

Overloaded Information and Its Impact on Consumer Decision Making at Online Shopping: In Case of North Cyprus Students

Maria Sharifzadeh

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Approval of the Institute of Graduate Studies and Research

Prof. Dr. Elvan Yılmaz
Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Master of Arts in Marketing Management.

Assoc. Prof. Mustafa Tümer
Dean, Faculty of Business Administration

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Arts in Marketing Management.

Asst. Prof. Dr. Mehmet Islamoglu
Supervisor

Examining Committee

1. Assoc. Prof. Mustafa Tümer

2. Asst. Prof. Dr. Deniz İşçioğlu

3. Asst. Prof. Dr. Mehmet Islamoglu

ABSTRACT

Online shopping is a method of electronic trade which permits customers to buy goods and services directly from a seller through the internet. Customers are interested and attracted to online shopping because of greater access to information, competitive pricing, broader selections and also high levels of convenience. Information overload points out to the difficulty that presence of too much information can make and there is the problem for people to have a good understanding of an issue and also having a good decision making. Information overload happens when the level and amount of input to a system is more than its Processing capacity and Decision makers have limited and bounded capacity on cognitive processing. When information overload happens, it is likely that a reduction in decision quality happens.

This thesis deals with overloaded information and its impact on customer decision making at internet shopping. Online shopping sites with too much information help customers to have a great shopping or it makes customers confused?

My thesis demonstrates the impact of internet shopping and overloaded information on customer decision making and also it demonstrates the impact of overloaded information on internet shopping. The case study of my thesis is the students of Eastern Mediterranean University of North-Cyprus.

Keywords: internet shopping, overloaded information, customer decision making

ÖZ

Online alışveriş mal ve hizmetlerin İnternet üzerinden doğrudan bir satıcıdan satar, tüketicilerin elektronik iş şeklidir. Online alışveriş Müşterilere daha fazla bilgi erişimi, rekabetçi fiyatlandırma, daha geniş bir seçim ve ayrıca yüksek düzeyde kolaylık sağlıyor. Aşırı Bilgi işaret olduğuna ve çok fazla bilgi olduğu ve insanların sorunu iyi bir şekilde anlama ve aynı zamanda iyi bir karar verebilmedir. Gelen bilgi seviyesi ve miktarı sürecin işleme kapasitesinden fazla olursa aşırı bilgi bombardımanı oluşur. Yani kapasitenin dışına çıkmaması gerekir. Aşırı yük oluştuğunda, karar verme kalitesinde bir azalma meydana gelir.

Aşırı bilgi, online alışveriş müşterinin karar verme üzerinde müşteriyi sıkıştırma ve pekiştirmeye sahiptir. Online alışveriş sitelerinde çok fazla bilgi müşterilere harika bir alışveriş sunuyor mu yoksa müşterilerin kafasını mı karıştırıyor?

Tezimde online alışverişin müşterinin karar verme ve online alışveriş üzerinde aşırı bilgi etkisini gösteriyor. Kuzey Kıbrıs Doğu Akdeniz Üniversitesinde okumaktayım ve bu benim vaka çalışmamdır.

Anahtar Kelimeler: İnternet alışverişi, aşırı bilgi, müşteri karar verme

DEDICATION

TO my father who is my hero.....

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Chapter 1

INTRODUCTION

1.1 Background

Internet became an important and practical sale channel for various goods and services. Many companies that acted as pioneers of the online marketplace did not become household names of today. Finding some ways that make the usage of internet to enhance customer's online satisfaction and intention has attracted big and significant attention. [1] Improving the shopping experience of online customers has been a priority for many studies. Part of this refers to determining the amount and level of information that customers can process within an online environment. The nature of information-rich at on-line environments may easily lead to information overload especially among new customers. Internet shopping sites for having more customers try to increase the amount of information for shoppers. However it's the question that overloaded information is really good for Internet sellers and customers?[3]The first World Wide Web server and browser created by Tim Berners-Lee in 1990 and it opened for commercial use in 1991, Then subsequent technological innovations emerged in 1994, for example online banking and first online shopping system that called internet shop. Amazon.com emerged in 1995 and also eBay was introduced in 1996. [11]

1.2 Aim of the Study

This study will analyze how information overload affects consumer's behavior and decision making in online shopping. Overloaded information and consumers decision making on online shopping, a sample of students in Eastern Mediterranean University is selected and questionnaires are designed accordingly and I distributed 220 questionnaires between students. The sample of this study is students of Eastern Mediterranean University that are between 18 to 28 years old. My selected industry for study is mobile and tablet industry, because we are living in the age of technology and young people are interested to communication advices such as mobile phones and tablets, so they can buy these advices by internet shopping because they can earn much information about these advices through different online shopping sites.

1.3 Thesis Structure

The first chapter is introduction part that explains a short background about the study. Chapter two is a literature review of the study and chapter three is about the research methodology and hypotheses of the study. Chapter four is the results and discussions part that explains the results of analysis. And finally, chapter five that is about the conclusions and recommendations of the study.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

In this part, an overview of relevant concepts relating to internet shopping, information overload and customer decision making is presented. Expansion of the internet provides more activities at online shopping environment. But still, some internet users because of uncertainty about privacy and security regards don't use online shopping. On the other hand online shopping is growing rapidly as online enterprises and companies become more sophisticated (Lian and Lin, 2008).[8]

2.2 Online shopping

Online shopping is a method of electronic trade which permits customers to purchase products and services directly from a seller through the internet. It's necessary for online consumers to have access to the internet and they must also have a channel for making payments. Customers are absorbed to online shopping because of greater access to information, competitive pricing, broader selections and also high levels of convenience, and facilities, such as:

- (1) Access facilities;
- (2) Search facilities;
- (3) Evaluation facilities;
- (4) Transaction facilities; and
- (5) possession/post (purchase facilities).

Generally, educated people, young people and people with high level of income are more interested in online shopping, because educated and young people use internet more than others, so they can search different online shopping sites and they can buy desired goods through online shopping. Development of technology also increases the usage of internet shopping and also helps to spread favorable attitudes among the public towards new shopping channel. Demands and expectations of customers are not the same. Some important factors on online shopping are age, gender, experience and culture. Online shopping experience could facilitate the process of online shopping, because person can easily finds reputable sites to purchase online and can makes purchasing process easier. [12, 9]

2.3 Opinions of consumers about online shopping

2.3.1 Trust

Consumers' trust about internet shopping and internet technology is key factors that affect internet shopping. Trust in both the online technologies and internet sellers guarantee the beliefs of consumers about the safety and security of online shopping. Because the virtual shopping and purchasing environment has some special specifications, consumers feel greater doubt and uncertainty and more powerful and stronger risk in their online purchasing decisions, so for decreasing the level of uncertainty, doubt and risks and for preparing a sense of safety, Trust is one of the most effective implements. [13]

2.3.2 Enjoyment

Opinions and beliefs of consumers about shopping enjoyment is one of the main and important factors in consumer's acceptance of internet shopping. Shopping enjoyment is a consumer's belief that shopping will prepare enjoyment in its own right. Consumer search shows that people have a limited area and range of basic and

main motivations and different shopping targets motive and start one's shopping behavior in different ways. Also the main and principal advantages of e-shopping such as more massive access to information and competitive pricing are related to utilitarian aspects of internet shopping. Enjoyment and social experiences that are enjoyable sights of internet shopping also touch and affect customers shopping activities. Customers can be influenced by a good and raising motivation that is prepared by social e-shopping, so the customers spend more time and more money and return more to e-retail stores. Enjoyment positively affects consumers' attitudes and trends towards e-shopping [13, 2]

2.4 Advantages of online shopping

2.4.1 Convenience

Generally online stores are available 24 hours a day, and too many consumers can use internet both at home and at work environment. Also consumers are able to use internet in travel and they can use internet by their mobiles and tablets everywhere. When a customer makes a purchase over the internet, if the product is not what the customer ordered, customer are concerned with the ease of exchanging the product with the right product or with a refund. Maybe there is a need for customer to contact the seller, going to the post office and pay return shipment, and then he/she has to wait for a replacement and substitute or a refund. [7]

2.4.2 Information and reviews

Online stores must present and explain their products with texts, photos, and multimedia files. Many online stores prepare complement information for products, for example they prepare instructions and orders, safety procedures and also producer specifications in addition to information and advice, and also there is some guidance that is designed to help consumers decide for buying products. There are

some websites such as Google Alexa that assign rate to online shopping sites by reviewing and considering customer's comment about that website. [7]

2.4.3 price and selection

One advantage of shopping online is that customers can fast compare their goods that they are interested in and services that provided by wide range of sellers. Customers can use search motors, discovery shopping motors and also online price collation services for searching the sellers of a special product or service. [7]

2.5 Disadvantages of online shopping

2.5.1 Fraud and security concerns

The risk of fraud at online shopping is more and greater than face-to-face transactions and dealings. Also some users use stolen credit cards and they make the risk of fraudulent shopping and sometimes online sites deny this fraudulent shopping. For more secure shopping consumers should not use the information of credit cards several times for their own purchases, and also consumers should not give the information of their own credit cards to others. Also, maybe hackers break into a seller's web site and steal customers information, the names of customers, their addresses and their credit card numbers, although the payment card industry data security standard to be handled to decrease and minimize the impact of these kind of problems. Quality signets should be placed on the Shopping web pages for increasing the trust and also the confidence of online shoppers. Though, the confusion created by the existence of different signets may deactivate this effort to a certain limit and extent. [7, 13]

2.5.2 Privacy

For too many consumers privacy of personal information is a main and important issue. There is various and different legitimate jurisdictions that have different laws

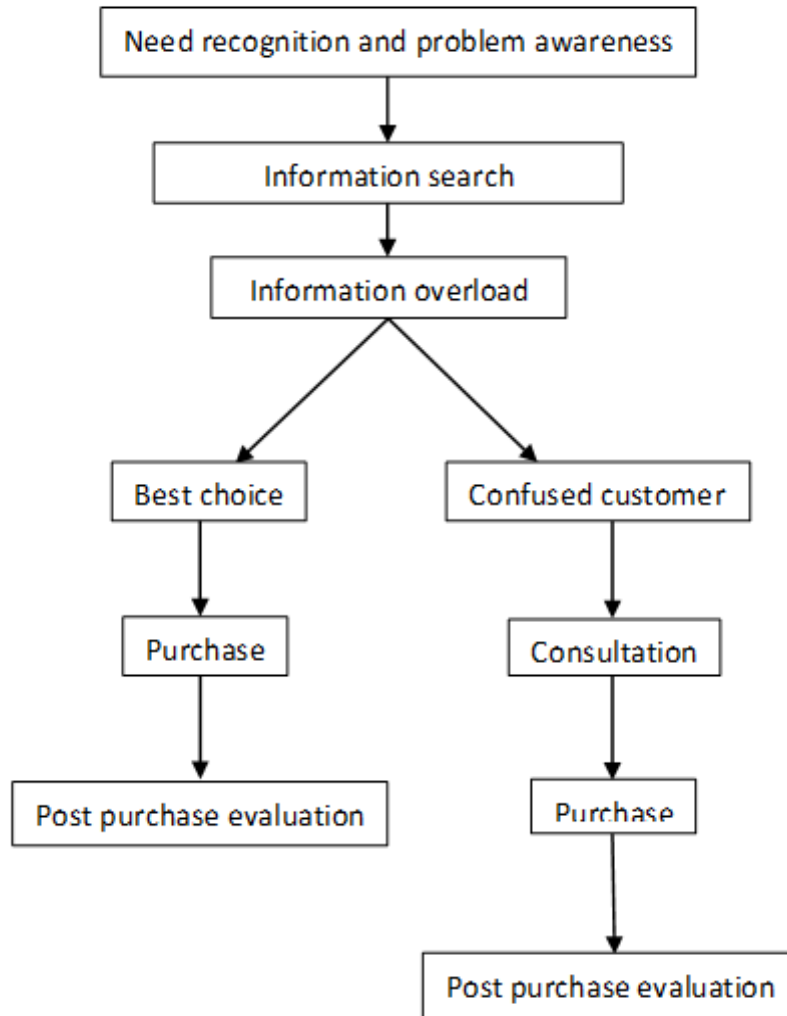
and rules about consumer privacy, and also they have various levels of implement. Many consumers care about fraud and telemarketing and they try to beware about them. Also providing of contact information for an online trader causes some serious fraud and spam, so consumers try to avoid them. There is a response for customers from merchants and traders that they promise to don't use the information of customers for this goal or for preparing a way or mechanism for choosing these contacts. Many websites follow the habits of customer shopping to suggest them items and also other websites to view. For checking out some websites inquire the phone number and address of consumer, although consumer may doesn't accept this issue. Many bigger stores need the consumers address for adding them to a catalog mailing list, so for more security they encode this information on consumers credit card. [7, 13]

