

FACTORS INFLUENCING CONSUMER
SATISFACTION IN ONLINE SHOPPING

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SATISFACTION IN ONLINE SHOPPING

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- (1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the research project.
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LIST OF ABBREVIATIONS

BK	Bahagian Kewangan
COD	Cash on Delivery
CPA	Consumer Protection Act 1999
CS	Consumer Satisfaction
CSI	Sproles and Kendall's consumer style Inventory
DV	Dependent Variable
F	Fiscal
H ₀	Null Hypothesis
H ₁	Alternate Hypothesis
IV	Independent Variable
MCMC	Malaysian Communications and Multimedia Commission
MDEC	Malaysia Digital Economy Corporation
PQ	Product Quality
PR	Price
SAS	Statistical Analysis System
SE	Security
SQ	E-Service Quality
UTAR	Universiti Tunku Abdul Rahman
WP	Wilayah Persekutuan Labuan

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PREFACE

The topic of this research is “Factors Influencing Consumer Satisfaction in Online Shopping”. This topic is chosen because the rapid growth of information and communication technologies is emerging online shopping into different of business.

Nowadays, consumers are become more importance element which they are the one who purchase things through online. Thus, analysing consumer behaviour is become the main part in the success of e-business. Therefore, researcher carry out this study to investigate the factors influence consumer satisfaction in online shopping.

This research will provide a more insight to the concept of online shopping and the factor’s influence on customer satisfaction of online shopping. This research believed to be able to benefit the growing market of online shopping or e- commerce through allowing researchers and business to understand factors affecting the online consumer satisfaction.

ABSTRACT

This research study will investigate the “Factors Influencing Consumer Satisfaction in Online Shopping”. In this study, researchers have investigated the relationship between security, product quality, e-service quality and price with online consumer satisfaction.

Statistical Analysis System (SAS) Enterprise Guide 7.1 had been use to execute reliability analysis, frequency analysis, explaining the correlation coefficient analysis and test on the hypotheses developed. The results of the analysis confirmed the positive and significant correlation existence between security, product quality, e-service quality and price with online consumer satisfaction.

There have some managerial implications involve in this research. Besides that, some limitations of the research have been identified. So, recommendations have been provided for future research. Therefore, future researcher can find the ways to enhance this problem for future research.

CHAPTER 1: INTRODUCTION

1.0 Introduction

The first Internet Service Provider (ISP) JARING which had introduced in Malaysia in year 1990, and follow by TMNET in year 1996, the number of Internet usage in Malaysia has been increasing (Khatibi, Haque, & Karim, 2006). Therefore, it provides a good opportunities for Malaysian to start their business and shop online. Zendehdel, Paim, & Osman were estimated that there are around RM1.8 billion in online shopping market in Malaysia in year 2013 and expected will increase to RM5 billion in year 2015 (Zendehdel, Paim, & Osman, 2015). Because of that, consumer are become more importance element which they are the one who purchase things through online. Thus, understanding consumer behavior is become one of the main part which will success in e-business.

In the research by Langvinienė & Guobytė (2014), indicate that the rapid growth of information and communication technologies is emerging online shopping into different of business. There are few reasons behind the growth of online shopping user, which are cost-effective (Langvinienė & Guobytė, 2014; Perez-Hernandez and Sanchez-Mangas, 2011; Tsai et al., 2011), consuming less time for information seeking (Langvinienė & Guobytė, 2014; Kim, 2010) and able to purchase goods anytime (Langvinienė & Guobytė, 2014; Moshrefjavadi et al., 2012). In the last few years, a significant growth has been pay attention to the internet- based service (Lim, Heng, Ng, & Cheah, 2016). There are different experiences will be present in online channel although purchased the same product in different retailer, because it depends on how they present the product to their potential buyers. There are a limited time and limitless choice to consumer. However, consumer can determine an essentially product in a

single click. They would spontaneously connect to the internet merchant who meet their requirement in order to provide them a quality service. Once consumer have their preferable choices, they will switch between few options as consideration. The reason of measuring service quality and gap is provide information which is aimed to retain consumers' loyalty. In order to deliver a better service quality, the manager of the companies have to understand how the customer perceives and assess online customer service. With the speedy development of the Internet and Globalization of market, the retail sector has become an increasingly competitive and active business (Garg, 2018.).

However, in the research by Akram (2018), stated that many consumer are refuse to make purchase online due to the concern of privacy and security of their online transaction especially in developing country, where online shopping gradually become common and do not have a complete set of regulations yet. It is said that internet fraud is the major factor growing in consumer's mind, making a barrier that stop them to purchase online. Therefore it is important to conduct a research to look into different perspective on how to satisfy consumer, including post-purchase behavior and pre-purchase behavior.

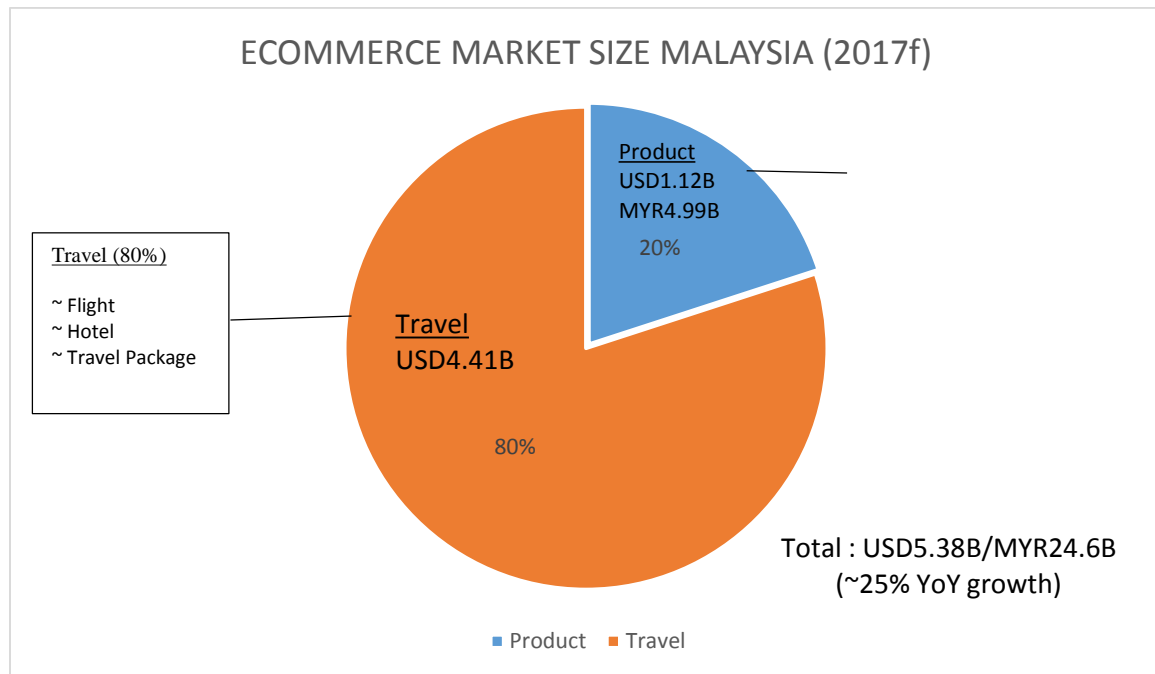
In this chapter, the introduction of study will provide an insight to the concept of online shopping and the factor's influence consumer satisfaction in online shopping.

1.1 Research Background

This research study aims to investigate the factors influence consumer satisfaction in online shopping. This research provides a clear understanding about how security, product quality, e-service quality and price influence consumer satisfaction. This chapter outlines the research background, problem statement, research objectives, research questions, and hypotheses of the study, significance of the study, chapter layout and conclusion.

Consumer usually refer to the person who consumes the goods, can be known as end user, while customer refers to the person who paid the price to obtain the goods for consumption, and can be known as buyer or client. It is noted that customer can be either consumer or not consumer because part of the customer paid for the goods for resale value or they may purchase on behalf of the others and reclaim the cost later (Gupta, 2016). Other than that, consumer is also not necessary to be categorized as customer because they may not pay for the goods and may consume the goods by getting permission of the buyer or gifted (Gupta, 2016). In this research, researcher will use the term of “consumer”.

Consumer satisfaction is becoming more and more important for companies and it has a direct impact on the company's profitability. Online consumer expect higher levels of service quality compare to traditional channels consumer. Without that, the consumer can easily switch to other online shops in the customer to customer (C2C) e-business model. So, using all the limited resources, making the service quality and the customer satisfaction become better, and keep up the customer loyalty are particularly important (Garg, 2018).

Figure 1.1: Ecommerce market size Malaysia (2017 fiscal (f))

Source: Statistic 2017. Retrieved 30 March 2017, from eCommerceMILO

The figure above shows that most of the Malaysian using the E-commerce platform for their travel as much as 80% it is around RM19.6 billion. Most of them are using it to book their flight, and hotel as well as travel package. Besides that, the rest is using for product which as much as 20% it is around RM4.99 billion. The product that they usually buy are electronics and media, furniture and appliances, toys, hobby and DIY, fashion and lastly is food and personal care. According to the statistic 2017 above, LAZADA, LELONG, 11 STREET, SHOPEE are the e-commerce platforms that Malaysian normally use to purchase travel packages and physical products.

