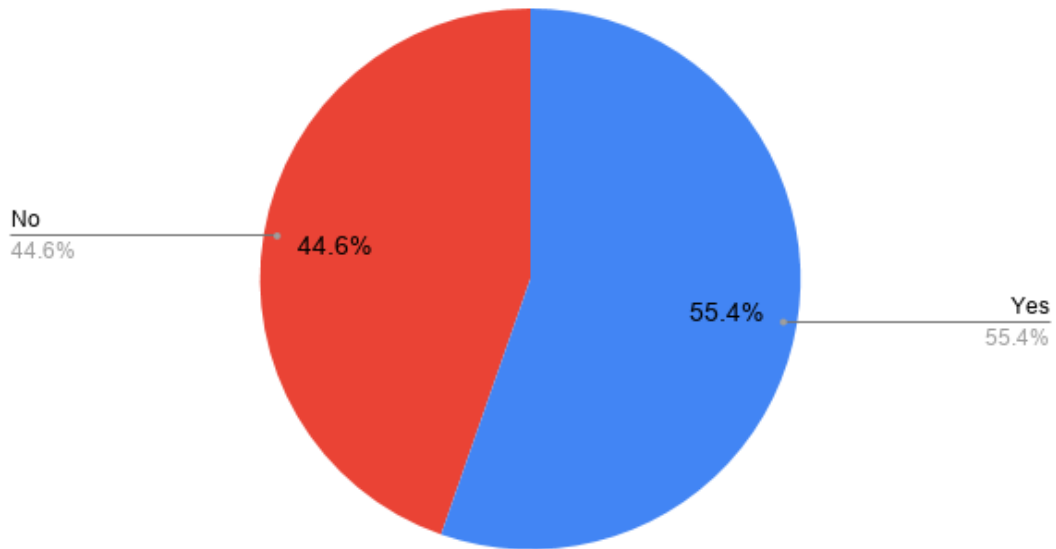We can find out our participants' preferences with this attribute. In figure 4.9 we can see that, 65.2% of 512 generally like online shop products. Nevertheless, 34.8% of them don't like online products.
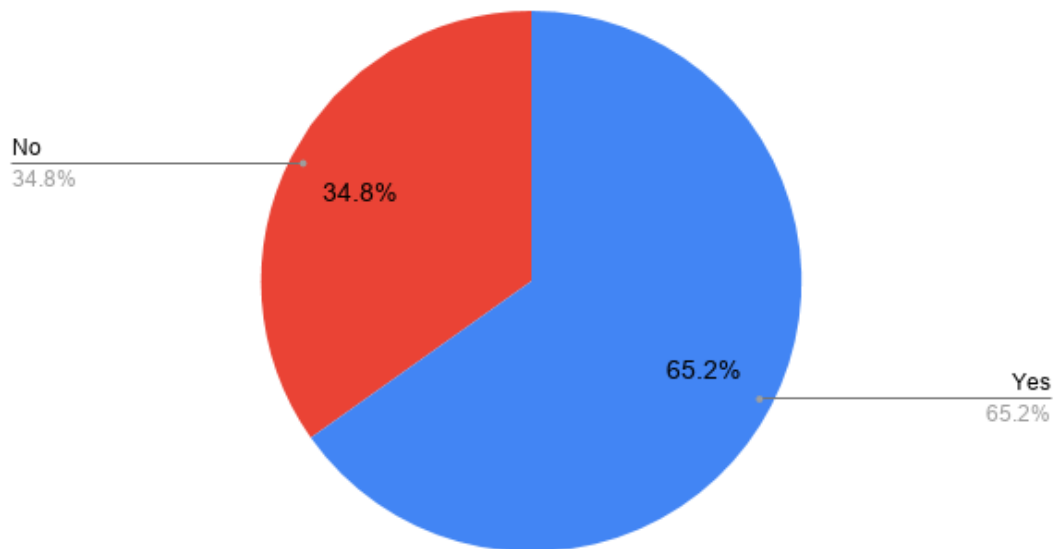

Figure 4.9: Acceptance of online products

3.4.10 How much time you approximately used to visit the suggested product?

People often use to visit online to check for the product. We have tried to find out how much time they frequently use to check for the product. Here, we can see in figure 4.10 approximately 44.1% people use 5 minutes or less to check the product. 42.4% people use 6 to 15 minutes and only 13.5% people use 16 minutes to above to check the product.
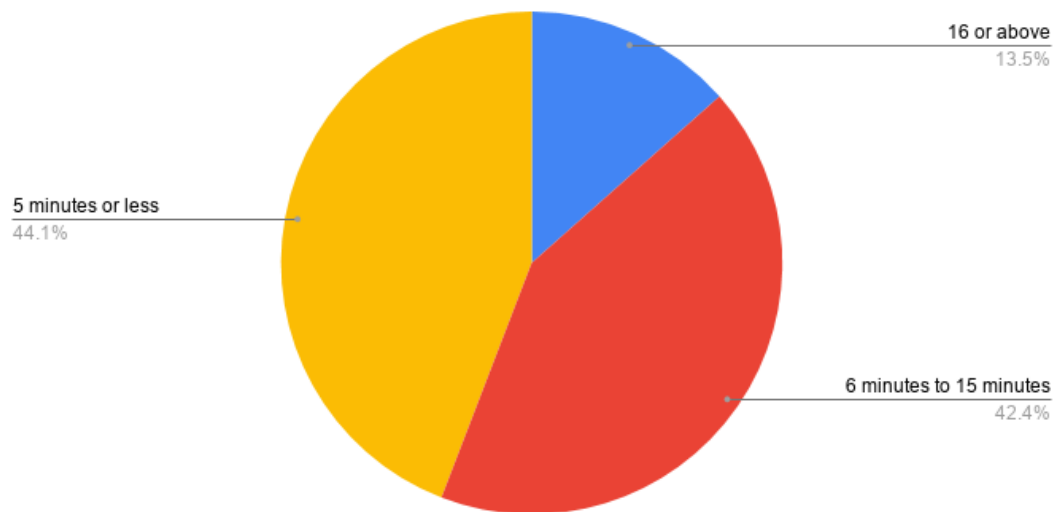
Figure 4.10: Time spent on suggested product