2.5.3 Hands-on inspection

When a customer is shopping on online stores she/he can put her/his trust on products through pictures and explanations of products that are available at online shopping sites. If it's the first time that customer is buying desired product or service and she/he doesn't have prior presentation to product, the customer will not has a full understanding about product. However, at online shopping sites are some video and written reviews from customers who have purchased same products in the past. These can help to future customers but also these can be based on personal preferences and priorities. [7]

2.6 Model of the consumer buying process in case of overloaded information

A model of the decision-making process that is related to consumer buying behavior in overloaded information situation is mentioned as follows: [4, 6]



Figur1: Steps of online shopping at overloaded information

2.7 Steps of online shopping

1. An online search for the desired product and customers should research on the shopping sites or stores.

2. Comparing the features and prices that offer from several sites. Too much information of shopping sites can help customers to have the best choice or it can confuse customers. If customers are confused about shopping they can get help from a counselor.

3. Deciding at which online shop to buy desired product.

4. Making sure that the shopping sites and shopping system is secure.

5. When customers are ready to buy they must click on shopping cart and check each item for accuracy and also they must check the shipping charges. [14, 4]

2.8 Information overload

Information overload points out to the difficulty that presence of too much information can make and there is the problem for people to have a good understanding of an issue and also having a good decision making. Information overload happens when the level and amount of input to a system is more than its processing capacity and valence and decision makers have bounded capacity on cognitive processing. When information overload happens, probably a reduction in decision quality occurs. For many years, it is a great interest for researchers and marketers to define and determine the amount of information that consumers with a bounded cognitive capacity can process. The basic presupposition of this concern is that if consumers confront with too much information, they become overloaded and maybe they make less effective and poorer decisions. [5, 10] Another presupposition says that if consumers face with too much information they can have the best choice and have the best decision. [10] Contrary to the growth of online shopping activities and the ability of internet to prepare and provide unlimited amounts of information, however, there are few studies and researches that have discussed and examined the impact and influence of information overload on consumer decision making and also consumer choice quality in an online environment and online shopping. As the interplay and engagement between consumers and marketers in the online

environment increase, the need to understand the influence of information overload on consumers becomes important. This understanding will help marketers in deciding how best to manage and organize the desirable amount of information in designing an efficient Web site. [10]

2.8.1 Causes of Information Overload

The information processing requirements (IPR) which are defined by the origin of the process or task and the information processing capacity (IPC) which is affected by personal specifications are two main and fundamental variables of information overload. Some special characteristics of information determines information overload. Such characteristics are the level of doubt that is related to information and also the level of novelty, ambiguity, intensity and complexity. The information processing capacity of customers can be modified and improved when the quality of information is modified and improved, because customer can use information with high quality better and also more quickly than unclear information.[10]

There are some general causes of information overload that mentioned as follows:

1. An increasing rate of new information being provided where there is a premium put on how news can be put out quickly which directs to a competitive advantage in news reporting but this influences the quality of the news stories.
2. The increasing of capabilities, copying stories and transferring of data throughout the internet.
3. The increasing of available channels which provide incoming and inbound information.

4. Absence of a way and procedure that is used to compare and process different information at different shopping sites.

5. Some information is unrelated or they don't have a special way to explain their relationships. [10]

2.9 Consumer Buying Behavior

Development of the internet gave use to online shopping which is growing rapidly as online enterprises and companies become more sophisticated (Lian and Lin, 2008). [8]

2.9.1 Stages of the Consumer Buying Process

1. Customers search for the desired product and they should research on the shopping sites or stores.

2. Customers compare the features and prices that offer from several sites. Too much information of shopping sites can help customers to have the best choice or it can confuse customers. If customers are confused about shopping they can get help from a counselor.

3. Customers must decide to buy desired product from desired shopping site.

4. Customer must be sure that the shopping sites and shopping system is secure.

5. When customers are ready to buy they must click on shopping cart and check each item for accuracy and also they must check the shipping charges. [14, 4]

2.9.2 Types of Consumer Buying Behavior

The Importance and intensity of desire to a product in a special situation and also the level of involvement in buying decision defined and determined types of consumer buying behavior. The motivation of customer for searching information about a special brand or product is determined by the level of Buyer's involvement, but customer ignores others virtually and when she/he faces to too much information she/he must select desired shopping site for purchasing desired products. [3, 15]

Chapter 3

MODEL, HYPOTHESIS AND METHODOLOGY

The following chapter will explain the foundation of those methodologies used through the study to calculate the estimated results. Different routine methods which are already used in the literature will be described. According to this chapter, the perfect methodology which fits the data best and leads in to empirical results will be discussed.

3.1 Research Methodology

Methodology of a research is defined as a systematic approach applied to the study to determine the characteristics of those procedures which lead into results. Usually it discusses features such as theoretical model, phases and quantitative or qualitative techniques. According to previous literature, it is common in management studies to classify the study in to quantitative and qualitative techniques. Quantitative technique is defined as those techniques which evaluate numerical information and qualitative technique uses narrative or non-numerical data such as enquiries (Berg, Bruce L., 2009). Hence, according to different unique features of a study, the appropriate technique could be utilized. This study however, uses the qualitative and quantitative approaches to answer the main research questions.

3.2 Questionnaire Design

Whenever human being is involved in a research the questionnaire is usually used by researchers to fetch the required information on a field. According to the topic of the current study, it is aimed to evaluate the effect of information overload on customer's

decision making while purchasing a good online. Now to design the proper questionnaire different legitimate and reliable studies are used. Since the study is run in country of North Cyprus, a number of modifications according to the specific cultural, technological and educational attributes are considered. The questionnaire is divided into two different parts with different perspectives. The first part of it which contains 22 different questions, are responsible to measure different variables chosen for the study. Questions with the focus on internet shopping are measured based on Likert-Scale 5 points from 1 (strongly disagree) to 5 (strongly agree). The second part of the questionnaire focuses on the demographic attributes of the respondents. To prevent the possible ambiguity from the side of respondents, the demographic questions are asked by the end of the questionnaire. The questionnaire was distributed among 220 respondents.

3.3 Sampling Methodology

There are different choices to select the population, such as convenience sampling, judgmental sampling, quota sampling and snowball sampling.

Since the study is run in north Cyprus, the main respondents are students. The respondents are interviewed first and asked whether they have access to online shopping and internet. Hence the current study uses judgmental sampling since it is required for them to be familiar with different concepts introduced in the questionnaire such as online shopping and information overload.



Figure 1: Conceptual model

In this chapter the conceptual model and hypotheses would be discussed. According to what is explained in previous chapters, the following model is drawn.

3.4 Hypotheses

H1: Internet shopping has significant and positive effect on customer decision making.

H2: Overloaded information has significant and positive effect on internet shopping in customer decision making process.

H3: Overloaded information has significant and positive effect on customer decision making at internet shopping.

3.4.1 Hypothesis 1: The relationship between internet shopping and customer decision making

Internet shopping is a method of electronic trade, so consumers can purchase their desired products and services directly from a seller through the internet. Customers are interested and attracted to online shopping because of greater access to information, competitive pricing, broader selections and also high levels of convenience. Consumers can visit and review the website of seller directly and also they can search between other sellers through a shopping search motor for finding the interested good or service. Too many online sellers use purchasing card software (credit card) for payment.

3.4.2 Hypothesis 2: The relationship between internet shopping and overloaded information

Internet shopping is a method of electronic business, so consumers can purchase their desired products and services directly from a seller through the internet. There are some reasons that customers absorb to online shopping, such as: greater access to information, competitive pricing, broader selections and also high levels of convenience. Consumers find their interested good or service by visiting the website of the seller directly or by searching among other sellers by using a shopping search engine. Once the desired product has been found and selected on the website of the seller, most online sellers use shopping card software for payment. Online sellers usually use a credit card in order to make payments. Information overload points out to the difficulty that presence of too much information can make and there is the

problem for people to have a good understanding of an issue and also having a good decision making.

3.4.3 Hypothesis 3: The relationship between overloaded information and customer decision making; Information overload could affect the customer's decision making

Information overload points out to the difficulty that presence of too much information can make and there is the problem for people to have a good understanding of an issue and also having a good decision making. The basic premise and hypothesis of this concern is that if consumers face with too much information, they become overloaded and maybe they make less effective and poorer decisions. Another premise and hypothesis says that if consumers face with too much information they can have the best choice and have the best decision. So, overloaded information can makes customers confused or can help them for having the best choice at internet shopping. Decision processes and procedures and also actions of people that is related to buying and using goods and services is called buying behavior.

Chapter 4

RESULTS AND DISCUSSIONS

4.1 Introduction

In this chapter, the statistical analysis of model will be discussed. At first, the correlation analysis will be explained for defining the degree of which the chosen variables are correlated with each other. Secondly, the regression analysis will be explained that is used for testing whether there are important relationships between dependent and independent variables of the model. The regression analysis is a companion with an Analysis of Variance (ANOVA) test in order to ensure that the variations which are explained by the model are not by chance. The choice of software is SPSS for the study since it is the most used statistical software among the researchers.

4.2 Pilot Study

Running a small scale of the research in order to check the feasibility of a study is called pilot or feasibility study.

This study chose a population of 35 respondents to run the test. Since the study has chosen the population from the TRNC region, different nationalities were chosen for the test. Out of 35, 15 respondents were Iranian, 10 of them were Russian, and the rest had Turkish and Cypriot nationality. After analyzing the results, it appeared that the variables for the questionnaire are chosen correctly and it is according to strategy design of the study.

4.3 Correlation Analysis

Statistically the Correlation analysis is important. It prepares the direction and level of relationships between two particular independent variables. A correlation matrix is the result of correlation analysis which allows us to contrast and compare the direction and the level of correlations among variables of study. Results of the matrix are represented in table 1. It has to be mentioned that the correlation coefficient varies from -1 to +1. -1 stands for perfect negative correlation and +1 shows perfect positive correlation. As it is shown in the table, each variable is perfectly positively correlated with themselves. By looking at the coefficient between internet shopping and over loaded information, the coefficient is equal to 0.506. This value represents a semi strong relationship between these two variables. Since the level of confidence chosen for the study is 0.01 and the P-value of the coefficient is equal to 0, the correlation between them is statistically significant. The correlation between internet shopping and consumer behavior is also statistically significant since the P-value is less than 0.01. The correlation value is almost 0.6 which is considered to be a semi strong correlation between the two variables. Between overloaded information and consumer behavior decision the correlation is statistically significant with P-value of less than 1% and the coefficient of 0.387 which is a small and moderate correlation between the two variables.

Table 4.1: correlation analysis

		Internet Shopping	Overloaded Information	Consumer Behavior and Decision
Internet Shopping	Pearson Correlation	1	.506**	.578**
	Sig. (2-tailed)		.000	.000
	N	220	220	220
Overloaded Information	Pearson Correlation	.506**	1	.387**
	Sig. (2-tailed)	.000		.000
	N	220	220	220
Consumer Behavior and Decision	Pearson Correlation	.578**	.387**	1
	Sig. (2-tailed)	.000	.000	
	N	220	220	220

4.4 Demographic Analysis

The demographic analysis is usually used to describe the essential and basic elements of the data extracted out of questionnaire. The important target of the test is to summarize the measures and used samples.