From the result, researchers know that the percentage of travel which consider as service is more than the percentage of product. It is because there are some causes which making difference between service and product. For instance, one of the

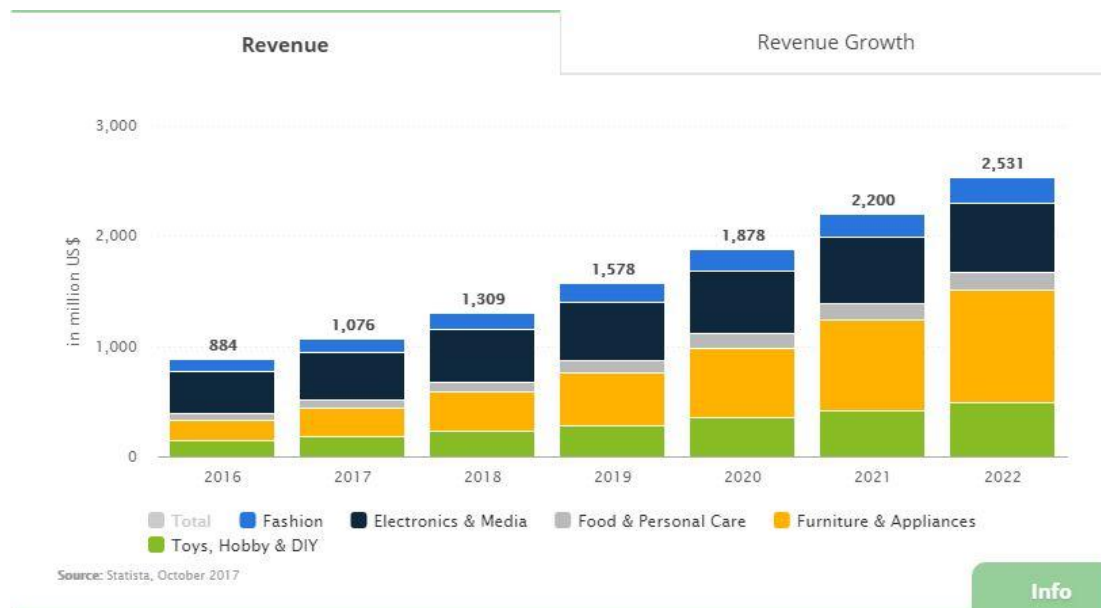
disadvantage that can be found for product is shoppers are hard to imaging or try the product that they purchase whether can reach their expectation or not that stated in the website (Zendehdel et al., 2015). Therefore, some of the consumer will not take the risk in buying the product that they want in online shopping which will make them dissatisfaction.

Besides that, according to Donna L.Montaldo (2018), the disadvantage of buying product online is online shopper lose their power to negotiate the price and payment with the supplier which may exist in local stores. It will be hard for consumer to communicate with supplier since it is not the direct communication as in physical store. Thus, consumer seldom purchase product through online.

A lot of consumer prefer buying product through physical store rather than online but for services such as purchasing an air ticket, they prefer buying through online rather than going to physical airport.

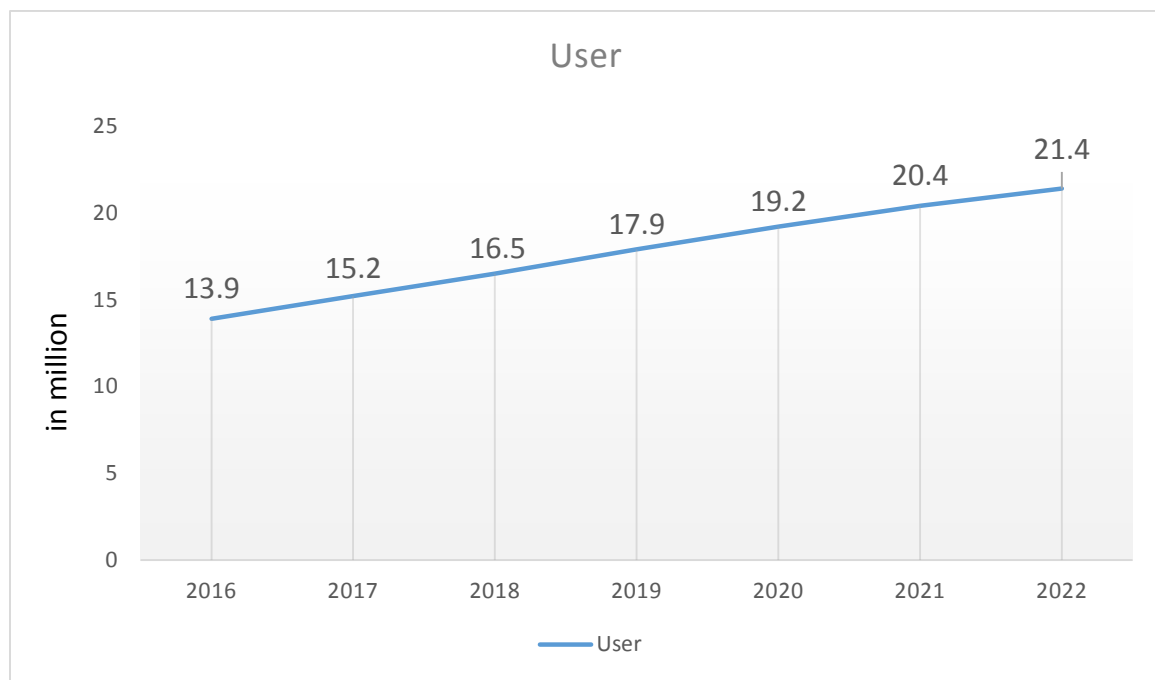
Therefore, in this study researchers will focus on products and shopping instead of travel to explore more knowledge in this area.

Figure 1.2: Revenue generated by online shopping in Malaysia, in US Dollar



Source: Statista, The Statistic Portal (2018)

Figure 1.3: User of online shopping in Malaysia



Source: Statista, The Statistic Portal (2018)

According to graph 1.1, it is showing that e-commerce sale of physical goods via digital channel such as computers and mobile devices, online shopping has generated revenue of 884 million US Dollar in year 2016 and 1076 million US Dollar in year 2017 it is expected to hit a revenue of 2531 million US Dollar in the future with an annual growth rate of 17.9%. The market's largest segment in 2017 is electronic and media product, amounted 426.4 million US Dollar and the second market's largest segment in 2017 is furniture and appliances products, amounted 260.8 million US Dollar. Besides that, according to graph 1.2, the user of online shopping has reached 13.9 million in 2016 and 15.2 million in 2018.

From the growth of the statistic, proving that the impact of online shopping is crucial for a business's profitability. The increasing of its user also show there are opportunities for business growth in online shopping. The evolution of communication

technologies is stimulating online shopping into different types of business (Langvinienė & Guobytė, 2014), and this is the reason of its importance for business expansion, considering to sell different products or entering new markets.

Table 1.1: Report of Complaint Status in Malaysia for the year 2017

6.3 LAPORAN STATUS ADUAN KESELURUHAN SEHINGGA DISEMBER 2017

BULAN	DITERIMA	BARU DITERIMA	DALAM SIASATAN	DISELESAI KAN	AGENSI LAIN	TRIBUNAL	PERTANYAAN	MAKLUMAT TIDAK LENGKAP	TIDAK BERASAS
Jan	2,006	25	539	1,442	300	44	16	52	63
Feb	2,504	15	449	3,040	448	106	27	80	90
Mac	1,596	70	522	1,003	233	57	8	25	27
April	6,565	2	251	6,316	923	231	43	136	140
Mei	8,108	30	572	7,506	-	-	-	-	-
Jun	9,555	44	709	8,791	1,294	357	61	183	216
Julai	11,232	17	719	10,496	1,527	422	74	207	247
Ogos	13,027	35	707	12,285	1,775	475	81	241	338
Sept	14,607	12	633	13,962	1,991	545	85	263	387
Okt	16,538	21	736	15,781	2,269	624	100	308	446
Nov	18,312	17	766	17,529	2,552	698	121	326	474
Dis	20,163	18	606	19,539	2,796	817	193	368	532

Source: Official Portal of Ministry of Domestic Trade, Co-operatives, and Consumerism (2017)

According to table 1.1, a report of complaints in Malaysia for the whole year in 2017 stated that the complaints received from January to December have the difference of 18,157, which is around 9 times compared to the first complaints received in January 2017. Although the shown complaints solved in December is 19,539 and the shown complaints received is 20,163 which nearly 97% of the complaints were solved, it is still a serious issue that the figure of complaints received had a change dramatically in the same year.

From the statistics provided, it can be explained as there are many consumer that are unsatisfied with the products or services provided, because the condition is remain unchanged and the complaints received were never being lessen. It is about the stagnation of online firms in improving their consumer's satisfaction by delivering better values, and more users are getting frustrated to the service provided. Therefore, it is important to study the factors influencing consumer satisfaction, to have better understanding on which perspective to satisfy consumer in order to minimize complaints received, and prevent loss of business opportunity. The meant opportunity including potential customers, and re-purchase activities of existing consumer.

According to a news reported by a local newspaper company, The Star Online (2016), Malaysia was the country most vulnerable to scam according to a study released by Telenor Group and Digi.Com Bhd., which 46% of the respondents had been victims to scams. The respondents averagely spent around nearly 10 hours per day on the web but only half of them stated they are very concerned with online scams. The study also found that 1 out of 5 people have been victims to internet auction scams where they never receive an item after they make the payment, and 6 out of 10 people had financial loss. However, 90% of Malaysian internet users do agree with the benefit of internet.