3.4.11 How much do you spend on online shopping?

Not only the time but also people spend their money to buy products from online shop. It is difficult to categorize the amount that is spent by the consumers. However, according to figure 4.11, we have found the data for people spent their money by a range of amount.33% participants spent less than 500 taka, 58% participants spent 500 to 2000 taka, 3.6% participants spent 2500 to 5000 taka and 5.4% participants spent more than 5000 taka for online shopping.
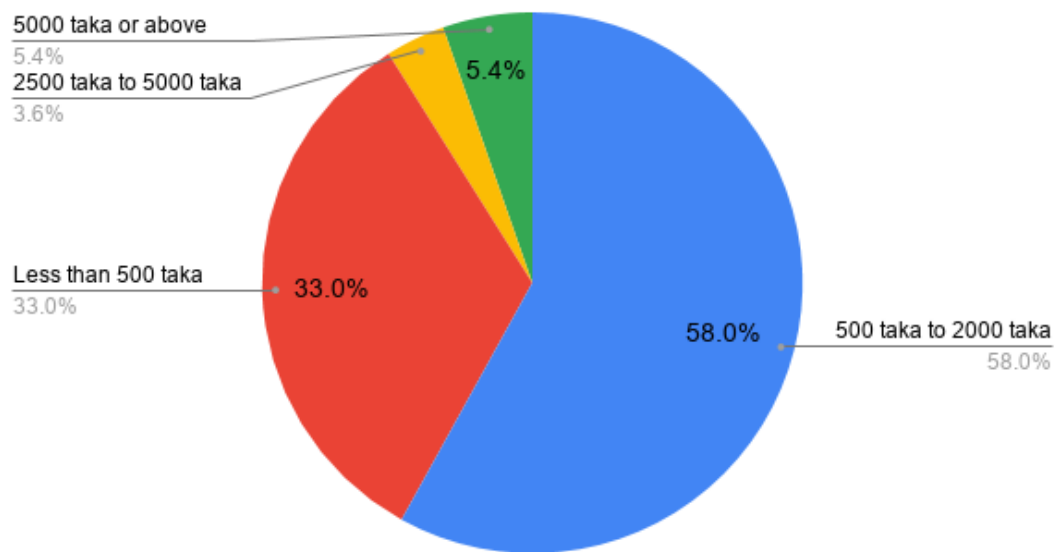
Figure 4.11: Money spent on online shopping

3.4.12 Have you ever checked for products bought from online shop in physical market?

People who buy the products from online most of them don't check it in the physical market. 73.4% of people that is a large portion of people don't check product in physical market. Apart from this 26.6% people check product in physical market first which is shown in figure 4.12.
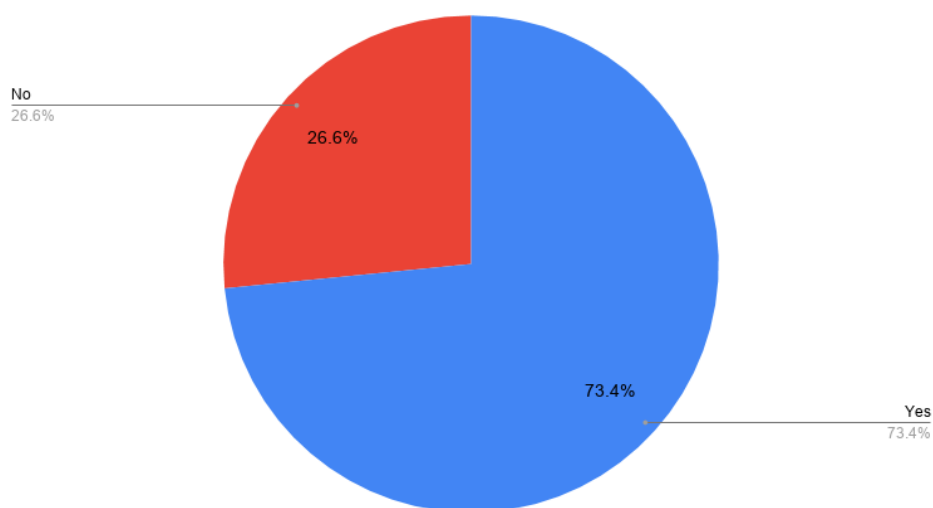
Figure 4.12: Comparing products of online shop with physical market.

3.4.13 What do you prefer most?

Online shop is in the premature phase, we can say it by watching that more than 50% of the people still prefer local shop rather than online shop. In figure 4.13, 58.2% people prefer local shop and 41.8% people prefer online shop.
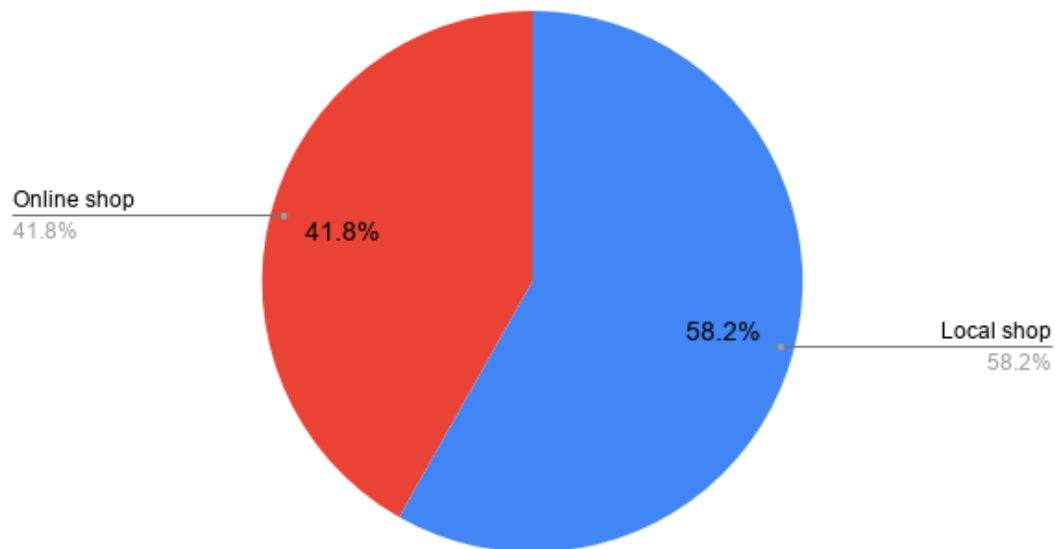
Figure 4.13: Compare between online shop and local shop