According to the results of the first question in questionnaire, 57.3 % of respondents spend more than 4 hours every day using internet. Since the population chosen for the study includes a large number of students and students tend to do most of their activities online the result is rational. Only 5.5% of the participants said that they use internet less than an hour every day.

Interestingly, having this question asked of respondents that how often they use internet prior to shopping, almost 5.5 % replied never and 49 % replied that they use internet for other purposes such as, studying, watching movies, listening to music, social networks and etc.

One of the core questions of the study represented in the questionnaire was that how often the respondents use internet for shopping. The results are very interesting. Asking this question from almost 220 participants resulted in that only 15% of them use internet often to shop online. 65% of them replied that they use internet rarely or sometimes to purchase their goods online. One other reason of the result could be, people living in TRNC still prefers the physical shopping (traditional shopping) rather than online shopping.

When it was asked from the respondents that if they have ever shopped online, the results were almost in line with the previous question. Almost 55% of them replied that they have never bought any good online. Now by looking at the next question that whether buying online could save respondents' time, the results support the previous question. Almost 107 of them replied that shopping online will not save their times. On the other hand almost 52 % of the participants believe that shopping online will help them save time.

To be able to buy online is at any time is considered to be a great advantage of online shopping (REF) more than half of the participants in this study believed so. Almost 57% of the respondents believe that buying online is an advantage while on the other hand, 43% of them were strongly disagree, disagree and indifference. Almost 60% of the respondents replied that shopping online is easy for them while on the other hand, only 25% said that it is more difficult for them to go online and shop.

The other core and important question of this study, is that whether information overload would confuse customers. The interesting result is that 20 % of the respondents replied that it doesn't make any difference to them either the websites bombard you with information or give a petit information on products. Almost 47% of the respondents believed that too much of information will not confuse them while purchasing online and the rest answered that overload of information would make the process of buying online more confusing for them. Results of the next question of overloaded information of shopping sites lead best choice were so close to the previous question. Now results of the following question could somehow explain the respondents' replies on previous questions. Having this question asked if they prefer the traditional shopping to online shopping, out of 220 participants 89 of them were strongly disagree and disagree. Almost 73 of them believed that eventually online shopping would take over traditional shopping.

One of the reasons that people still prefer traditional shopping to online shopping is that they believe that shopping online is risky. Almost 90 respondents were agree to the statement above and 93 of them showed their disagreement to it.

The other interesting question asked of respondents was that whether they would buy online if the prices were lower. More than 46% replied that they would switch to online shopping if prices were lower. Sometimes delivering a product which is bought online takes more than buy it in a traditional way, which is why 40% of the participants agreed that it takes a long time for a product to be delivered when purchasing it online.

49% of the respondents believe that, on internet customers have access a more broad types of products while on the other hand, 38% replied that they access to more types of products in traditional shopping.

One of the big differences between buying online or at place is the accuracy information of products. When this question was asked from the respondents, only 25.9% of them said that they get better information online. 47.3 % of them believe that websites do not give out better information. According to these results, it is somehow expected that participants might believe that information given for products online, is not sufficient. This statement is supported by the answered of the next question where only 38% of them believe that online information on products are sufficient. While on the other hand, almost 36% believe that websites give out enough information. When it was asked from the respondents that if online shopping is more secure than traditional shopping, almost 57% of them were disagree and strongly disagree and only 6% believed that online shopping is more safe than traditional shopping. It is assumed that since, buying online involves credit cards, people are afraid that their financial accounts are under threat. That is why the next question was asked from them. Almost 48% of them confirms the above assumption and 35% were disagree.

395 % of the participants believed that shopping online will not decrease costs while 40 % believed that it would. Not everyone has credit card which is a disadvantage to online shopping. 44% of the participants confirm this assumption and 37.8 rejected it. The frustration caused out of not being satisfied by what's been purchased online, is another assumption. More than 48% agreed and strongly agreed to the statement above and only 32% disagreed.

It could be said that since the results are close, online shopping is not well adopted in TRNC with respect to European and North American countries.

4.5 Reliability Test

Internal consistency of results is always an important factor. To make sure of existence of it reliability test is the tool. It is usually tested through clarifying if there is any repetition of measurements on scale or dimensions. Numerous studies used this test to be confident on the internal consistency of results such as Carmines and Zeller (1979); Taylor (1992) and Cronin (1994). The measurement for this test is a tool which is called Cronbach's Alpha. As Carmines and Zeller (1979) said, for a study to pass the test and be internally consistent, the value of it should be greater than 0.7. If the alpha is lower than 0.7 it is not acceptable which implies that the dimension or the scale is under the pressure of random error.

For this study two different reliability tests were run. One for the items of questionnaire and one for three core variables of, information overload, customer behavior and online shopping.

Table X.Y, shows the results of this test for the items in the questionnaire. As it is shown the Cronbach's Alpha is greater than 0.7 by almost 10%. It is equal to 0.793

which is a satisfactory value for the study and rejects the possibility of random error in the scale.

Table 4.2: Reliability statistics

Cronbach's Alpha	N of Items
.793	22

Now to see the effect of each variable in the questionnaire on the alpha, Cronbach's Alpha if item deleted is also run. Results are in table (X, Y). As it shown by omitting three questions of "How often do you use the internet every day?", "It is more difficult to shop on the internet" and "Online shopping is as secure as traditional shopping." The value of Cronbach's Alpha will slightly increase.

For the second reliability test, the result is as following:

Table 4.3: Reliability Statistics

Cronbach's Alpha	N of Items
.709	3

Since the Cronach's Alpha is greater than 0.7 the result is acceptable and the variables have internal consistency and do not suffer from random error. Again the

test of Cronbach's Alpha if item deleted is run and results show that omitting each one of the variables will increase the random error.

4.6 Regression Analysis

In order to examine the relationship between the dependent variable and the independent variables, regression analysis can be used. Then, customer decision making is defined as the dependent variable on which its dimensions are regressed. Before running the regression, the variables were checked for the assumptions of linear regression. The results show that there is no heteroskedasticity problem and the values of residuals are normally distributed.

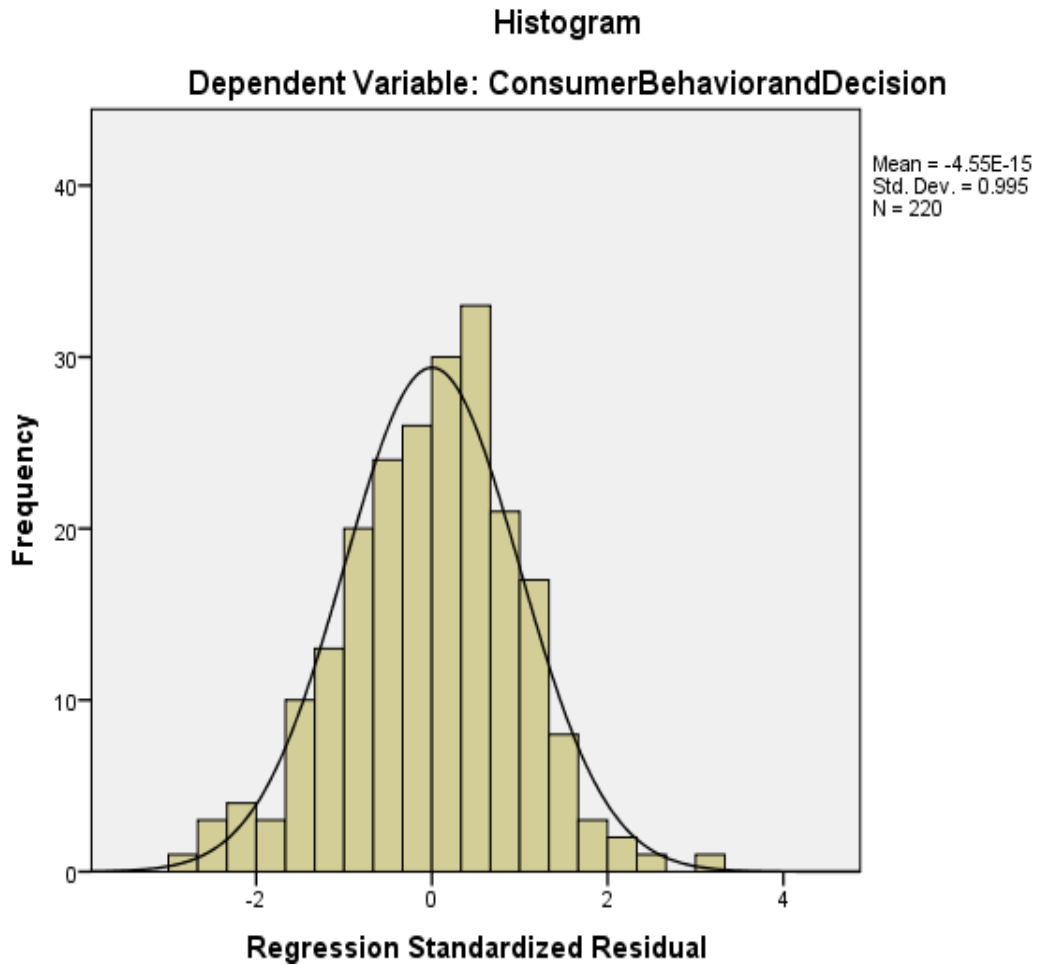


Figure 2: Regression Histogram

The items in model summary are given below. The most important item in this table is R-Squared. Since this study is using a multiple linear regression, the adjusted R-Squared is important to interpret. Adjusted R-Squared measure the proportion of the total variability in the dependent variable being explained by independent variables. Since the value of it in this study is 0.341, it could be said that 34.1 % of changes in dependent variable could be explained by the independent variable according to the model chosen for this study.

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589 ^a	.347	.341	.030297

a. Predictors: (Constant), Internet Shopping, Overloaded Information

b. Dependent Variable: Consumer Behavior and Decision

The results of regression are illustrated in the following table. The null hypothesis for T-statistics in regression is that coefficients of independent variables are equal to zero which means that the independent variables help to predict the changes in the dependent variables.

Internet Shopping

Since the P-Value of T-statistic is equal to 0.00 and it is less than 1 and 5%, the null hypothesis is rejected and internet shopping as the independent variable has predictive ability for dependent variable which is consumers' behavior and decision. Now in terms of coefficients there are two types to be interpreted, Unstandardized and standardized coefficients. For Unstandardized the model predicts that if overloaded information increases by one unit, customers' decision making will (positively) increase by 0.743 holding the other independent variable fixed. For the standardized coefficients, one standard deviation increase in internet shopping, the model predicts that consumer decision making will increase by 8.082 standard deviations.

Overloaded Information

Since the P-Value of T-statistic is equal to 0.47 and it is less than 5%, the null hypothesis is rejected and overloaded information as the independent variable has predictive ability for dependent variable which is consumers' behavior and decision. Now in terms of coefficients there are two types to be interpreted, Unstandardized

and standardized coefficients. For Unstandardized the model predicts that if overloaded information increases by one unit, customers' decision making will (positively) increase by 0.112, since the coefficient is equal to 0.112 holding the other independent variable which is internet shopping fixed. It also could be said that if overloaded information increases by one unit, customers tend to increase online purchase by 0.112. For the standardized coefficients, one standard deviation increase in overloaded information, the model predicts that consumer decision making will increase by 1997 standard deviations. It also could be said that, when information overload is injected to the formula, it could significantly decrease customers' perception while buying online. Hence the results show that, by increasing the needed information to the customers in terms of online shopping, customers tend to get confused instead of being more informative. So the buying will could decrease if too much information is provided.