The head of social responsibility of Telenor Group, Ola Jo Tandre (2016) made a statement that Malaysian should educate themselves about internet safety, so they can enjoy the opportunity created by internet. Other than that, online firms should also provide knowledge or information about techniques to identify scams, such as their characteristics. Scam usually happened when the online firms ignores the unauthorized parties and never put reminder to their consumer, so they have the responsibility to guide their consumer in identifying these scams too to guarantee the satisfaction of consumer for the price they have paid.

Table 1.2: Report of Complaint Status According to States and Division for December 2017

6.2 LAPORAN STATUS ADUAN MENGIKUT NEGERI DAN BAHAGIAN BAGI DISEMBER 2017

BIL	NEGERI/BAHAGIAN	TERIMA	BARU DITERIMA	SIASATAN	SELESAI
1	Perlis	156	0	1	155 (99.4%)
2	Kedah	862	0	16	846 (98.1%)
3	Pulau Pinang	858	0	16	842 (98.1%)
4	Perak	873	1	13	859 (98.3%)
5	Selangor	5,133	0	143	4,990 (97.2%)
6	WP Kuala Lumpur	3,696	0	184	3,512 (95.0%)
7	Negeri Sembilan	768	0	15	753 (98.0%)
8	Melaka	798	0	20	778 (97.4%)
9	Johor	1,629	3	45	1,581 (97.1%)
10	Pahang	731	1	38	692 (94.6%)
11	Terengganu	489	1	27	461 (94.2%)
12	Kelantan	533	1	37	495 (92.8%)
13	Sabah	731	0	33	698 (95.4%)
14	Sarawak	759	1	4	754 (99.3%)
15	WP Labuan	105	0	0	105 (100%)
16	BPDN	54	6	0	48 (88.8%)
17	BK	1,572	0	0	1572 (100%)
18	BPP	83	3	0	80 (96.3%)
19	TTPM	0	0	0	0
20	BPGK	332	0	14	318 (95.7%)
21	BPSM	1	1	0	0
22	GST	0	0	0	0
	JUMLAH	20,163	18	606	19,539 (96.9%)

Source: Official Portal of Ministry of Domestic Trade, Co-operatives, and Consumerism (2017)

According to the report of complaint status according to states and division in December of 2017, the highest amount of complaints received according to states is Selangor, amounted to 5,133 complaints and the lowest is Wilayah Persekutuan Labuan (WP) Labuan, which is amounted to 105. Meanwhile the complaint solved is averaged

from 92.8% to 100% which is a very high percentage. But the problem is not how efficient they reimbursed or compensated the customers, but how they satisfy them at first place. If they failed to do so, the complaint received will be more or less the same. For the part of division, Bahagian Kewangan (BK) had the worst performance among all divisions which contains 1,572 complaints, but meanwhile there were two divisions had no complaints at all. The varieties of complaints received among all states and divisions showed the inconsistency of satisfaction in Malaysia, therefore it is important to investigate the reasons of the gap behind the failure to satisfy customers.

1.2 Problem Statement

Table 1.3: Comparison of highest ten complaint categories for the year 2017

6.1 PERBANDINGAN SEPULUH (10) KATEGORI ADUAN TERTINGGI BAGI TAHUN 2017

BIL	KATEGORI	30 SEPT 2017	31 OKT 2017	30 NOV 2017	31 DIS 2017
1	Perihal Perkhimatan	3,488	3,952	4,339	4,793
2	Perihal Harga	2,689	2,967	3,262	3,549
3	Transaksi Internet	2,199	2,618	2,995	3,369
4	Bengkel Kenderaan Bermotor	701	791	879	976
5	Tiada Tanda Harga	638	766	835	893
6	Aktiviti Jualan Langsung	502	588	644	705
7	Iklan Mengelirukan	517	582	665	752
8	Transaksi Sewa Beli	492	547	602	655
9	Barang Tiruan	418	478	532	631
10	Anti Pencatutan	326	363	440	489

Source: Official Portal of Ministry of Domestic Trade, Co-operatives, and Consumerism (2017)

Table 1.3 showed the ranking of the most concerned complaints received according to different issues in year 2017, the issues consist of service issue, price issue, internet transaction, motor vehicle repair shop, lack of price label, direct selling activity, confusing advertisement, sales and rent transaction, fake goods, and anti-profiteering. As the table shown, these issues are closely related to security, product variety, service quality and price, and these factors are very crucial in determining customer satisfaction level in online shopping.

Table 1.4: Comparison of highest ten complaint categories for the year 2018

6.1 PERBANDINGAN SEPULUH (10) KATEGORI ADUAN TERTINGGI TAHUN 2018

BIL	KATEGORI	FEBRUARI	MAC	APRIL
1	Perihal Perkhimatan	987	772	356
2	Perihal Harga	583	463	366
3	Transaksi Internet	659	544	541
4	Bengkel Kenderaan Bermotor	189	153	164
5	Tiada Tanda Harga	137	129	47
6	Aktiviti Jualan Langsung	78	96	47
7	Iklan Mengelirukan	127	106	89
8	Transaksi Sewa Beli	129	126	86
9	Barang Tiruan	192	109	77
10	Perkhidmatan Telekomunikasi	104	54	88

Source: Official Portal of Ministry of Domestic Trade, Co-operatives, and Consumerism (2018)

Table 1.4 showed the ranking of the most concerned complaints received according to different issues in year 2018. According to table 1.4, online transaction ranked second on the month of February and March, and ranked first on the month of April in year 2018.

These rankings have shown that online transaction is a serious issue across the early months of 2018. They are amounted to 659, 544, 541 number of complaints respectively. In the research of Cho, Im, Hiltz, & Fjermestad (2002) stated that the gap between online shopper expectations and the actual performance is the trigger of the online complaints. Cho, Im, Hiltz, & Fjermestad (2002) indicated that the solution is to minimize consumer dissatisfaction and this concern has yet to be investigated much.

According to Mazlan (2018), the previous researcher has stated that there are changes in the Consumer Protection Act which was amended in year 2012. This Act will imposed some of the requirements where to provide a better protection to online consumer. Besides that, there are some of the tips where the previous researcher has been provided in order to help company to avoid the complaint. For example, quality control, and customer expectation management are the two important ways to avoid product disappointment (Jonas Sickler, 2018).

According to Vasja Vehovar, information security was highly known as important factor in the new era of information. Consumer' especially online consumer were very sensitive on online privacy and data security (Vehovar, 2002). There were increase of cybercriminal in recent years who mainly targeting new emerging online retail industry which would hugely impact the online shopping consumer's consideration on buying online and their satisfaction (Marotti, 2018). On the other hand, there were news that show that online shopping consumer's identity was sold on the dark web. Information like credit cards number, social security number, billing address and even names of family member would be sold online with a price of \$1,170 on dark web (Brandon, 2018).

Based on the Internet Users Survey 2017 done by Malaysian Communications and Multimedia Commission (MCMC), online shopping activities was increased from 35.3% in year 2015 to 48.8% in year 2016. At the same time, there was 59.1% of users think the online privacy is essential and 32.8% think that it was important. There was only 8.1% of users think online privacy can be neglected. This statistic shows that there was increasing in people that using online shopping and most of the online users valued the online security (Commission, 2017).

Product quality is one of the common and serious problem that can be found in online shopping. It will affect consumer satisfaction at the same time. According to Tarun Mittal (2017), he stated that consumer have no guarantee of a product's quality when purchase things online even though having a review of the product. Not only that, there are some faulty product that be sold online is because of the fraudulent sellers who

focus on the sales (Tarun Mittal, 2017). For instance, there are around 529 counts of negative feedback from Amazon where people never received their products from this three fraudulent sellers who are EVILLE, xkuehns, HJSGHUY (Wade Shepard, 2017).

According to Zeithaml, Parasuraman and Malhotra (2002) e-service quality is defined as the extent to which website facilitates efficient and effective shopping, purchasing and delivery of products and services. The conceptualization of service quality has its roots in the expectancy disconfirmation theory (Collier & Bienstock, 2006), so the evaluation of service quality results from comparing the perception of service received to prior expectation of what the service should provide (Choi *et al.*, 2004). Generally online customers always expect equal or higher level of service quality than traditional channel customers (Lee & Lin, 2005). A number of factors predict customer's perception of e-service quality. For example, Lee and Lin (2005) identified the main factors influencing customer perception of e-service quality in online shopping namely, degree of user friendliness, reliability and security, responsiveness helpfulness and trust mechanisms provided by a website. Fassnacht and Koesel (2006) recommend that service providers should provide quality service because it is a source of competitive advantage.

Price of items has a significant impact on consumer satisfaction together with image and perceived quality (Li, 2013). Hidden charges are one of the problems that can be found in online shopping (Priyanka Nagrale, 2014). According to Timothy Ho (2017), the author has stated that foreign currency transaction cost is one of the hidden cost that consumer paid when purchasing through the overseas online website. For instance, most of the credit cards that applied in Singapore have to charge the foreign currency transaction fee when purchased in overseas (Timothy Ho, 2017).

1.3 Research Objective

The prior purpose and objective of this research is to study consumer satisfaction at the perspective of online shopping. The research aims to examine variables of security, product quality, e-service quality, price, and to determine whether these factors will influence consumer satisfaction in online shopping.

1.3.1 General Objectives

To identify the factors influencing consumer satisfaction in online shopping.