3.4.14 Have you ever felt problem in online shopping?

As online shopping is an intermediary system it has some issue with the service provided. People having problem in online shopping is still 58.2% shown in figure 4.14.
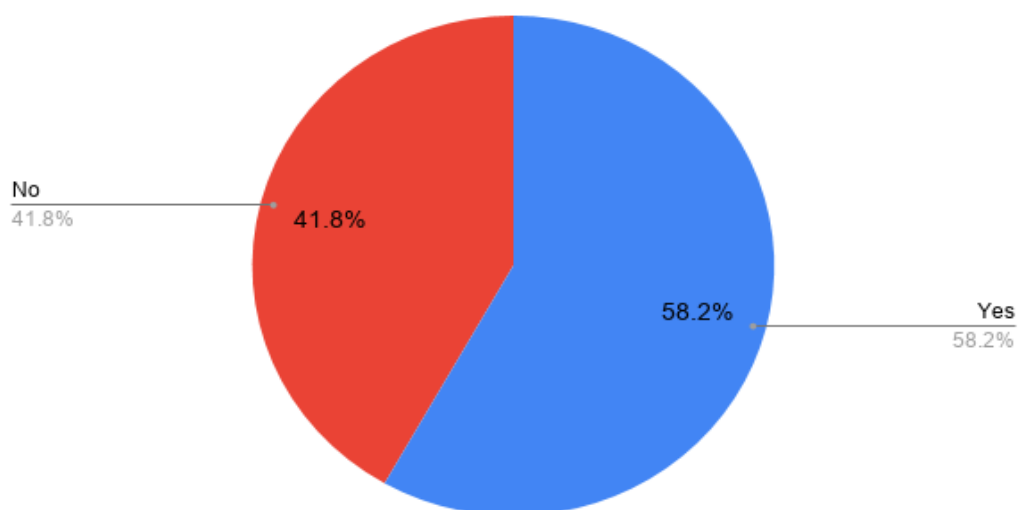
Figure 4.14: Number of people are not comfortable with online shopping

3.4.15 Have you ever bought unnecessary product?

People not only buy the necessary products on online but also buy the unnecessary products. The amount of unnecessary products bought in online is too low. From figure 4.15 we can figure out that, 64.6% people don't buy unnecessary products.
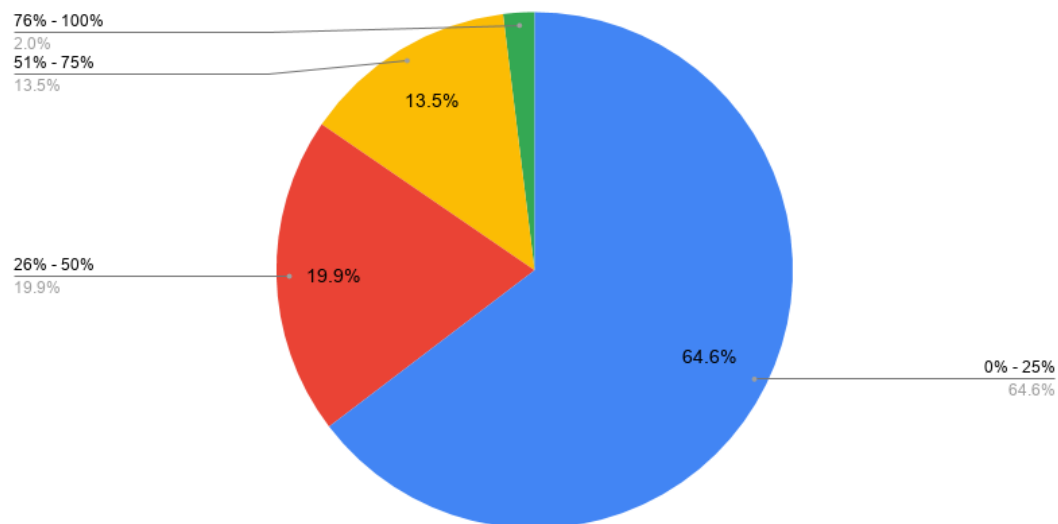
Figure 4.15: Percentage of unnecessary product bought