Table 4.5: Regression results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	,441	,237		1,860	,064
	Internet Shopping	,743	,092	,514	8,082	,000
	Overloaded Information	,112	,056	,127	1,997	,047

4.7 Analysis of Variance (ANOVA)

ANOVA (Analysis of Variance) is the next step to recognize whether the model is statistically acceptable or not. ANOVA table is consisted of two main rows. The first row is regression which displays the variation which is considered in the model, while the second row is remaining which displays the variation which is not considered in the model.

The important item in ANOVA table is F-test. To interpret it, null hypotheses should be discussed first. The null hypothesis is that the model has no explanatory power or none of the independent variables help to predict the changes in dependent variable. In this study, since the P-Value, is significant at zero, results have a really strong evidence to reject the null hypothesis at 1% and 5% which means that the independent variables are able to predict the changes in the dependent variables.

Table 4.6: ANOVA

Model		Sum of sq	Df	Mean Square	F	Sig.
1	Regression	41,841	2	20,920	57,540	,000 ^b
	Residual	78,896	217	,364		
	Total	120,737	219			

a. Dependent Variable: Customer decision making

b. Predictors: (Constant), Internet Shopping, Overloaded Information

Chapter 5

CONCLUSION

5.1 Introduction

The current section summarizes the results and links their contribution to previous literature. Previous chapters introduced methodologies and tried to assess their contribution to the model chosen for the study and also the results that the study obtained were discussed. Different variables related to internet shopping and information overload were introduced and analyzed in order to find out the relation between them in the concept expressed in previous chapters.

5.2 Discussion

According to the different methodologies applied to the current study, important measures of data such as mean, standard deviation, maximum and minimum were calculated to observe the obtained data extracted out of questionnaires. According to the preliminary analysis of data, it has been revealed that the reliability of the measures, according to reliability test and Cronach's alpha, is reported to be almost to 0.8 which is a proof for the accuracy and reliability of data.

According to the histograms generated, it is shown that the data is normally distributed and possibility of different issues such as multi-co linearity and autocorrelation are rejected through factor analysis (principal component analysis) and different other tests such as KMO and Bartlett's' test.

According to the regression results it is reported that in internet shopping, P-Value of T-statistic is equal to 0.00 and it is less than 1 and 5%, the null hypothesis is rejected and internet shopping as the independent variable has predictive ability for dependent variable which is consumers' behavior and decision. On the other hand, the model predicts that if overloaded information increases by one unit, customers' decision making will (positively) increase by 0.112, since the coefficient is equal to 0.112.

Results on one way ANOVA reveal that both variables are able to estimate the changes in the dependent variable in the model.

The findings in the current study could strongly answer the question of whether information overload could significantly affect the customers' decision making while purchasing goods online. In fact the correlation and the mediatory effect of information overload on customers' decision is reported to be negative. According to Chen et al (2009), rich information leads to a perception of high information overload; and the latter lead consumers to a worse subject state towards decision. Hence the findings of the current study are in line with their findings.

So, according to my results all hypotheses are supported, internet shopping absorbed customers and customers try to use online shopping sites for finding and purchasing their desired products. Overloaded information is a positive factor for online shopping sites, so customers can use these information that are provided by online shopping sites for their purchasing process. Overloaded information has positive impact on customer decision making, so too much information at online shopping sites can help customers and customers can have the best choice for their purchasing.

5.3 Limitations and future suggestions

The current study focused on the effect of information overload on customer decision making while buying online. The main participants of the study were students and three different variables are chosen to discuss the matter. However, future studies could focus on other populations such as households.

The numbers of 220 questionnaires were distributed among the participants where future studies could use a larger number of populations to obtain more accurate results. Furthermore the measures chosen for the study are according to the previous literature where future studies could modify the measures according to the specific cultural, social and facilities features of the locals.

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APPENDIX

Appendix: Demographic Analysis

Frequency Tables

Table 1: How often do you use the internet everyday

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 hour	12	5.5	5.5	5.5
	1-2 hours	15	6.8	6.8	12.3
	2-3 hours	24	10.9	10.9	23.2
	3-4 hours	43	19.5	19.5	42.7
	more than 4 hours	126	57.3	57.3	100.0
	Total	220	100.0	100.0	

Table 2: How often do you use Internet for information prior to a purchase?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very often	49	22.3	22.3	22.3
	often	46	20.9	20.9	43.2
	sometimes	72	32.7	32.7	75.9

rarely	41	18.6	18.6	94.5
never	12	5.5	5.5	100.0
Total	220	100.0	100.0	

Table 3: How often do you use Internet for shopping

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very often	15	6.8	6.8	6.8
often	23	10.5	10.5	17.3
sometimes	79	35.9	35.9	53.2
rarely	66	30.0	30.0	83.2
never	37	16.8	16.8	100.0
Total	220	100.0	100.0	

Table 4: Have you ever bought via the Internet mobile or tablet

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	yes	100	45.5	45.5	45.5
	no	120	54.5	54.5	100.0
	Total	220	100.0	100.0	

Table 5: I think shopping on the internet saves time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	44	20.0	20.0	20.0
	disagree	32	14.5	14.5	34.5
	indifference	31	14.1	14.1	48.6
	agree	72	32.7	32.7	81.4
	strongly agree	41	18.6	18.6	100.0
	Total	220	100.0	100.0	

Table 6: It is a great advantage to be able to shop at anytime of the day on the internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	39	17.7	17.7	17.7
disagree	30	13.6	13.6	31.4
indifference	33	15.0	15.0	46.4
agree	74	33.6	33.6	80.0
strongly agree	44	20.0	20.0	100.0
Total	220	100.0	100.0	

Table 7: It is more difficult to shop on the internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	33	15.0	15.0	15.0
disagree	95	43.2	43.2	58.2

indifference	37	16.8	16.8	75.0
agree	42	19.1	19.1	94.1
strongly agree	13	5.9	5.9	100.0
Total	220	100.0	100.0	

Table 8: Overloaded information of shopping sites confuses customers

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	36	16.4	16.4	16.4
disagree	66	30.0	30.0	46.4
indifference	42	19.1	19.1	65.5
agree	59	26.8	26.8	92.3
strongly agree	17	7.7	7.7	100.0
Total	220	100.0	100.0	

Table 9: Overloaded information of shopping sites lead best choice

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	26	11.8	11.8	11.8
disagree	68	30.9	30.9	42.7
indifference	51	23.2	23.2	65.9
agree	61	27.7	27.7	93.6
strongly agree	14	6.4	6.4	100.0
Total	220	100.0	100.0	

Table 10: I prefer traditional conventional shopping to online shopping

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	41	18.6	18.6	18.6
disagree	48	21.8	21.8	40.5
indifference	58	26.4	26.4	66.8
agree	52	23.6	23.6	90.5
strongly agree	21	9.5	9.5	100.0
Total	220	100.0	100.0	

Table 11: Online shopping is risky

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	43	19.5	19.5	19.5
disagree	50	22.7	22.7	42.3
indifference	37	16.8	16.8	59.1
agree	64	29.1	29.1	88.2
strongly agree	26	11.8	11.8	100.0
Total	220	100.0	100.0	

Table 12: I believe online shopping will eventually supersede traditional shopping

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	39	17.7	17.7	17.7
disagree	63	28.6	28.6	46.4
indifference	47	21.4	21.4	67.7
agree	53	24.1	24.1	91.8
strongly agree	18	8.2	8.2	100.0

Total	220	100.0	100.0	
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Table 13: I will prefer online shopping only if online prices are lower price

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	50	22.7	22.7	22.7
disagree	32	14.5	14.5	37.3
indifference	36	16.4	16.4	53.6
agree	74	33.6	33.6	87.3
strongly agree	28	12.7	12.7	100.0
Total	220	100.0	100.0	

Table 14: A long time required delivery products services internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	30	13.6	13.6	13.6

disagree	54	24.5	24.5	38.2
indifference	49	22.3	22.3	60.5
agree	66	30.0	30.0	90.5
strongly agree	21	9.5	9.5	100.0
Total	220	100.0	100.0	

Table 15: Selection of goods available on the internet is very broad

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	35	15.9	15.9	15.9
disagree	48	21.8	21.8	37.7
indifference	43	19.5	19.5	57.3
agree	69	31.4	31.4	88.6
strongly agree	25	11.4	11.4	100.0
Total	220	100.0	100.0	

Table 16: The description of products shown on the websites are very accurate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	32	14.5	14.5	14.5
	disagree	72	32.7	32.7	47.3
	indifference	59	26.8	26.8	74.1
	agree	49	22.3	22.3	96.4
	strongly agree	8	3.6	3.6	100.0
	Total	220	100.0	100.0	

Table 17: The information given the products and services internet sufficient

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	23	10.5	10.5	10.5
	disagree	63	28.6	28.6	39.1
	indifference	55	25.0	25.0	64.1
	agree	70	31.8	31.8	95.9
	strongly agree	9	4.1	4.1	100.0

Total	220	100.0	100.0	
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Table 18: Online shopping is as secure as traditional shopping

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	33	15.0	15.0	15.0
disagree	91	41.4	41.4	56.4
indifference	47	21.4	21.4	77.7
agree	36	16.4	16.4	94.1
strongly agree	13	5.9	5.9	100.0
Total	220	100.0	100.0	

table 19: While shopping online I hesitate give my credit card number

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	33	15.0	15.0	15.0
disagree	44	20.0	20.0	35.0

indifference	38	17.3	17.3	52.3
agree	67	30.5	30.5	82.7
strongly agree	38	17.3	17.3	100.0
Total	220	100.0	100.0	

Table 20: Internet reduces the monetary costs

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	45	20.5	20.5	20.5
disagree	40	18.2	18.2	38.6
indifference	47	21.4	21.4	60.0
agree	66	30.0	30.0	90.0
strongly agree	22	10.0	10.0	100.0
Total	220	100.0	100.0	

Table 21: The fact that only those with a credit card or bank account can shop on the internet is a drawback.

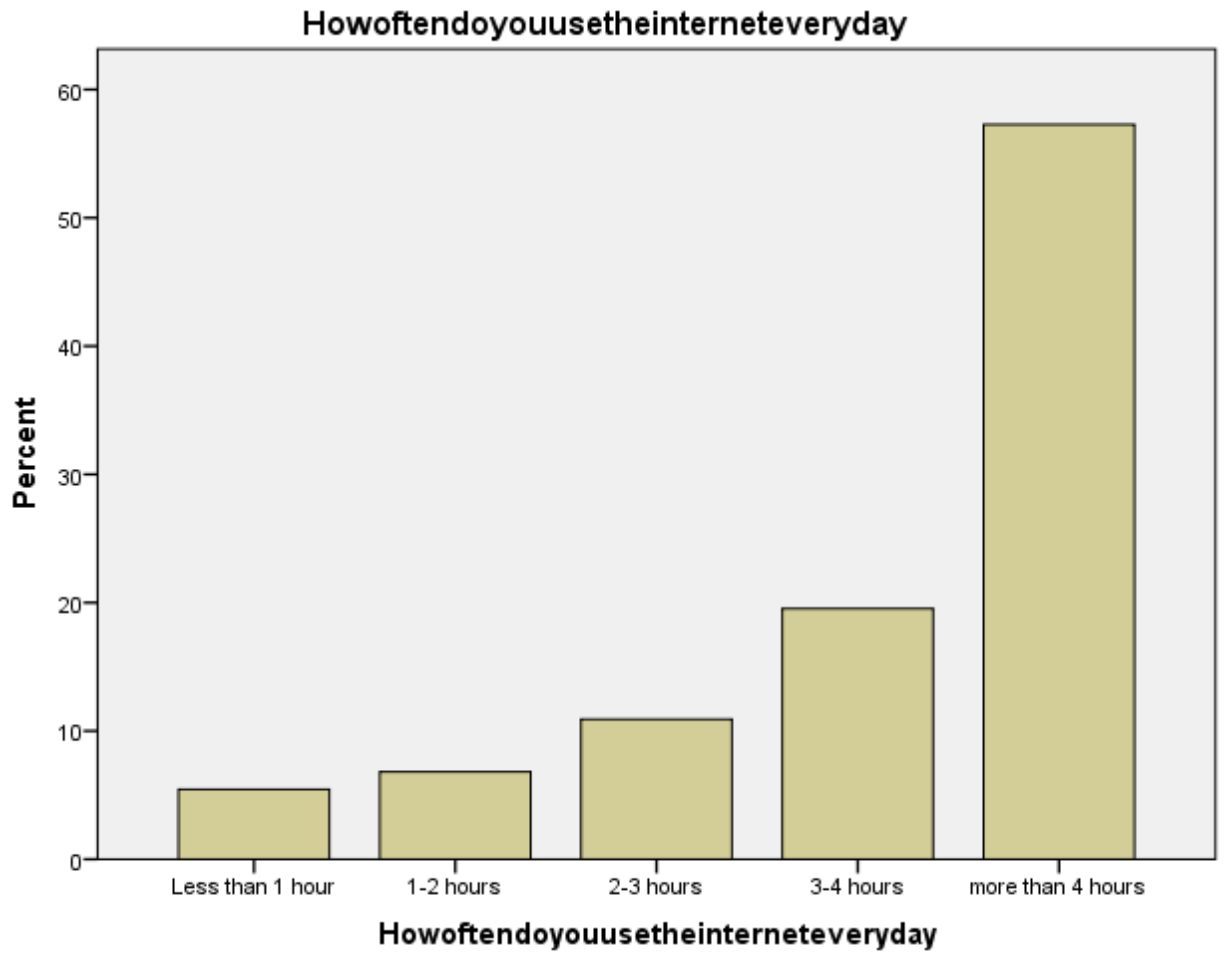
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	38	17.3	17.3	17.3
	disagree	45	20.5	20.5	37.7
	indifference	40	18.2	18.2	55.9
	agree	65	29.5	29.5	85.5
	strongly agree	32	14.5	14.5	100.0
	Total	220	100.0	100.0	