1.3.2 Specific Objectives

- (a) To determine the relationship of security and consumer satisfaction.
- (b) To determine the relationship of product quality and consumer satisfaction.
- (c) To determine the relationship of e-service quality and consumer satisfaction.
- (d) To determine the relationship of price and consumer satisfaction.

1.4 Research Question

- (a) Is there positive or negative relationship between security and consumer satisfaction?
- (b) Is there positive or negative relationship between product quality and consumer satisfaction?
- (c) Is there positive or negative relationship between e-service quality and consumer satisfaction?
- (d) Is there positive or negative relationship between price and consumer satisfaction?

1.5 Hypotheses of the Study

Hypothesis One

H₀: There is a negative relationship between security and consumer satisfaction.

H₁: There is a positive relationship between security and consumer satisfaction.

Hypothesis Two

H₀: There is a negative relationship between product quality and consumer satisfaction.

H₁: There is a positive relationship between product quality and consumer satisfaction.

Hypothesis Three

H₀: There is a negative relationship between e-service quality and consumer satisfaction.

H₁: There is a positive relationship between e-service quality and consumer satisfaction.

Hypothesis Four

H₀: There is a negative relationship between price and consumer satisfaction.

H₁: There is a positive relationship between price and consumer satisfaction.

Hypothesis Five

H₀: There is a negative relationship between the four variables (security, product quality, e-service quality, price) and consumer satisfaction.

H₁: There is a positive relationship between the four variables (security, product quality, e-service quality, price) and consumer satisfaction.

1.6 Significance of the Study

This research studies about the factors influencing consumer satisfaction in online shopping. The outcome of this research study is beneficial to both buyer and seller in the online shopping industry, which are the consumer and business entity. The factors in this research are important because they will alter the level of satisfaction of consumer in online shopping.

In a research by Wu & Huang (2015) stated that more than 65% of online shoppers which is a high proportion have the bad experience in online shopping. In the era of information age, the rapid growth of consumerism and easy access to information will likely cause consumer to make complaint to their sellers. It is important for the online firm to process and analyze the complaints effectively in term of delivering good values to the consumer. This study helps the business entity identify the flaw between consumer and online shopping system to guarantee success of short term profit by stimulating their sales in a specific period. In advance, it may also help the business entity to guarantee long term profit, such as re-purchase activities and positive word of mouth. By using these factors as a guideline, the business entity may take precaution to avoid threats like complaints and negative reviews which will damage the organization's reputation by maximizing their capabilities to satisfy their consumer. As a result, the consumer able to get benefit in correspond to the price they paid.

Besides, the research is also helpful in term of government support. In the research of Hai & Kazmi (2015), a conclusion was made in which government support gives a positive influence on consumer's intention of shopping online. Government can look into the important factors influencing consumer satisfaction in online shopping and provide support accordingly such as tax policy support, financial, foreign exchange support and government law to business firms. When consumer have high satisfaction

in the local business, the Gross Domestic Product (GDP) will likely to increase and help the country to grow in term of economic and development.

Malaysia's government implement The Consumer Protection Act 1999 (CPA) in order to maintain the satisfaction of their consumer. This Act is to protect consumer against a range of unfair practice and enforces minimum product standards (International Trade Administration, 2017). Furthermore, the government also implement the E-government to their consumer which is the use of technology to enhance the access to and delivery of government services in order to benefit their consumer (Neely, 2014). It is good for sellers who can paying their tax through E-government system (IRS Tax Tip, 2016).

The research may provide a guideline for future researcher to investigate the factors influencing consumer satisfaction with improvement and development of new theories. It helps future researcher to conduct advance research focusing on more crucial or vital factors to improve online firms management and strategies.

1.7 Chapter Layout

Chapter 1: Introduction

This chapter gives an idea on the relationship between the dependent variable and four independent variables, with the reference of previous research and statistic. There are five subchapter to summarize the research.

Chapter 2: Literature review

This chapter highlights the variables, and forming a theoretical framework with the comparison of related studies. Besides, hypothesis is developed to examine the validity of the theory.

Chapter 3: Research Methodology

This chapter involve data collection procedures based on the corresponding research design and data collection method, which determine source of the data. The target audience is also determined through sampling design which are divided into five subchapter to interpret it. The chapter proceeds with research instrument, and operation definition of constructs. The data is also integrated with data processing, and interpreted with data analysis. This chapter ended with chapter summary with support of collected data to increase the research proposal's credibility.

1.8 Conclusion

This chapter provides an overview on the factors influencing consumer satisfaction in online shopping. From the comprehension of previous researches and statistics, research background and problem statement have been concluded. The direction of the research has been determined after the research objection is formed. The hypothesis is formed based on the relationship of the variables in the conceptual framework. The significance of the study define usefulness of the research, the impact of the factors of this research to the profitability or performance of the business entity.

In the following chapter, the proposed conceptual framework and included variables will be further discussed and explained.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In the literature review, the definition of both the dependent variable and independent variables will be explored in the following reviews. The determinant of variables is necessary to understand how the four elements of independent variables (security, product quality, e-service quality and price) influence the dependent variable (consumer satisfaction) in online shopping. Researcher carried out the review of the particular theoretical models used to propose this conceptual framework.

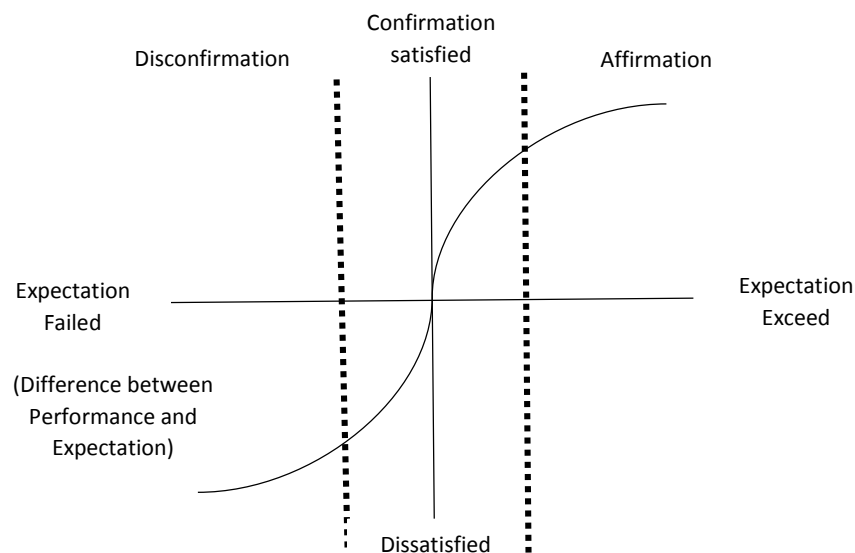
2.1 Review of the Literature

2.1.1 - Dependent Variable: Consumer Satisfaction

According to Vavra, T.G. (1997) have stated that what the consumer will expected to the product or service's performance are the comparison of satisfaction process. The process has been described as the 'confirmation / disconfirmation' process. Vavra, T.G. (1997), had stated that even though there are slightly different between perceived performances and expect performance, it will occur assimilation which made the perceived performance equal to expectations. While, if there are a big different between perceived performance and expectations, a contrast will be happen and the deficit in the perceived performance will be overstated.

First, the expectations will form before the customers purchase a sudden product or services. Next, expectation of perceived quality of the products or services involved will be affected (Oliver, 1980).

Figure 2.1: The Satisfaction Function



Source: Anderson, Eugene W., & Sullivan, Mary W. (1993). "The Antecedents and Consequences of Customer Satisfaction for Firms," *Marketing Science*, Spring, p. 129.

The figure 2.1 had stated that the satisfaction function between perceived quality and expectations. Even though the performance exceeds expectations and there is an increasing in satisfaction, but it will happen at a decreasing rate. Because of that, the disconfirmation become more due to the perceived performance falls short of expectations (Safiek, 2009).

According to consistency theories, the consumer will feel tension when the expectations are not match with the actual product. The consumer will make some of the adjustment such as their expectation or the perception to the product's performance in order to reduce the tension (Peyton, R.M., Pitts, S., and Kamery, H.R., 2003).

Based on the American marketing guru Philip Kotler, he analyze that the consumer will satisfied when the performance product match the expectation. While, the consumer will feel highly satisfied when the performance of the product exceeds the expectation. One the other hand, the consumer will feel dissatisfied when the performance of the product did not match the expectation. Customer satisfaction, or disaffection, is a feeling which an organization have met their need or not through their experience (Nigel et al 2007, 31).

There are many business aims to achieve consumer satisfaction to their consumer. One of the business that can be found is online stores. Even though dissatisfied consumer will not so affect the running of the online business but it might be affected the buying online behavior in the future (Rudansky-Kloppers, 2014).

There are some models have been developed previously about customer satisfaction. Those models were more focused on the satisfaction on the product and services which have to purchase through online.

Al Karim (2013) developed a model in which motivations and inhibitions are the two major reasons to influence the online shopping. In this research, the previous researcher found that online shopping was convenient, easy, less stress and time saving by 90% of their respondents. While, delivery systems faults, online payment systems, personal privacy and personal customer services were the main concerning issues for online shopping which considered as inhibitions of online shopping. All of this reason will affect the satisfaction of consumer toward online shopping.

Jukariya & Singhvi (2018), had used some of the factor to test the online buying behavior of student. There are 23 factors that been tested by researchers. Personal privacy and security plays a great role in buying product online or not and this factor is strongly agreed by majority of students which is 91%. The second most students were strongly agreed was transaction security and multiple payment options which is around 83%. Therefore, all the online sellers are recognized to take care to those factors in order to increasing the consumer satisfaction.