3.4.16 Do you sent feedback after online shopping?

Feedback is the system where consumers give the information about their problem. People can also know the behavior about the vendors. But only 35.4% consumers send feedback, but 64.6% consumers don't send feedback according to figure 4.16.
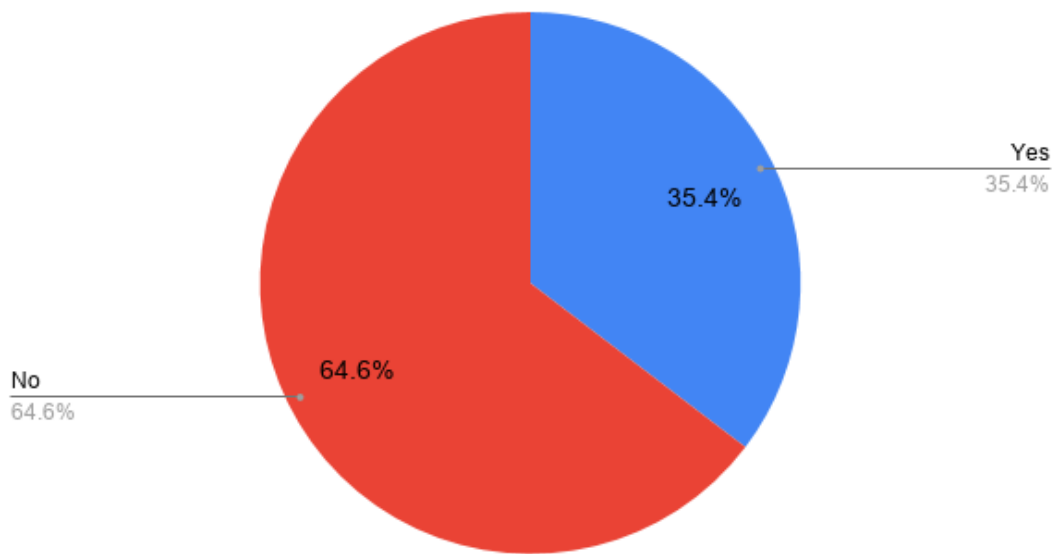
Figure 4.16: Feedback sent by consumers

3.4.17 How much satisfy are you with online shopping?

In our survey questioner we asked people to give their satisfaction in scale from 1 to 5.From 512 participants 80 people gave one out of five, 76 people gave two out of five, 159 people gave three out of five, 183 people gave four out of five and only 14 people gave five out of five that is shown as a bar chart in figure 4.17.
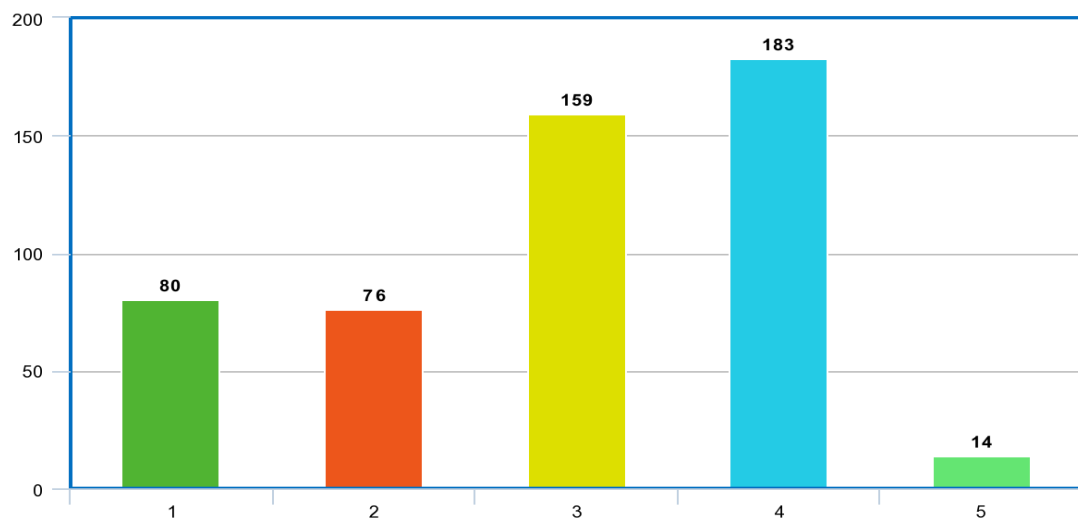
Figure 4.17: Consumers satisfaction with online shopping

3.4.18 Do you think online shopping save our time?

Online shopping is the way of buying products from the vendors staying anywhere and receive it in home or office. So ultimately, it saves our time. In figure 4.18,with an amount of 71.5% people say online shopping save their time and 28.5% people don't agree with it.
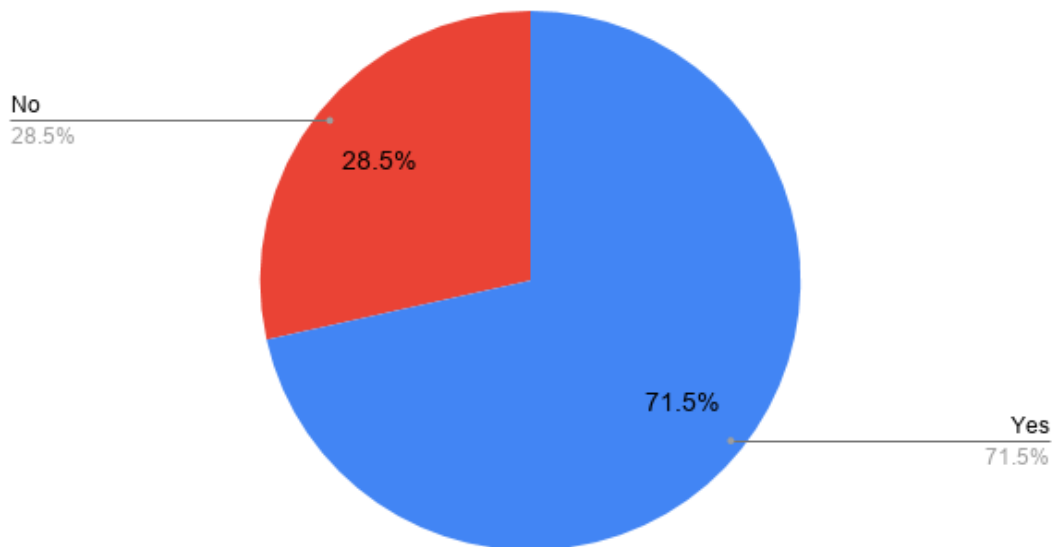
Figure 4.18: Online shops save customers time