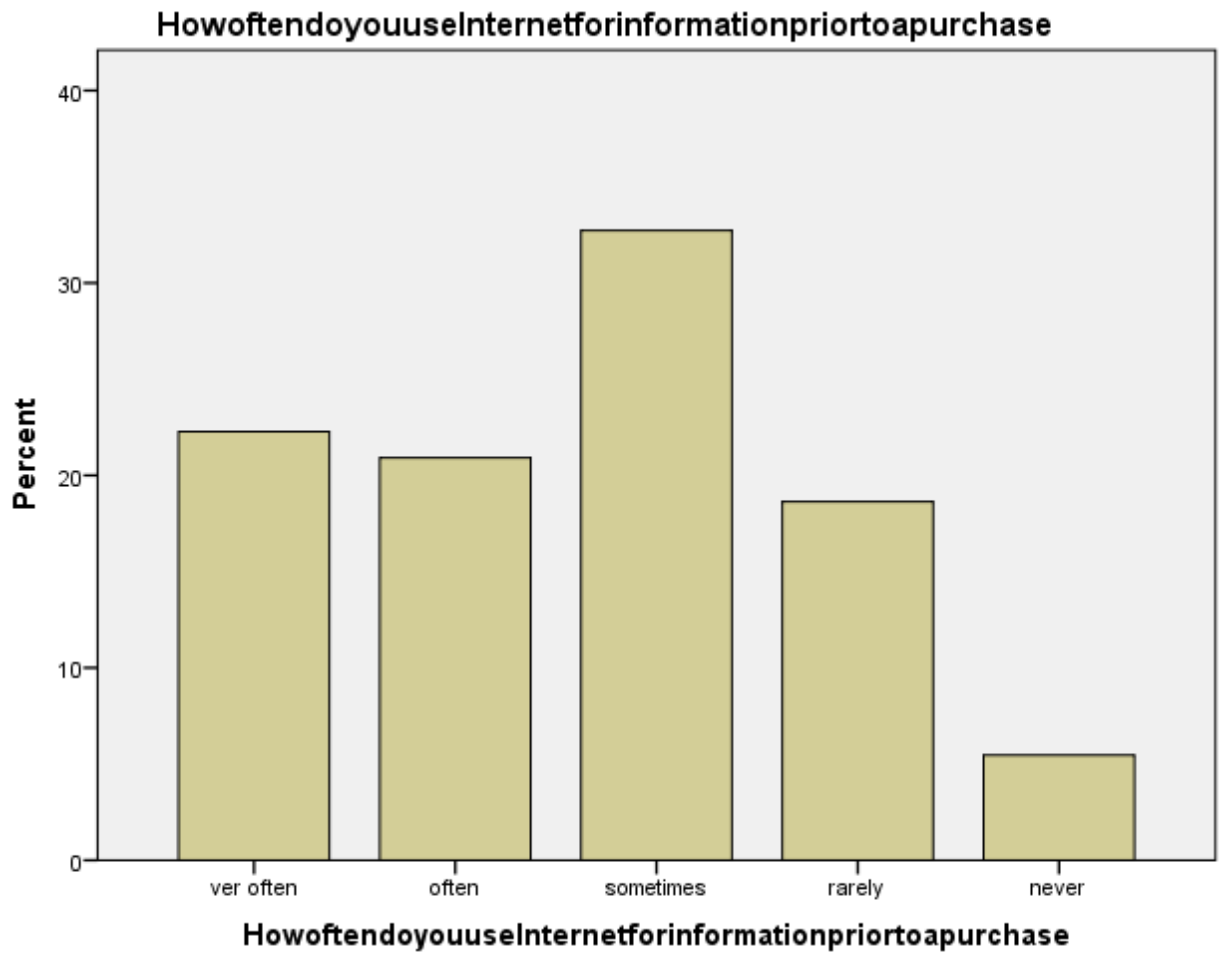
Table 22: I would be frustrated about what to do if I am dissatisfied with a purchase made from the internet.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	32	14.5	14.5	14.5
	disagree	41	18.6	18.6	33.2
	indifference	40	18.2	18.2	51.4
	agree	77	35.0	35.0	86.4
	strongly agree	30	13.6	13.6	100.0

Total	220	100.0	100.0	
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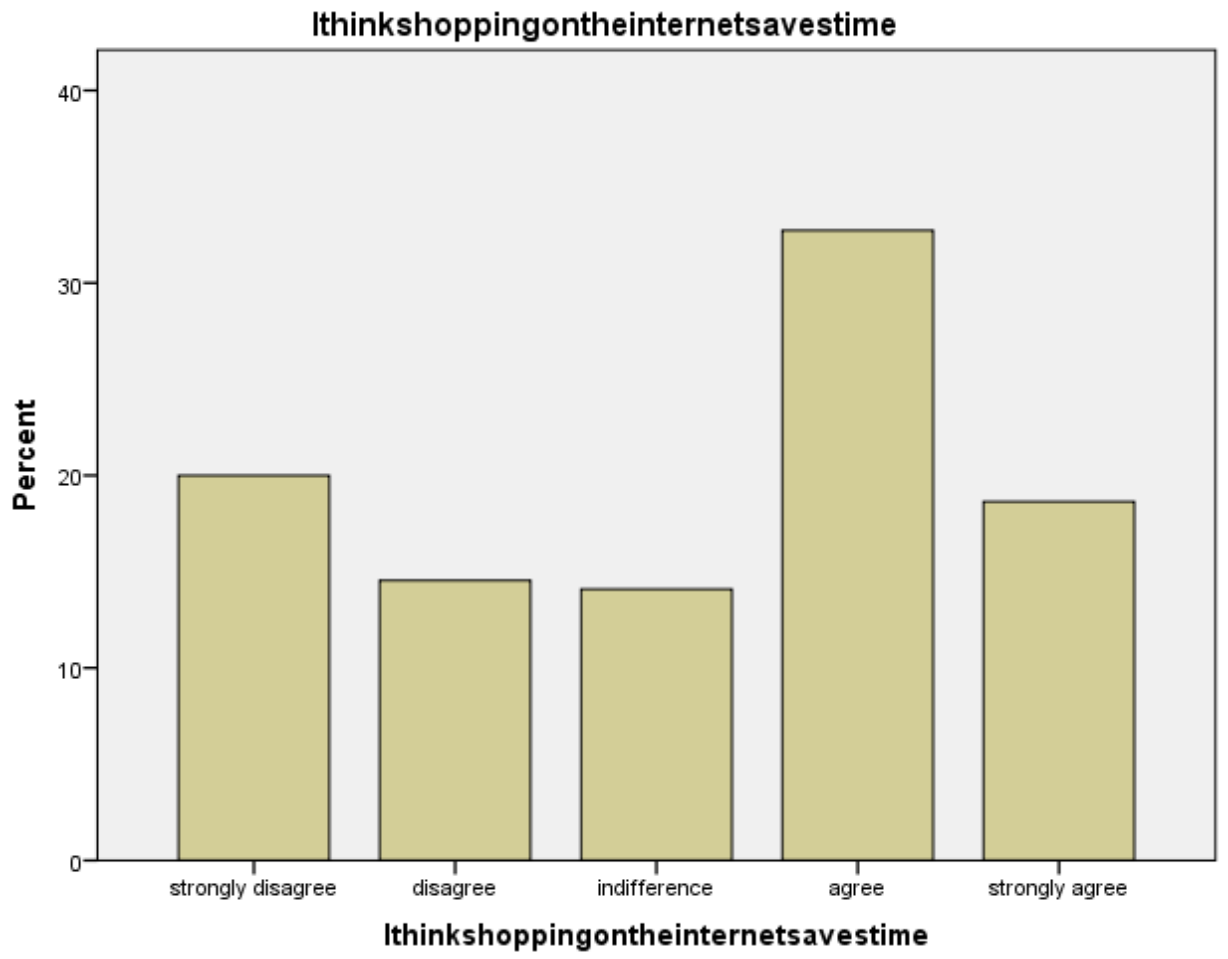
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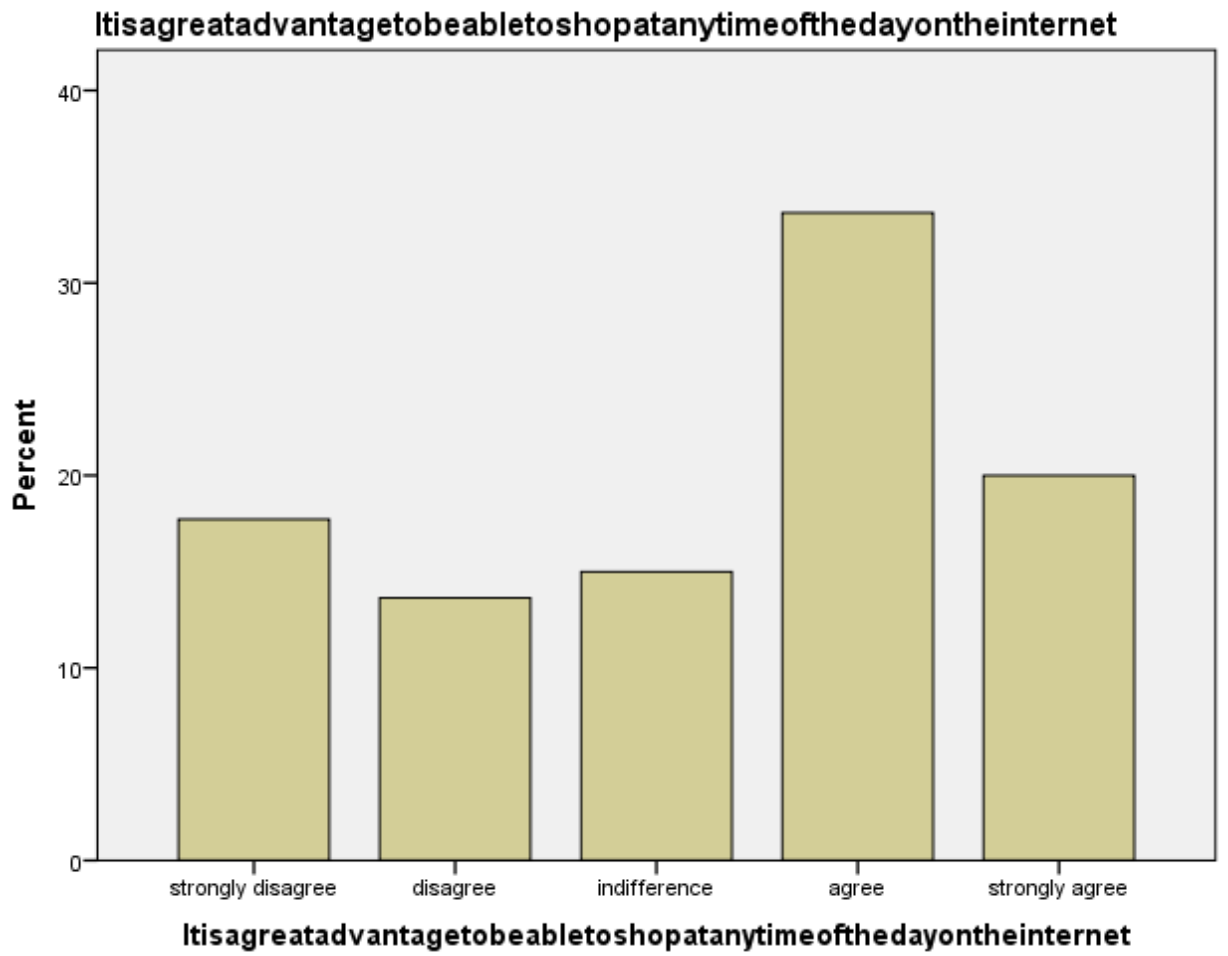