Nittala (2015) developed and tested their model of factors influencing online shopping behavior of consumer in India. There are 8 factors have been identified by the previous researchers which are social influence, price, promotion, positive attitude, perceived usefulness, product risk, perceived risk and traditional shopping. In this research, there are 3 factor have no significant effect on online shopping behavior which are promotion, perceived usefulness and traditional shopping. While, others factors have significance effect on online shopping.

2.1.2 – 1st Independent Variable: Security

According to Xiaoying Guo, Kwek Choon Ling and Min Liu (2012), security means how well the online shopping website able to protect its consumer's personal information from any potential threat of unauthorized use of the information through the transaction process (Guo, 2012). Security and privacy problem were the most important factors that maintaining trust for the online transaction and the website itself (Chellappa, 2002). Based on Guo's research, there are two part in security. First part is regarding online data and transaction security and second part was about authentication of user (Guo, 2012).

Security means as away from troublesome situation, risk or doubt. It consist of physical safety, financial security and confidentiality. It also consists of employees who instill confidence in consumer by let them confidence during the online transactions, employees who are consistently mannerly and employees who have the ability to answer consumer's question (Parasuraman, 1985). Security also give description as personal and possessions safety of the consumer which included confidentiality maintained by service providers (Jognston, 1997). Online shopping security is also identified as one of the prime factor and continuing concerns that preventing online consumer engaging with online shopping (Niranjanamurthy, 2013).

Online consumer very care of the security, liability and privacy of any website (Gefen, 2000). Security problem faced by online consumer was mainly privacy risk. According to Vijayasathy (2002), privacy risk was potential uncertainty that will occur when consumer required to disclose their personal information in order to settle the online transaction.

Online shopping security have been more concern by people as from the previous research 75% of customer was very worry about the risk of using their personal information and credit card which must be insert before they were able to shop online (Horrigan, 2009). Szymanski and Hise found that online shopping satisfaction was

hugely affect by convenience, site design and financial security (Szymanski, 2000). In another article, it mentioned that even though online shopping risk today's was lower compare with the period when e-commerce just invented, it can still easily become the key factor which affect the consumer satisfaction when new problem occurred. From the study of Miyazaki and Fernandez, they found that online risk was the major concern of online shopping where 37% of their sample shows that people was worry about third party fraudulent behavior and more than 20% of responses worry that there will be unauthorized third party that accessed to their personal and credit card information. They also found that huge amount of consumer's satisfaction was affected by the fear of privacy than security (Chiu et al., 2011).

Online shopping satisfaction was mainly affected by 3 factors which are technology factor, product factor and shopping factor, and within these factors it included security in the technology factor together with privacy. The relationship between online shopping security and consumer satisfaction was interrelated (Schaupp, 2005). According to Boyer, consumer that have bad experience that not satisfy with their previous online shopping experience will more concern on the security while purchasing online which show both satisfaction and security was interrelated (Boyer, 2005). In a research done in United States of America, they found that more than 60% of American was not satisfied of current online shopping security as they worry about internet hackers (McCrohan, 2003). Traditional shopping method was able to generate instant satisfactions and more detail about product information for consumer to make their purchasing decision and that will secure the security of the transaction as the consumer was able to directly communicate with the seller (Changchit, 2006).

Veronika believed that e-consumer was similar to traditional consumer where Abraham Maslow hierarchy of need come into play. E-consumer demand need of safety and security in order to be satisfied (Svatosova, 2013). According to Bhanagar and Ghose (2004), online purchase security was within the factor which affect the buying potential and satisfaction online as a lot of consumer still don't like to purchase online as they feel the online purchase security is still not good enough for them to enter their personal data during the transaction. The perceived risk was also known as precursor of

satisfaction. That is why the perceived risk was more important as the lack of security and network reliability which any consumer's personal information kept in the database or during the transmission of data might be stolen by third party (Ltifi, Moez; Gharbi, 2012).

Lee and Turban (2001), mention that psychological factor was the most impactful variable that affect online shopping behavior and their behavior often linked with their satisfaction. It also stated that trust and security was two of the most important factor for consumer to choose whether to purchase online or not. Researchers also agreed that online transaction security especially payment risk was determined as the most important factor that affect consumer satisfaction (M.Head, 2007). The research of Zahra Tabaei (2011), found that satisfaction was very important for online shopping and the satisfaction must be available during the whole online shopping process. They also mentioned that in order to meet the consumer satisfaction product feature and website must reach their expectation and security was categorized as part of the website quality.

Yang, Jun, and Peterson found that there was 5 online service quality dimensions that included security which affect the online consumer satisfaction (Yang, 2004). Gilly and Wolfinbarger (2002) also found that fulfilment or reliability were the main component that will affect consumer satisfaction. Security, correct transaction, enable for consumer to personalize their transaction, tracking of their transaction and privacy was within the factors that affect the online consumer satisfaction (Rangsan & Titida, 2013). According to S. Ghane's research, they found that ease of use , information content, innovation, security protection, customer service, transaction and delivery process were the factors that affecting online shopping satisfaction (S.Ghane, 2011).

The research by Izyan Hizza found that only e-service quality and information quality was positive affecting consumer satisfaction while website design and security do not do so. However, they also mentioned that it is only particularly on young adults while older online consumer do appreciate the quality of website design and online security (Ludin & Cheng, 2014). From the result of Christian and France's research, researcher

was able to reconfirmed the relation between online security and online shopping satisfaction was positive (Schaupp, 2005).

Shergill & Chen proposed that there were 4 dimensions that affect the online shopping experience and satisfaction. It consists of website design, customer service, fulfilment or reliability and security or privacy (Gurvinder S. S., 2005). However, some research found that excessive of online security features build for increase online consumer's trust the online seller will only cause the website to be harder to use and resulting in decline of online consumer's satisfaction (Shen, 2010).

According to latest research on making online payment, online consumer was worry of their private and financial information security (Ahmad Nabot, 2014). Brazilian researcher was introduced a model of online consumer satisfaction and information systems security practices (Montesdioca, 2015). Under a research on students, it proved that online users satisfaction and system security is interrelated and security was a non-decomposable attribute of information systems (Vaezi & Chin, 2009).

According to Experian report, 53% of customers would like to abandon their transaction when the online seller required a lot of information for user registration and there are also another 27% of consumer will also not register if lack of reliable security (Crets, 2018). In United States, 40% of consumer did not complete purchase online because they worried of fraud and concern of private security. There were a total 70% users concerned about fraud and private information when having online shopping. At the same time, 28% of consumer had become a victim of e-commerce-related fraud, survey also found consumer was fear of fraud and information security and it affect their satisfaction and decision making while purchasing online (Evans, 2017).

2.1.3 - 2nd Independent Variable: Product Quality

According to Gaurav Akrani (2013), there are 8 dimensions can be defined as “quality”.

Figure 2.2: Definition of quality



Source: Gaurav Akrani. (2013). What is Product Quality? Definition Meaning Importance.

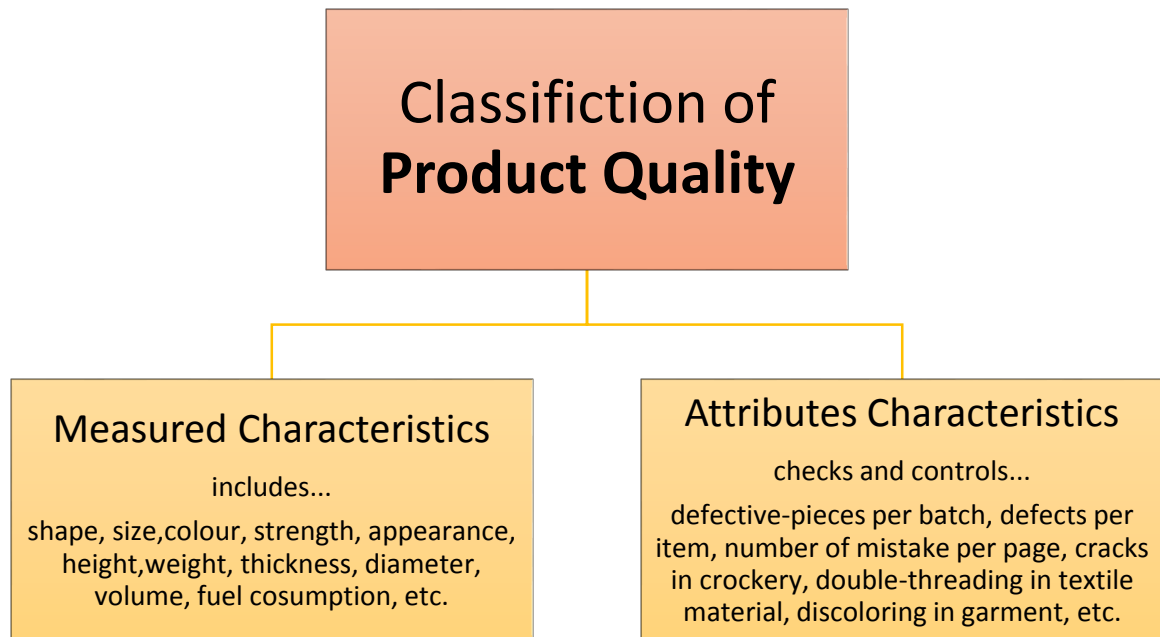
Figure 2.2 are the 8 dimensions of the quality. The 8 dimensions are the common definition that would be defined from most of the experts. It is clearly to show that the meaning of the quality and this 8 elements are summarize of most of the expert.