3.4.19 Known online vendor in social media or internet

As the market of online shopping is growing also the number of companies is increasing. There are lots of online vendors in our country. But people of our country only know about some of them. 26.9% people know about more than 6 online vendors. 33% people know about 3 to 5 vendors and 45.1% people know about only 2 or below it is shown in figure 4.19.
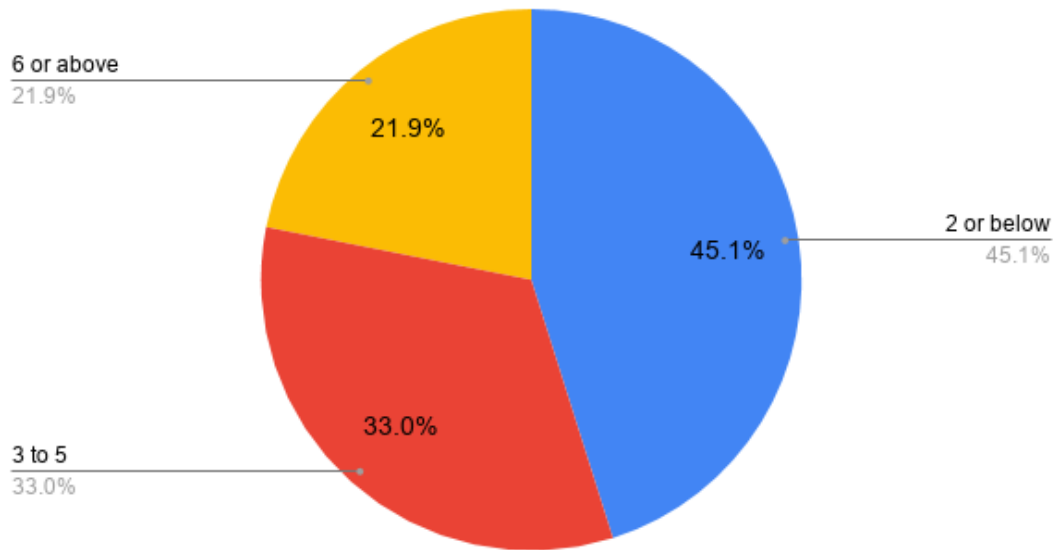
Figure 4.19: Known online vendors

3.4.20 Do you trust the price on online shopping?

In online shopping trust is a big issue for the consumers. As the consumers don't trust the online vendor, they won't buy goods or services from the vendors. More than half of our participant don't trust the vendors. According to figure 4.20, 52.3% of people don't trust the price of online shopping where 47.7% of people think the opposite.
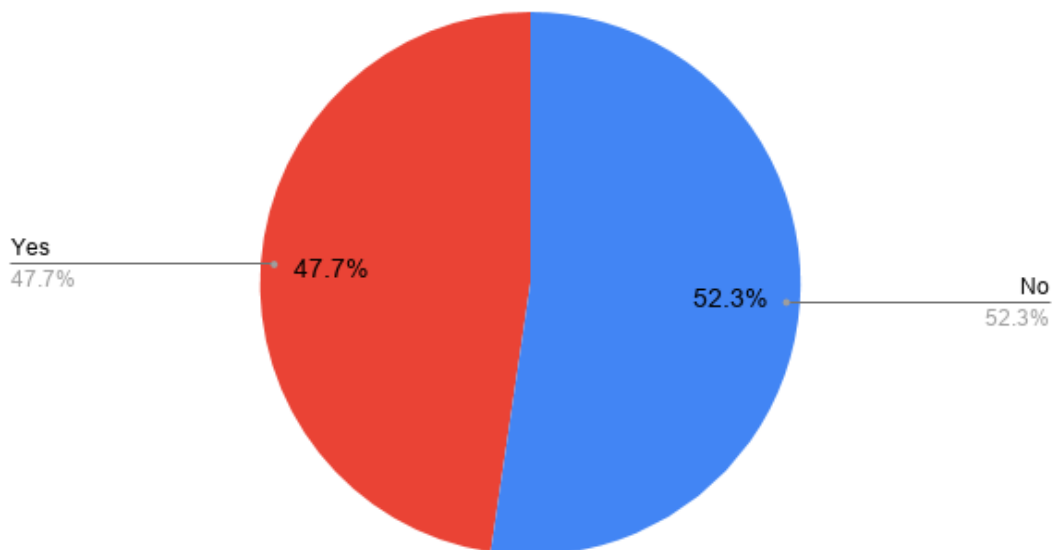
Figure 4.20: Price trusted by customers

3.4.21 Do you check the review before purchase?

It is a good practice to check feedback in respect of products previously purchased which is known as a review. According to figure 4.21, 87.5% of the participants usually check reviews before purchasing a product.
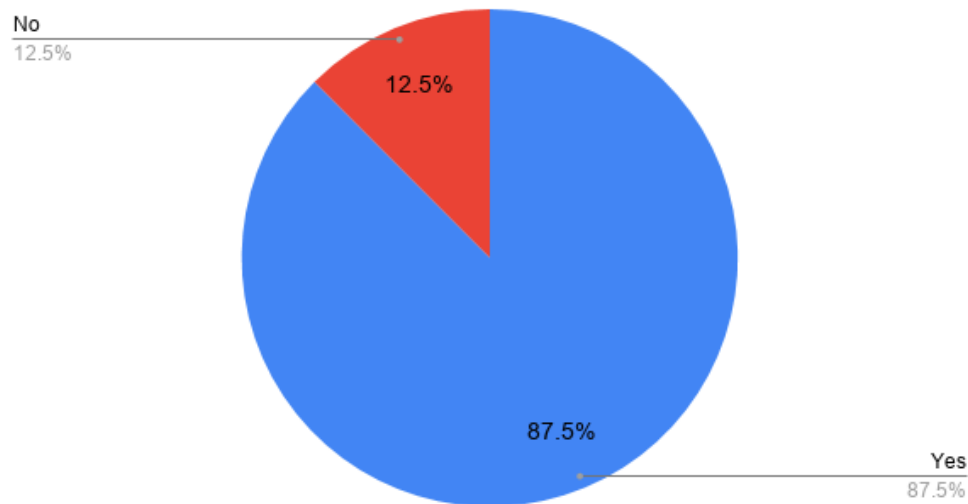
Figure 4.21: Review checked by customers