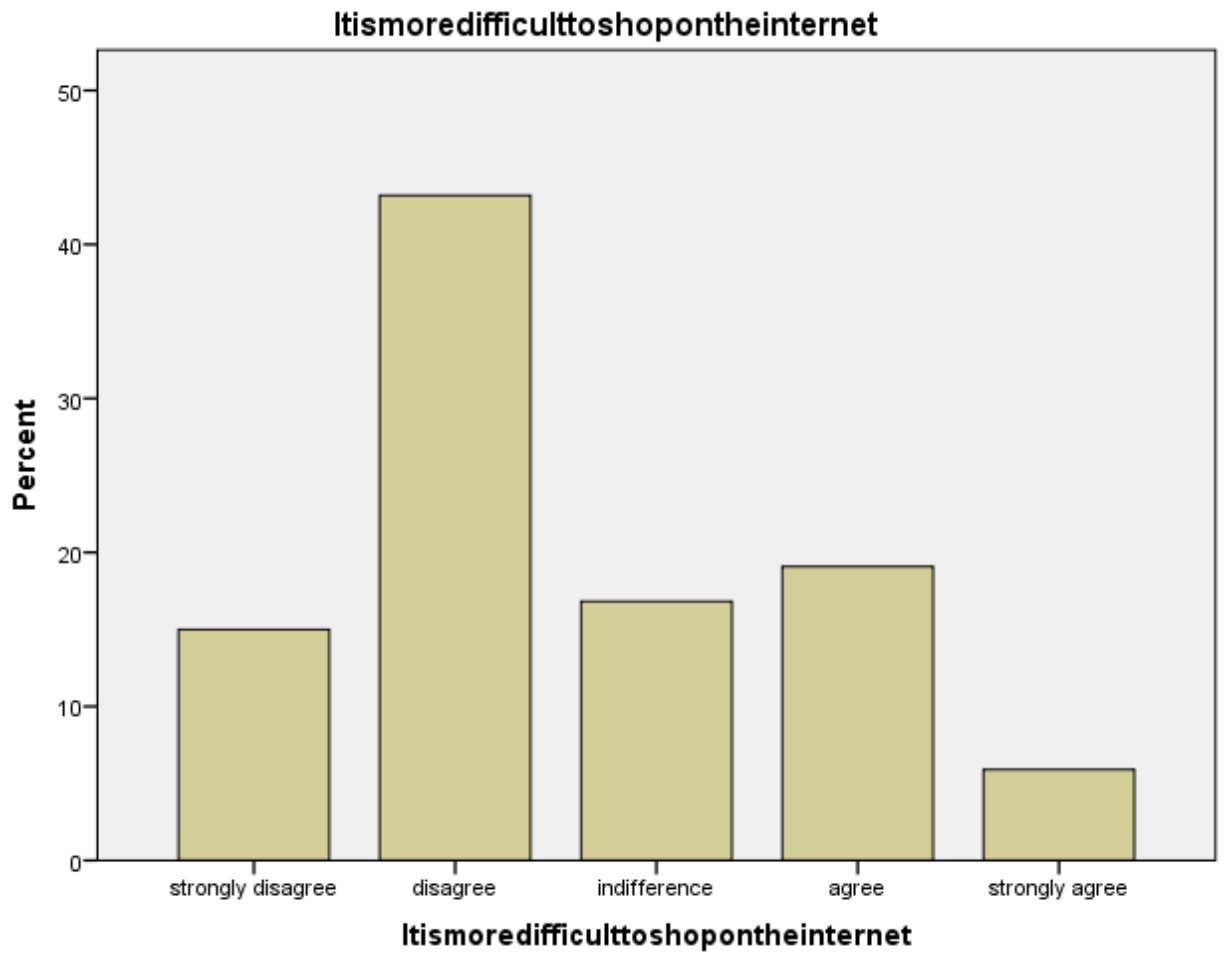


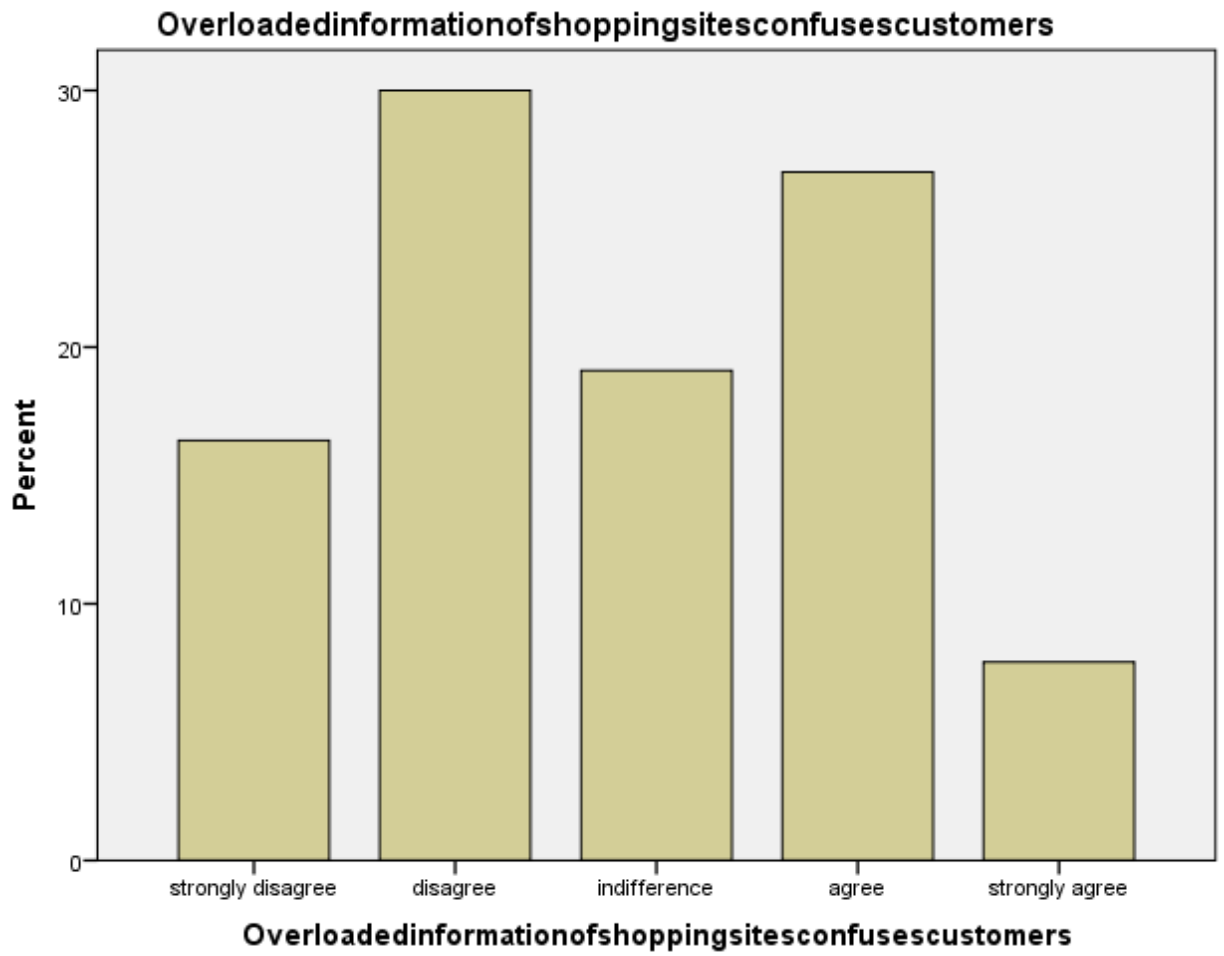




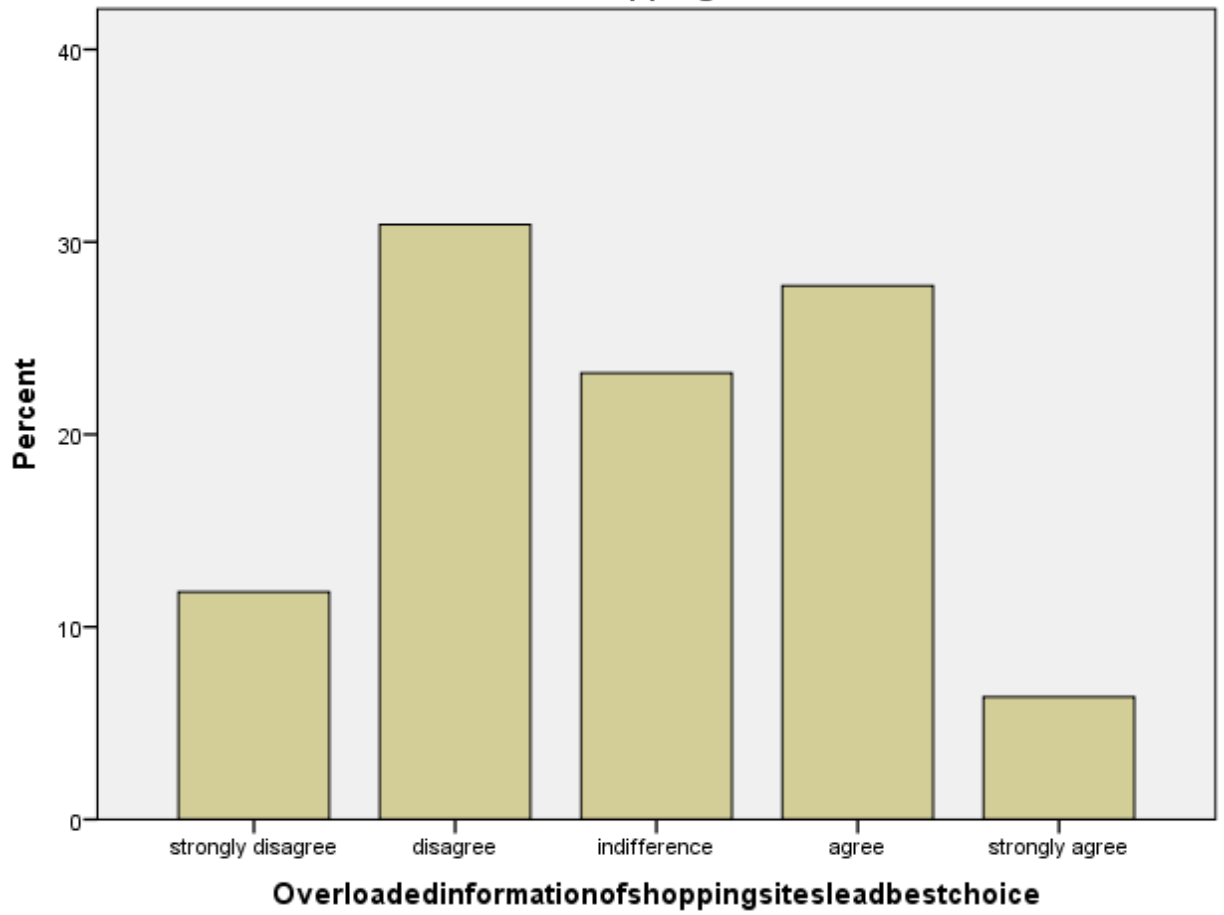


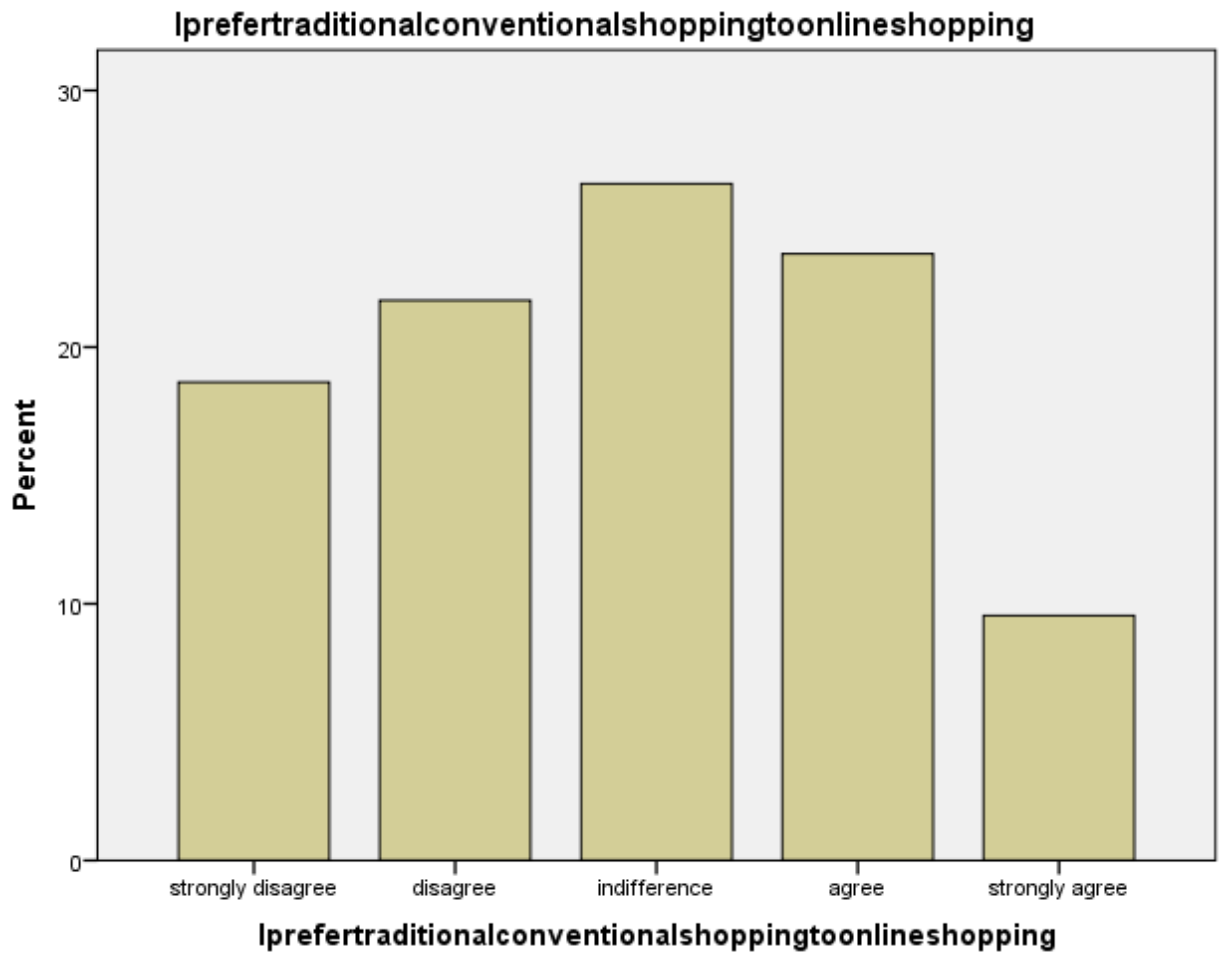