According Business Dictionary, product quality is defined as a saleable good that controlled by a manufacturer in order to reach some of the basic requirement through features and characteristics. In other word, product quality is defined as by improving

the products or goods to meet the customer needs or wants in order to reach customer satisfaction (Gaurav Akrani, 2013).

There are two main characteristics that can be found in product quality which are measured characteristics and attributes characteristic.

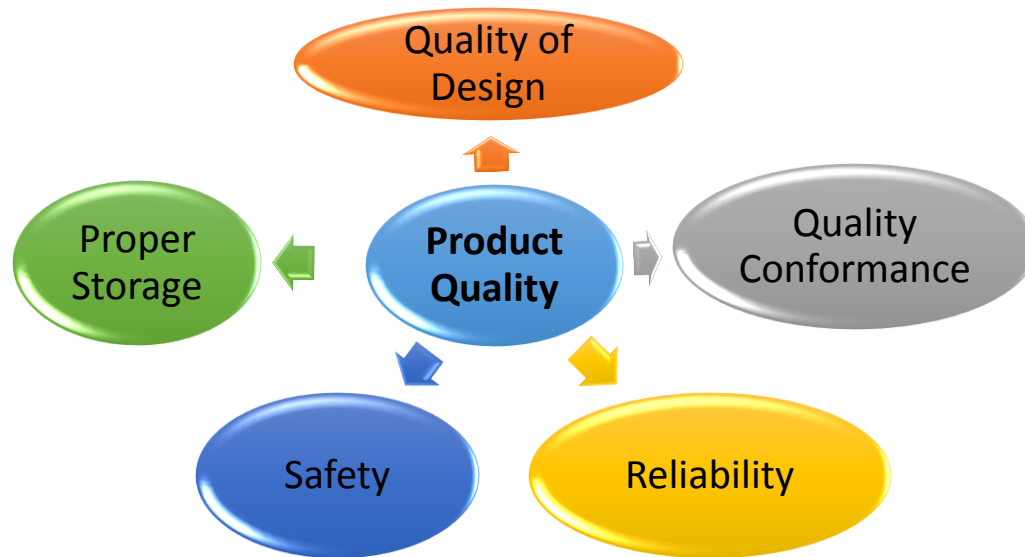
Figure 2.3: Classification of product quality



Source: Gaurav Akrani. (2013). What is Product Quality? Definition Meaning Importance.

As the figure above, researchers found that measured characteristics include features of a product. While, the attributes characteristics that can be found are stated in the figure above. Therefore, researchers can divide the products into good and bad based on the classification. Thus, product quality is mention as the excellence of the product (Gaurav Akrani, 2013).

Figure 2.4: Five main aspects of product quality



Source: Gaurav Akrani. (2013). What is Product Quality? Definition Meaning Importance.

The first aspect is quality of design. This is really important aspect since it will directly affect consumer satisfaction. For example, a good design in website can give a good first impression to their consumer (Brevity, 2017). Therefore, it is really importance for having a quality of design which have to match with the consumer' needs and giving a good quality standard as well (Gaurav Akrani, 2013).

The second aspects is a quality conformance. It means that the finished goods have to match with the product design that designed by them. If company fail to this then it will affect their consumer satisfaction since the product did not match their expectation (Gaurav Akrani, 2013).

The third aspects is reliability. It means that the product have to be reliable or dependable which is not easily breakdown and not need to repair it constantly. The product must be remain operational and can maintain it in a longer time (Gaurav Akrani,

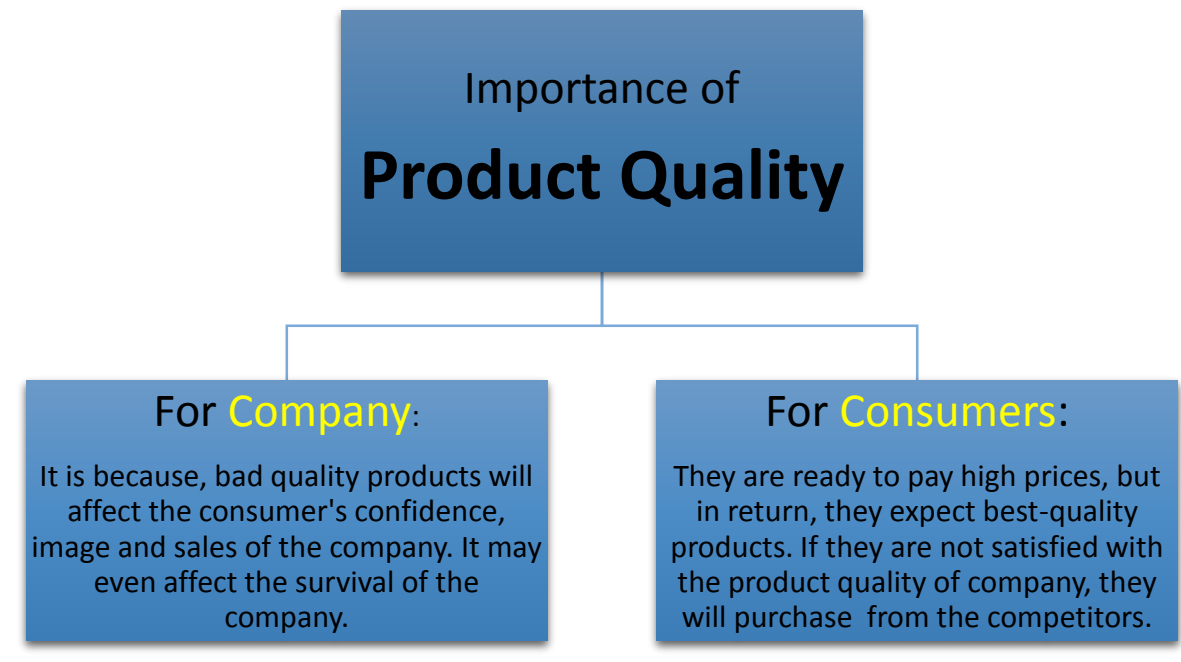
2013). Not only that, reliability also importance in business which can improves efficiency, customer experience and general workplace satisfaction (The Wire, 2017).

The fourth aspects is safety. It means that company have to make sure that the finish good is safe for use or handling and confirm that the product do not harm consumer in any way (Gaurav Akrani, 2013). Safety is importance especially for food industry. According to Ron Wacker (2015), the result that there are an increasing number for consumer who concern about safety of the food. Therefore, safety is becoming more and more importance nowadays.

The last aspects is a proper storage. It means that the product have to be packed in good condition and can be stored properly. The product quality must be maintained until expiry date stated in the product (Gaurav Akrani, 2013).

There are two categories that can be found in product quality which are the importance quality for company and the importance quality for consumer.

Figure 2.5: Importance of quality



Source: Gaurav Akrani. (2013). What is Product Quality? Definition Meaning Importance.

Researchers will discuss on importance of product quality for company. As the figure shows that it is importance since a bad quality products will affect directly to its consumer's confident, the product reputation and the sales as well. Not only that, the survival of the company will be affected too (Gaurav Akrani, 2013). Besides that, according Lan Linton (2018), he stated that the quality products can help to maintain customer satisfaction and loyalty as well. In the same time, it can reduce the risk and cost of replacing for the incorrect good that making by the workers (Lan Linton, 2018). There are some strategy that can meet quality product which are stated in Lan Linton (2018). There are meeting customer expectation, managing a reputation, meeting industry standards and managing costs as well.

Besides product quality is importance for company, it's also importance for consumer too. It is because consumer are ready to pay a high price which will expect to get the best quality product that match with the amount that they paid. If the company failed to do that, they will purchase from the competitors. There are a lot of good quality international products that been sold in local market nowadays. Therefore, if local companies does not improve their product quality to a higher standard, most probably they will hard to survive in the market (Gaurav Akrani, 2013).

Product quality is important to online shopping as well. According to the Product Information Report, it has stated that one of the important factor that success in online sales is product quality (Retail Dive, 2016). Besides that, the quality also plays a significant role to reduce shopping cart abandonment and also will impact the brand equity and consumer's future purchase decisions (Retail Dive, 2016).

2.1.4 – 3rd Independent Variable: E-Service Quality

According to Lovelock and Wirtz (2011), there are a major differences between services and goods. One of the differences are services is consider as intangible while goods will consider as tangible. It will be quite complicated to measure the service quality because services are consider as intangible. Service quality is measures on how much the services that been provided meets the consumer' expectations. Perceived service quality is the term that been used by researchers in order to measure the quality of intangible services. Perceived service quality is using which will be compared the perceptions about service delivery process and actual outcome of service (Grönroos, 1984; Lovelock and Wirtz, 2011).

Sweeney, J. C., Soutar, G. N. and Johnson, L. W. (1997), have been analyzed whether the perceived value and consumer willingness would be affected by service quality. Based on the result of the study, they noticed that consumer more affected by service quality perception rather than product quality especially in service encounter stage. At the same time, it will also guide many companies to pay more attention on quality and consider it as a strategic tool in order to compete in the markets. Service quality has been becoming more and more important nowadays. Therefore, in order to gain competitive advantage, increasing the satisfaction and loyalty of the customers, services quality will becoming the main element of it. According to Horovitz (1990) showed that customers will spread their experiences to more than three other people when they are dissatisfied with the services that they get (Horovitz, 1990).