3.4.22 Do you suggest people for online shopping?

Nowadays, online shopping has keeping a vital role in our day to day shopping of our needs. People usually suggest another person for things if he found it useful. Thus, according to figure 4.22, 68.8% of the participants generally suggest other person for online shopping.
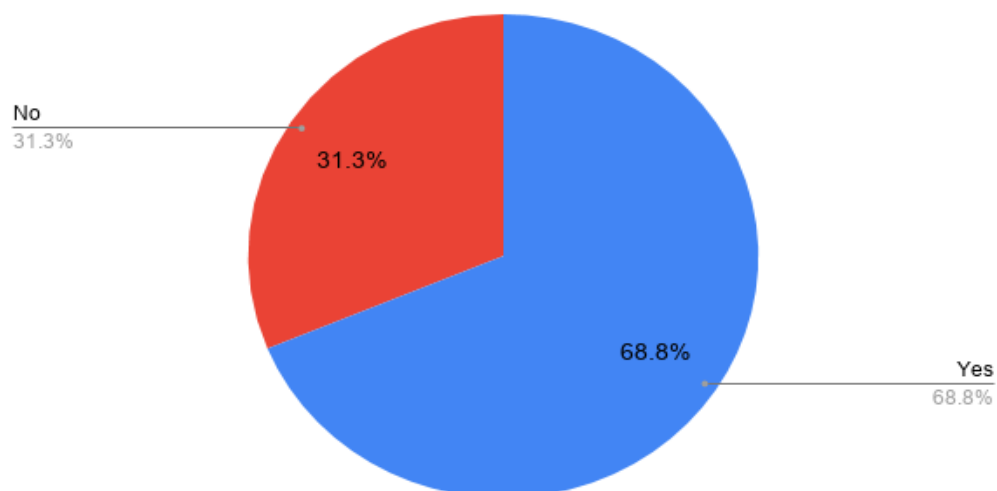
Figure 4.22: People suggest about online shop

3.4.23 What payment method do you prefer for online shopping?

In general, cash on delivery is the most trusted payment method. In this method, you have to complete your payment after receiving the product you order. Which has been highly preferred by our participants that is nearly 78%. Others are preferring online payment methods like Bkash, Rocket and card demonstrated in figure 4.23.
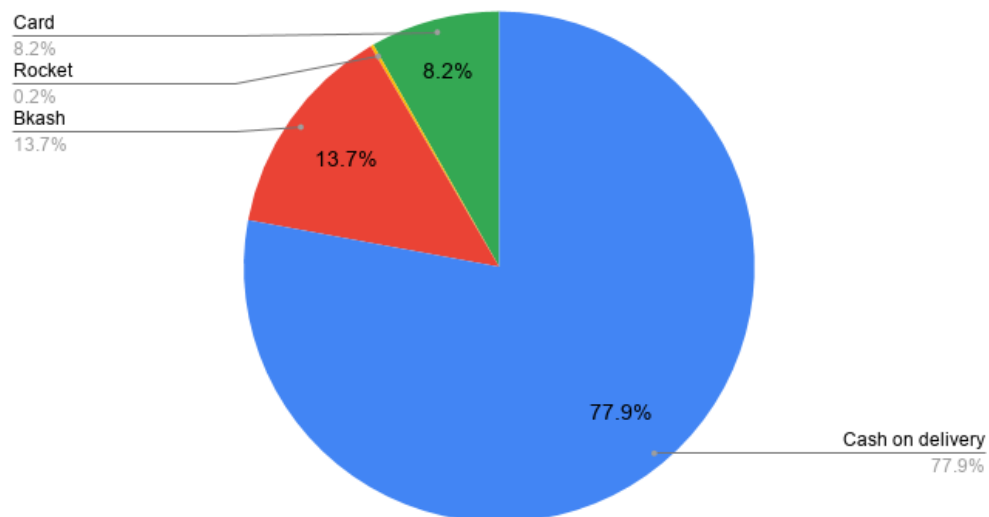
Figure 4.23: Payment methods

3.4.24 Speed of delivery is important for you?

It is one of the primary reason for choosing online shopping. Figure 4.24 reflects that, it gets importance from 96.5% of the total participants.
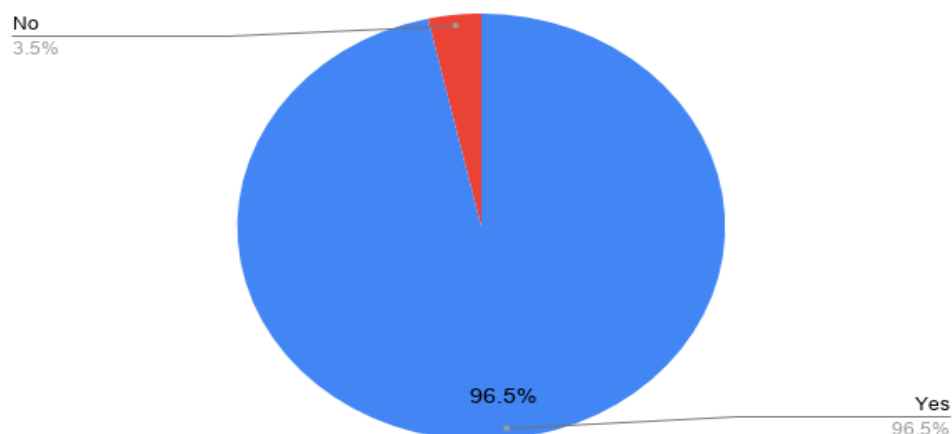
Figure 4.24: Importance of speed of delivery

3.5 Implementation Requirements

At the very beginning of our data analysis, we checked for missing and scattered value. Luckily, in our data set there was no missing or scattered value. So, we moved on to the analysis phase. We actually used WEKA software to analysis our datasets by implementing different algorithms. We have used LibSVM (Support Vector Machine), J48, Naive-Bayes, Simple CART algorithms.