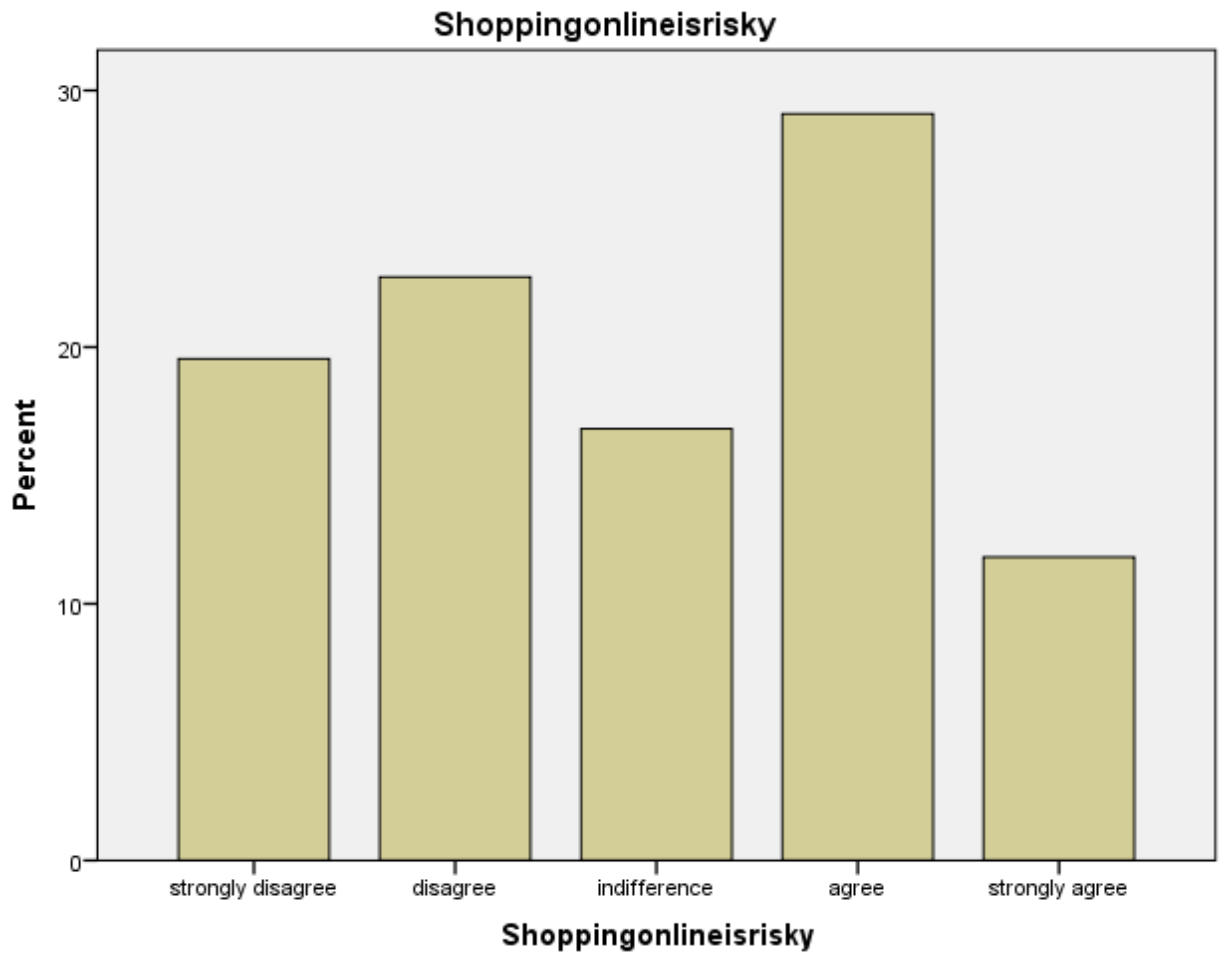


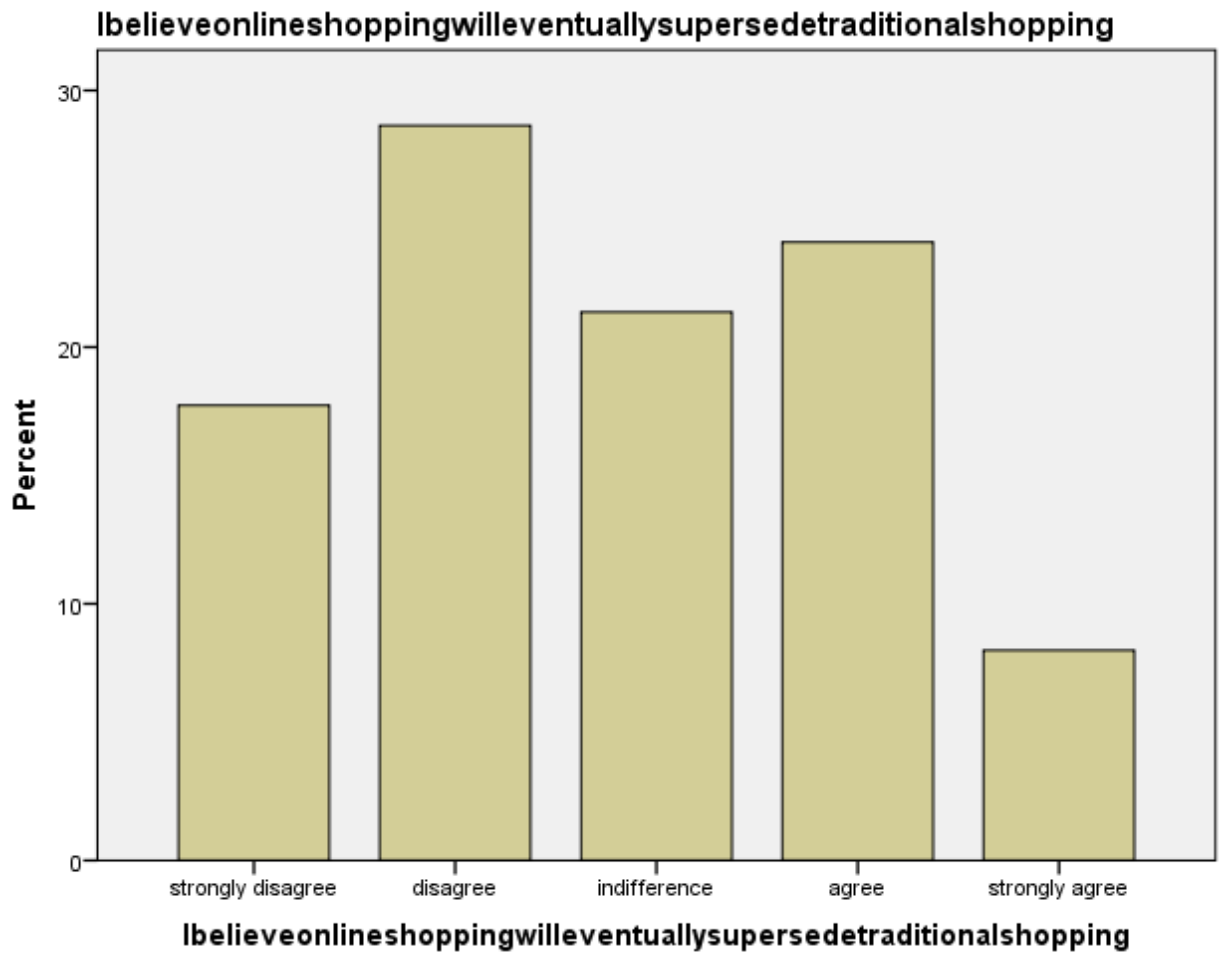


Overloaded information of shopping sites lead best choice

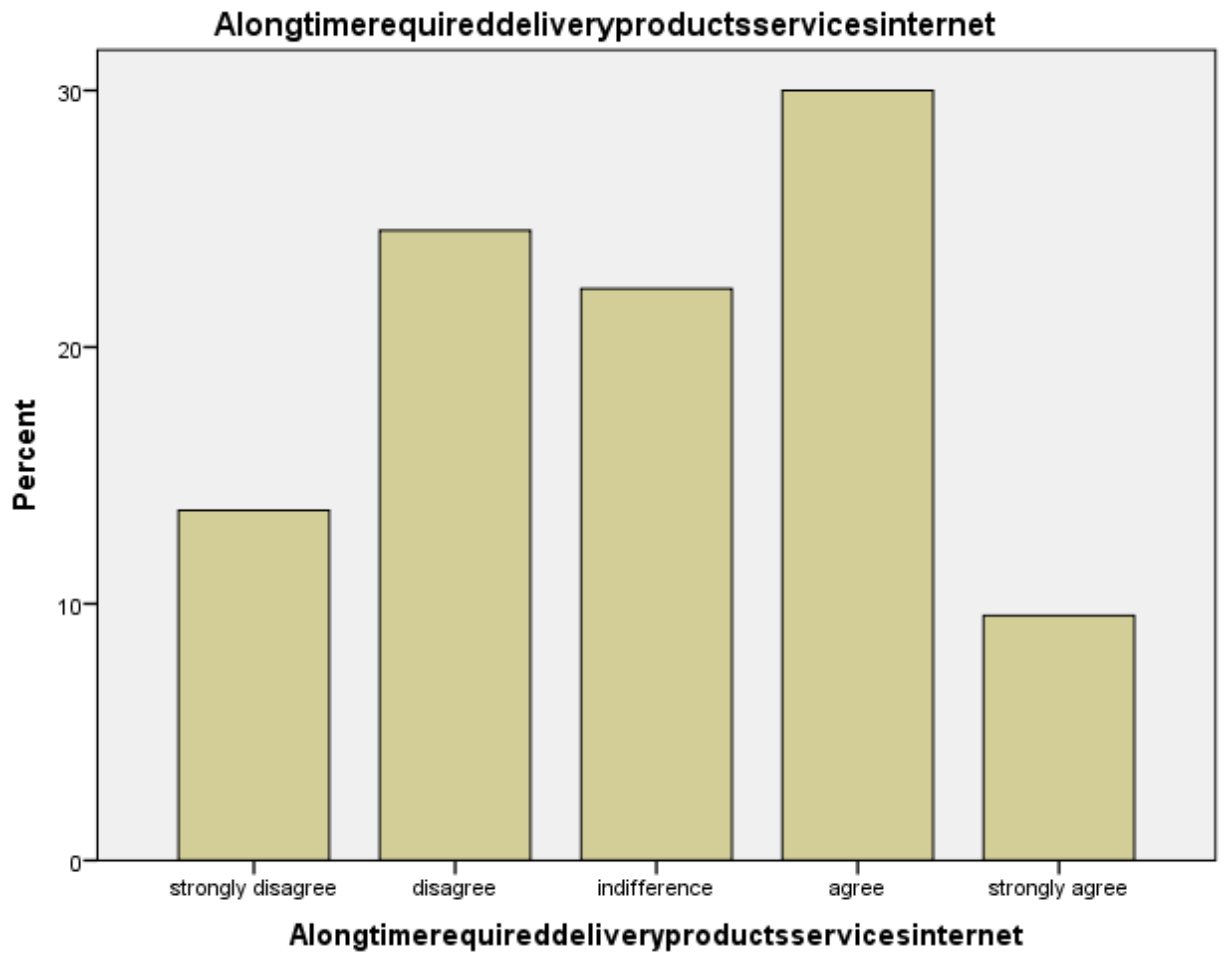