Santos (2003), had defined that e-service quality as a quality of e-service delivery which evaluations by overall consumer in the virtual marketplace. There are many studies which are focus on how service quality will influence in consumer' decision in the past decades. Nevertheless, there are more studies nowadays since the e-commerce became more familiar with consumer. For examples, many people will evaluate the quality of virtual community websites (Kuo, 2003), the satisfaction about the e-

commerce channels that they used (Devaraj et al., 2002), and will be determinate the success of website (Liu and Arnett, 2000). WebQual was developed by many researchers in the previous studies (D.L., E.T., Goodhue, Loiacono, R.T. and Watson, 2007) in order to rates the Websites on 12 dimensions. The 12 dimensions that been rates are informational fit to task, interaction, trust, response time, design intuitiveness, visual appeal, innovativeness, flow, emotional appeal, integrated communication, business processes and substitutability. E-service quality has become one of the key factor for consumer where to let them to choose an online store (Santos, 2003).

According to Hassan, Hassan, & Nawaz (2013), service quality is defined as an evaluation to the standard or distinction of the service. Gronroos, C. (2000) also further explained service quality as a comparison between assumptions of service they should receive for the price they paid with the service they actually received and evaluated. Kim (2007) stated that in order to achieve excellence and survive in a competition, all business entity should put effort in growing service quality that will give positive impact to consumer satisfaction, therefore Huang, E. and Liu, C.-C. (2010) concluded that the higher the level of service quality, the more effective it is to improve consumer satisfaction.

Fah and Kandasamy (2011) also emphasized on the importance of service quality towards satisfaction of hotel guests in Malaysia even though tangible production seems to be the most important element towards consumer satisfaction. Izogo & Ogba (2015) also stated consumer will be satisfied with the service of the firm when the service provided exceeded the consumer's expectation. Furthermore, it became a necessity for the firm who want to satisfy its customer to keep up with the offering service quality with the expectation of the customers. It is important because satisfied customers has more commitment to the firm compared to dissatisfied customers.

In the research of Hussain, Al Nasser, & Hussain (2015), a statement was made about the importance to increase service quality depends on the capabilities of flight companies in airline industry to constantly fulfill the needs of the organization and their customers. By maximizing their capabilities to generate and maintain service quality,

the firm is able to gain monetary benefit and also competitive advantage by ensuring customer satisfaction. Hussain, Al Nasser, & Hussain (2015) also said improve quality does not incurred high cost in the long run business because it is rather an investment to generate higher profits.

2.1.5 – 4th Independent Variable: Price

According to Langvinienė & Guobytė (2014), the price alone cannot determine the level of satisfaction of consumer because price could be easily compared due to the huge load information in world wide web. Therefore, the previous researchers conducted this study in order to understand the factors of online shopping that will create unique experience of online shopping to its user which cannot be easily imitated.

Ehsani & Ehsani (2015) mentioned that price is the cost paid or opportunity lost by consumer to obtain a product or services (Zeithaml, V. A., 1988). Perceived price has an effect on psychology decision when consumer react on price (Etzioni, A., 1988). When selecting a product or services, price is an important factor to consumer for consideration between alternatives (Huber, F., Herrmann, A., & Wricke, M., 2001). Price can be used as a strategy to increase consumer satisfaction by fitting the selling price with the perceived cost consumer willing to pay (Bhattacharya, A., & Friedman, H. H., 2001). When the consumer's perceived cost and perceived value are match, the purchase behavior will likely to be repeated. If the consumer's perceived cost and perceived value are not match, re-purchase behavior will not be conducted (Ranaweera, C., & Neely, A., 2003). When the perceived cost is higher than the perceived value, the consumer satisfaction will be negative. In contrast, if the perceived cost is equal or lower than the perceived value, consumer satisfaction will be positive. Price is an important factor because consumer will compare with other consumer buying the same product for the price of same product obtained (Beldona, S., & Namasivayam, K., 2006).

According to the research of Chen, Yan, & Fan (2015), price has the benefit when it comes to products attached with high risks, for example replica and product without brand. Usually these products were sold with lower price, and consumer will tend to accept the risk when the price advantage is greater than the risk attached and as long the product can perform their basic function. In the research also mentioned that, a

trend called “Shanzhai” products is very popular in Chinese market where the unofficial manufacturer imitate the products of popular brands with different materials and sell with low price. The quality of these imitated products contain high uncertainty, where some of the products able to compete with the products of popular brands, and some of the products are totally bad in quality. Therefore, these products are able to attract consumer who want to get the similar products but with affordable price. These consumer are sensitive to prices and willing to bear the risk as they have lower expectation to the product quality when purchasing the products because it comes with lower price.

There is also another phenomena in China called Cash on Delivery (COD) where it require the consumer to make payment only after they receive the product and examined it. Consumer have the right to reject the product and refuse to pay if they were not satisfied with the product as the product contains flaws or in poor quality, therefore there will be no loss incurred on the consumer. This payment method able to stimulate higher consumer satisfaction because the gamble of acquiring more possible value even when the product varies from the expectation but as long it has price advantage it is acceptable (Chen et al., 2015).

This payment method also begins to become available in Malaysia in recent years. Many websites like Shopee, Lelong and Lazada had begins to offer cash on delivery in the past few years. Shopee.com which is one of the online website in Malaysia, it stated that there will be no extra charges for this service and at the same time it was said to be an opportunity for the online seller to reach to more buyers especially those who do not have a credit card or access to online banking (Shopee, 2017).

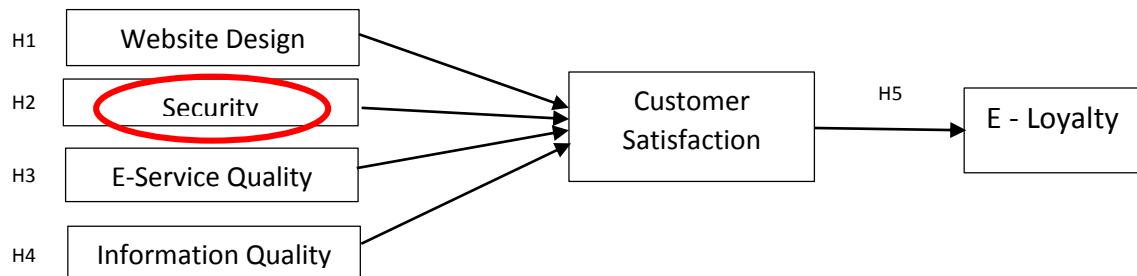
Hassan, Hassan, & Nawaz (2013) also have the opinion that in term to maintain a long term relationship with consumer, it is important to place concern on the consumer satisfaction and by providing them fair price, the seller is able to stimulate satisfaction from their consumer. The previous research also show that with the understanding of price impact towards consumer satisfaction, it is able to assist the company to develop pricing strategies for different consumer segments. In the research of Hanif, Hafeez &

Riaz (2010), a statement is made regarding serious competition in the telecom sector, price fairness is a vital determinant of competitive advantage. Because in telecom sector, there is not much factor for them to determine their suitable service provider due to intangible product, they can only compare the call rate provided by different telecom companies.

According to Sabir, Ghafoor, Hafeez, Akhtar, & Rehman (2014), price is a main contribution to consumer satisfaction in hotel industry of Pakistan because it affects the consumer directly which incur financial loss. When the product is sold with affordable price, consumer will likely to repeat the purchase activity (Gustafsson et al. 2005). Price fairness does an important impact to consumer satisfaction when consumer are paying for products which has greater benefit than the price. It is also said that service provider must focus on the price of the products which they are selling to get competitive advantage especially for price sensitive products.

2.2 Review of Relevant Theoretical Models

Figure 2.6: Model – Factors Influencing Customer Satisfaction and E-loyalty: Online Shopping Environment among the Young Adults



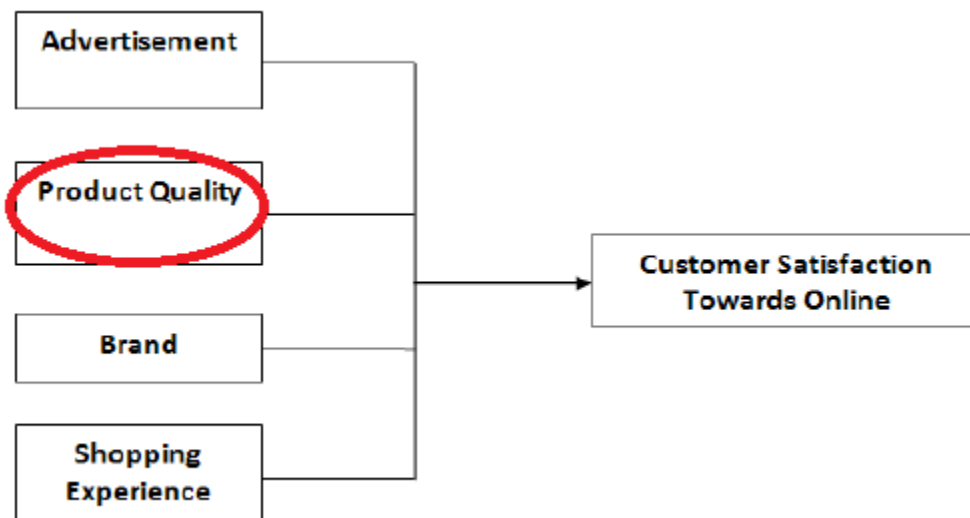
Source: Izyan, H., Boon, L. C. (2014). Factors Influencing Customer Satisfaction and E-loyalty: Online Shopping Environment among the Young Adults. *Management Dynamics in the Knowledge Economy*, 2(3), 462-471.