CHAPTER 4
EXPERIMENTAL RESULTS AND DISCUSSION

4.1 Introduction

We have collected different types of required data from social media, Facebook, E-mail and in person. We have implemented different data mining algorithms to analysis our data. These algorithms will find out the accuracy, decision tree and classification from our datasets.

4.2 Experimental Results

For analyzing 512 instances in respect of 25 attributes, we use 50 fold cross validation

4.2.1 Using Support Vector Machine

Result from the Weka after implementing LibSVM on our datasets is given below:

Correctly Classified instances 474 which is 92.5781%.

Incorrectly Classified instance 38 which is 7.4219%

Kappa statistic 0.7595

Mean absolute error 0.0742.

Root mean squared error 0.2724

Relative absolute error 21.8126%

Root relative squared error 66.1055%

Total number of Instance 512

Table 4.1: Detailed accuracy by class (LivSVM)

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.988	0.297	0.923	0.988	0.954	0.772	0.845	0.921	Yes
	0.703	0.012	0.940	0.703	0.804	0.772	0.845	0.725	No
Weighted Avg.	0.926	0.236	0.927	0.926	0.922	0.772	0.845	0.879	

=== Confusion Matrix ===

a   b   ← classified as

396   5 | a = Yes

33   78 | b = No

4.2.2 Using Classification and Regression Tree (CART)

Result from the Weka after implementing CART on our datasets is given below:

By implementing this algorithm, we found,

Correctly Classified instances 486 which is 94.9219%.

Incorrectly Classified instance 26 which is 5.0781%

Kappa statistic 0.8495

Mean absolute error 0.058

Root mean squared error 0.2173

Relative absolute error 17.0415%

Root relative squared error 52.7351%

Total number of Instance 512

Table 4.2: Detailed accuracy by class (CART)

	TP Rate	FP Rate	Precision	Recall	F-Measure	ROC Area	Class
	0.97	0.126	0.965	0.97	0.968	0.956	Yes
	0.847	0.03	0.89	0.874	0.882	0.956	No
Weighted Avg.	0.949	0.105	0.949	0.949	0.949	0.956	

=== Confusion Matrix ===

a   b   ← classified as

389   12 | a = Yes

14   97 | b = No

```
CART Decision Tree

How often do you visit online shop?=(Not at all)
|   How you come to know first of your online shop?=(From friends)|(Others): No(58.0/1.0)
|   How you come to know first of your online shop?!=(From friends)|(Others)
|   |   Age < 23.5: No(3.0/1.0)
|   |   Age >= 23.5: Yes(18.0/1.0)
How often do you visit online shop?!=(Not at all)
|   How much satisfy are you with online shopping? < 1.5
|   |   Have you ever felt problem in online shopping?=(No): No(24.0/1.0)
|   |   Have you ever felt problem in online shopping?!=(No)
|   |   |   Known online vendor in Social Media or Internet=(6 or above): No(2.0/0.0)
|   |   |   Known online vendor in Social Media or Internet!=(6 or above): Yes(16.0/0.0)
|   How much satisfy are you with online shopping? >= 1.5
|   |   Do you suggest people for online shopping?=(No)
|   |   |   Do you think online shopping save our time?=(No)
|   |   |   |   Do you send feedback after online shopping?=(No): No(9.0/0.0)
|   |   |   |   Do you send feedback after online shopping?!=(No): Yes(8.0/1.0)
|   |   |   Do you think online shopping save our time?!=(No)
|   |   |   |   How much time do you spend on social media or browsing internet ?=(7hrs or above)|(4hrs to 7 hrs)
|   |   |   |   |   Known online vendor in Social Media or Internet=(2 or below)
|   |   |   |   |   |   Age < 22.5: No(3.0/0.0)
|   |   |   |   |   |   Age >= 22.5: Yes(2.0/1.0)
|   |   |   |   |   Known online vendor in Social Media or Internet!=(2 or below): Yes(2.0/0.0)
|   |   |   |   How much time do you spend on social media or browsing internet ?!=(7hrs or above)|(4hrs to 7 hrs): Yes(29.0/0.0)
|   |   Do you suggest people for online shopping?!=(No)
|   |   |   Do you visit advertisement of different offers?=(No)
|   |   |   |   How often do you visit online shop?=(Once per week)
|   |   |   |   |   How much satisfy are you with online shopping? < 3.5
|   |   |   |   |   |   Age < 29.5: No(9.0/0.0)
|   |   |   |   |   |   Age >= 29.5: Yes(4.0/0.0)
|   |   |   |   |   How much satisfy are you with online shopping? >= 3.5: Yes(8.0/0.0)
|   |   |   |   How often do you visit online shop?!=(Once per week): Yes(55.0/0.0)
|   |   |   Do you visit advertisement of different offers?!=(No): Yes(256.0/0.0)

Number of Leaf Nodes: 17

Size of the Tree: 33
```

Figure 4.25: Tree visualization. (CART)

4.2.3 Using C4.5 (j48) algorithm

Result from the Weka after implementing C4.5 (j48) on our datasets is given below:

By implementing this algorithm, we found,

Correctly Classified instances 493 which is 96.2891%.