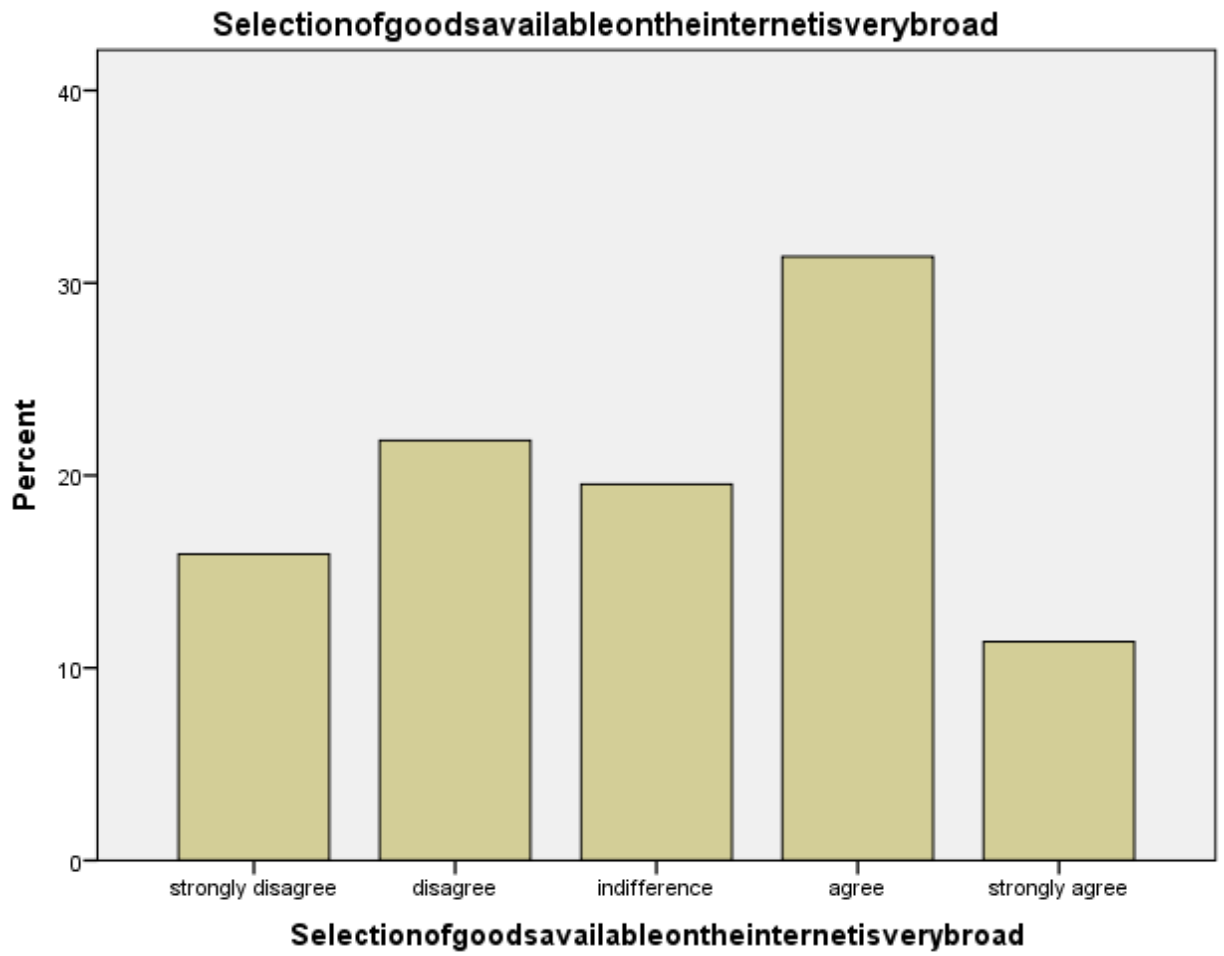


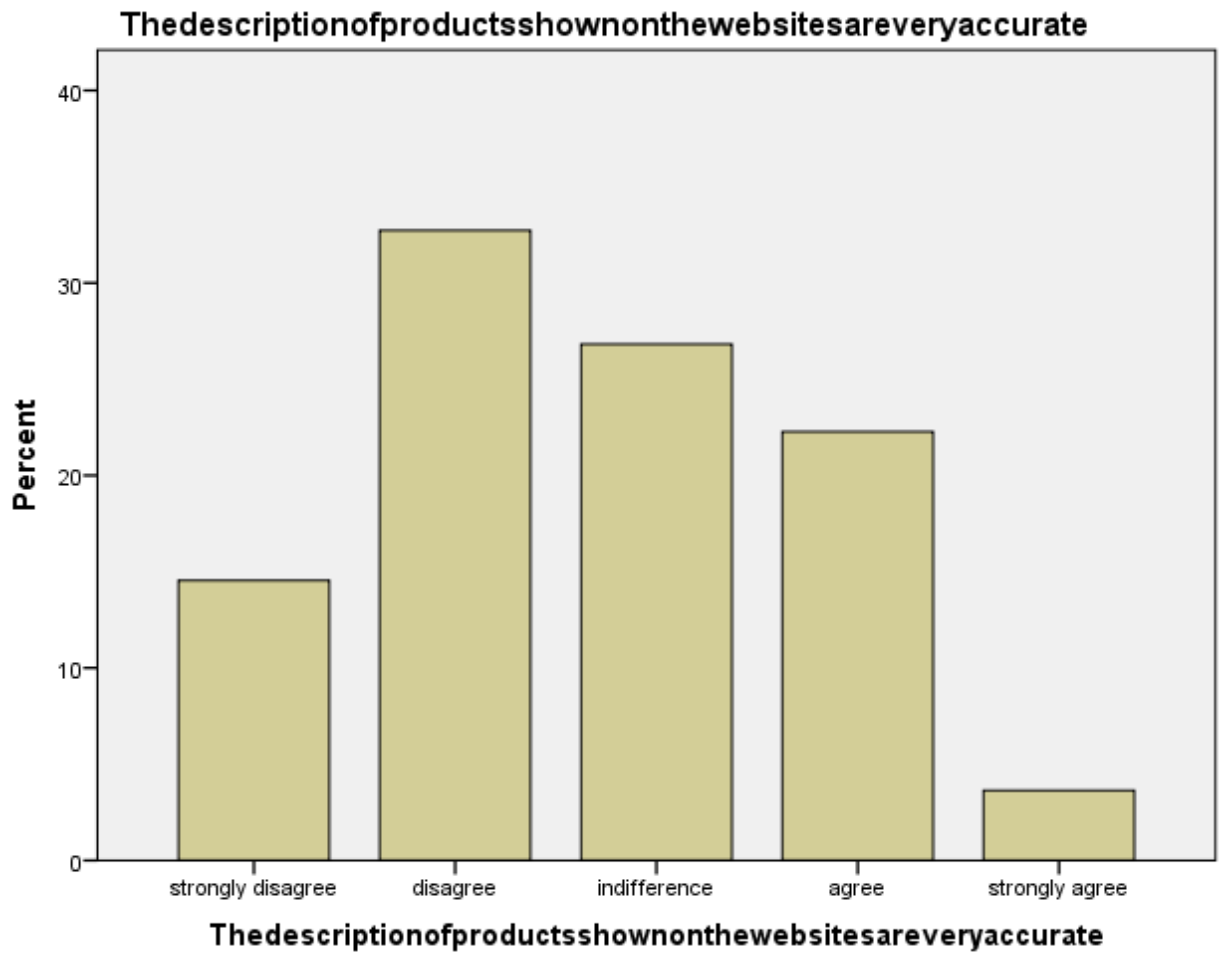












The information given the products and services in internet sufficient