Incorrectly Classified instance 19 which is 3.7109%

Kappa statistic 0.9349

Mean absolute error 0.0393

Root mean squared error 0.1583

Relative absolute error 10.2482%

Root relative squared error 36.1807%

Total number of Instance 512

Table 4.3: Detailed accuracy by class (C4.5)

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.979	0.050	0.963	0.979	0.971	0.932	0.957	0.947	Social Media
	0.958	0.019	0.951	0.958	0.955	.0937	0.981	0.959	From Friends
	0.909	0.002	0.986	0.909	0.946	0.938	0.946	0.913	Others
Weighted Avg.	0.963	0.034	0.963	0.963	0.963	0.934	0.962	0.945	

=== Confusion Matrix ===

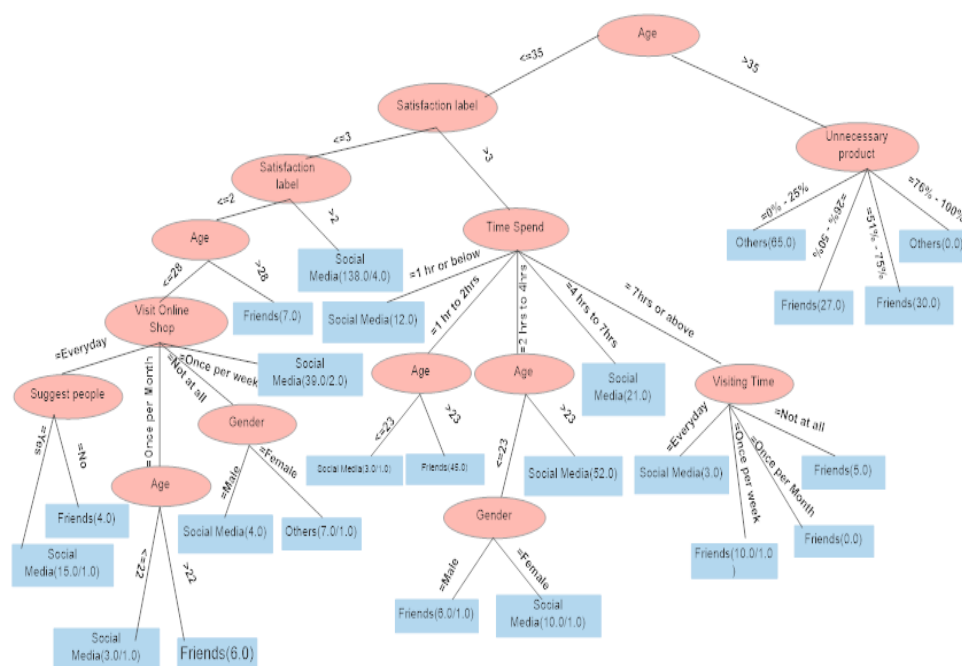| a	b	c	← classified as
286	05	01	a = Social Media
06	137	00	b = From Friends
05	02	70	c= Others

Figure 4.26: Tree visualization. (C4.5)

4.2.4 Using Naive Bayes algorithm

Result from the Weka after implementing Naive Bayes on our datasets is given below:

Table 4.3: Detailed accuracy by class (Naïve Bayse)

	TP Rate	FP Rate	Precision	Recall	F-Measure	ROC Area	Class
	0.915	0.288	0.92	0.915	0.918	0.922	Yes
	0.712	.0085	0.699	0.712	0.705	0.922	No
Weighted Avg.	0.871	0.244	0.872	0.871	0.872	0.922	

By implementing this algorithm, we found,

Correctly Classified instances 446 which is 87.1094%.

Incorrectly Classified instance 66 which is 12.8906%

Kappa statistic 0.6229

Mean absolute error 0.1267

Root mean squared error 0.3282

Relative absolute error 37.2295%

Root relative squared error 79.632%

Total number of Instance 512

=== Confusion Matrix ===

 a   b   ← classified as

367   34 | a = Yes

32   79 | b = No

4.3 Descriptive Analysis

At the end of our task, by implementing four of these algorithm we get, 92.5781%, 94.9219%, 96.2891% and 87.1094% correctly classified data. Furthermore, we can generate decision tree from simple CART and C4.5 (J48) algorithms. According to the tree, we also can find out different characteristics and predict result. Example, if anyone is above 22.5 years using internet 4 hours or above and also know 2 or below online shop than he would likely buy products from online shop.

4.4 Summary

After conducting our study we stands for the result that express, People who are spending time in social media less than 4 hours are more likely to purchase from the online shop than those who spent more than 4 hours. Furthermore, People who are older than 35 years had first come to about online shop from friends or other medium. On the contrary, having age under 35 years, mainly gather first information about online shop from social media. Along with our study, we can say that 58% of the people of our country know about online shop from social media. Others are more likely to know about online shop from friends or others different way like newspaper, television and so the like.

CHAPTER 5
SUMMARY, CONCLUSION, RECOMMENDATION AND
IMPLICATION FOR FUTURE
RESEARCH

5.1 Summary of the Study

Through our study period on this topic, we came to know about the effects of social media in various way. Also, we organize data of different categorized people and find their opinions about online shopping. Furthermore, the correlation between people's view about it and social media is figured through our research. Usually, maximum number of the people are knowing about online shop through social media. Almost, half of the people are purchasing from online shop who are provoked by various attractive advertisement. At the least, we have found an interesting relation between social media usages and online shopping behavior.

5.2 Conclusions

Our research has a vital role in the recent circumstances for our country due to the increasing rate of online shopping. We have researched the behavior of people of Bangladesh on online shopping through data mining techniques. We can predict whether a new consumer is going to buy products via an online shop or not. We have classified our data by using data mining algorithms. We have produced decision trees that can be useful for providing better services. People who spend less than 4 hours on social media are more likely to buy from an online shop than those who spend more than 4 hours on social media. In addition, people over the age of 35 had first come to know from friends or other media about an online shop. On the contrary, people under the age of 35 are mainly collecting first information from social media about online shops.

5.3 Recommendations

At the end of our study, service providers can make the online shop more user friendly for providing better services towards general people. Through, our feedback analysis we can suggest the online service providers improve their product quality, delivery time and provide proper pricing to attract more consumer.

5.4 Implication for Further Study

In future research can be done with preferences on products by customer's choice. Furthermore, Features and Offers mostly liked by consumers can be find out by more study. Moreover, by studying on the peoples' feedback, the reflection of their necessity on online shopping could be figure out.

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