The illustration above shows some of the component that influencing the satisfaction for online consumer and their loyalty against online sellers. It also shows how all these factors will affected the online consumer satisfaction and their loyalty as well (Ludin & Cheng, 2014). They found that the online shopping security does not affect the customer satisfaction positively which the result shows that even the security was poor, the online customer satisfaction still does not drop significantly. Online consumer in Malaysia, especially young adults' satisfaction do not affected by website design and security at all. However, their research also found that there are different in requirement for younger generation and older generation where older generation was perceive more on online shopping security while the young generation do not.

There are positive relationship between security and consumer satisfaction. Previous researcher determined that there were 8 factors that influence consumer satisfaction (Guo, 2012). In another research, it shows that brand value, trust and security, website

and technology, and customer service while loyalty was the factors affecting consumer satisfaction and it further affect the e-loyalty of online shoppers (Gommans, 2001).

Figure 2.7: Model: Customers Satisfaction on Online Shopping in Malaysia



Source: Mumtaz, H., Aminul Islam, M., Ku Ariffin, K. H., & Karim, A. (2011).

Customers Satisfaction on Online Shopping in Malaysia. *International Journal of Business and Management*, 6(10).

The illustration shows the factor that will affect consumer satisfaction toward online shopping. There are some factors analyzed by the author such as advertisement, product quality, brand and shopping experience (Mumtaz, Aminul Islam, Ku Ariffin, & Karim, 2011).

Product quality is one of the independent variable for the researcher's study. According to (CSI) model, there are many consumer are more focus on product quality when they shop online even though they cannot feel and touch the product directly. Therefore, they will look at comments of the product to indicate the quality of the product (Guo et al., 2012). According to Saleh (2008), he argued improve the quality control in a product can increase consumer satisfaction and their loyalty as well in the marketplace

(Cruz, 2015).

Product is all that can be offered in the market which to get consumer's attention, market demand, usage or consumption that can satisfy the needs of consumer. (Kusuma, Suyadi, & Abdillah, 2014). Therefore, product quality is really importance to consumer since they will satisfy when the perceived meet their expectations while they will not satisfy when the service falls below their expectation. (Musa et al., 2015).

According to the Anthill Magazine (2015), there are three countries are more concern about product quality more than security which are Japan, New Zealand and South Korea. Therefore, in order to satisfy them, the sellers have to take care about the quality of the product.

Figure 2.8: Model – Evaluating factors influencing customer satisfaction towards online shopping in China

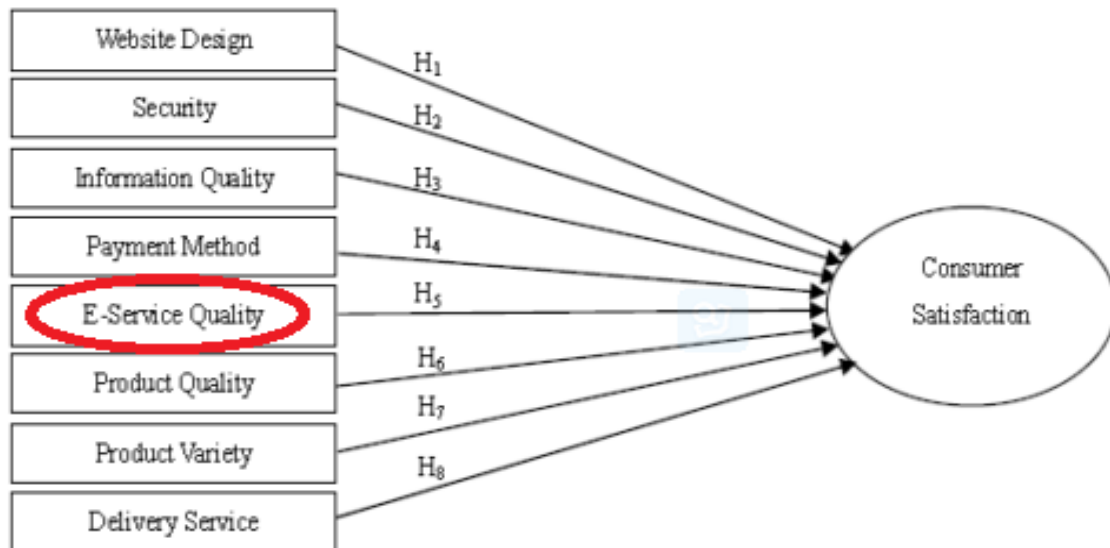


Figure 1. Proposed conceptual framework

Source: Guo, X., Ling, K.C., and Liu, M. (2012). Evaluating factors influencing customer satisfaction towards online shopping in China. *Asian Social Science*, 8(13), 40-50.

There is a direct impact between consumers and service quality provided, which is to maintain devoted relationship with the online retailers. Online retailers which have a good service quality can learnt about their customers' expectation in order to improve their satisfaction (Khristianto et al., 2012).

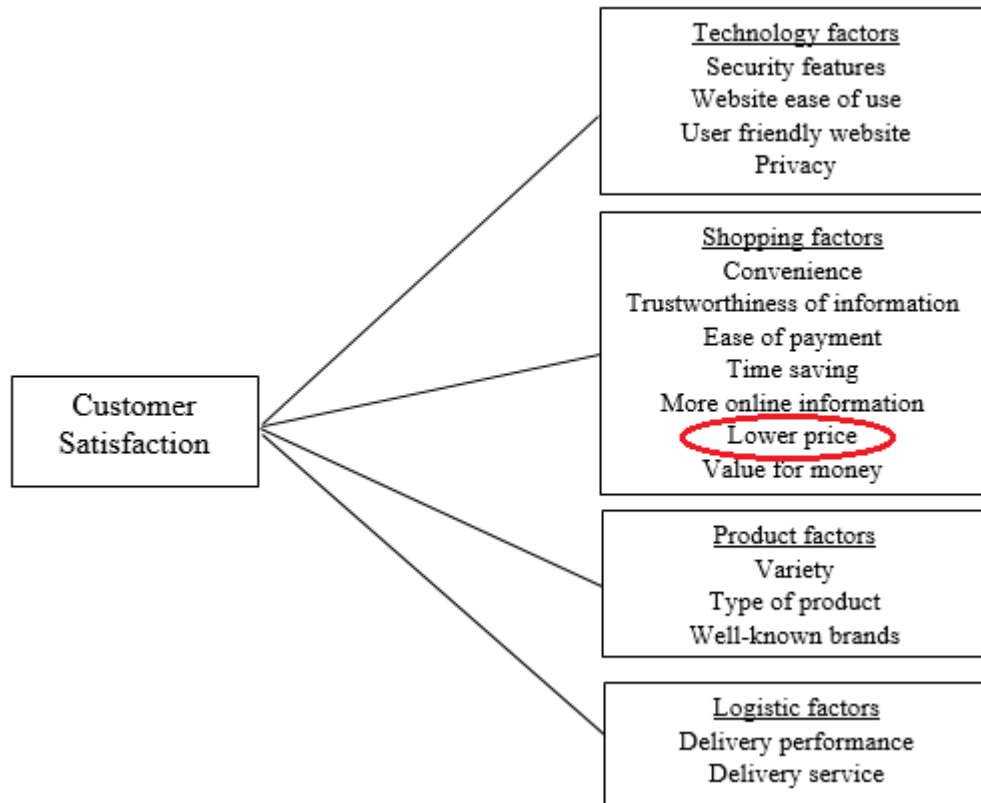
Guo, X., Ling, K.C., and Liu, M. (2012) explain service quality has provided an efficient and effective shopping, purchasing and delivery system in products and services for online retailers.

Christodoulides and Michaelidou (2011) have stated that if the online retailers provided an information though formal or informal platform to the consumer and it will be increase the satisfaction of the consumer and increased their experience in shopping at

the same time. Thus, quality management turns out to be vital since it is the procedure to keep up the nature of the item and management, in order to provide satisfactory service which can fulfill consumers' need.

Service quality is become a superiority which in meeting the consumer' demand. Therefore, it is importance to have a good e-service quality in order to increase the satisfaction of the consumer (Khristianto et al., 2012).

Figure 2.9: Model: Factors Influencing Customer Online Buying Satisfaction in Gauteng, South Africa



Source: Rudansky-Kloppers, S. (2014). Investigating Factors Influencing Customer Online Buying Satisfaction In Gauteng, South Africa. *International Business & Economics Research Journal (IBER)*, 13(5), 1187.

Figure 2.9 is the illustration of price, where it shows the relationship of price towards consumer satisfaction. Price is defined as the amount of money charged or sum of values that consumer exchange for the benefits of the use of a product or service (Kotler and Armstrong, 2010). In the research of Koble (2014), indicated that the difference of online shopping with physical shopping, is the speed of browsing online for comparison of prices for similar product offered by different sellers, therefore price can be treated as a sensitive factor that contributed to customer satisfaction in online shopping. The

research also indicated in the MasterCard survey of online shoppers in South Africa, most of the respondents do consider promotional offers and discounts as important factors during online shopping (Goldstuck, 2013). Besides that, another important reason of shoppers preferring online method is because of the assumption of lower prices than physical stores due to the minimization of intermediaries, thus lesser cost applied to the prices (Rudansky-Kloppers, 2014).

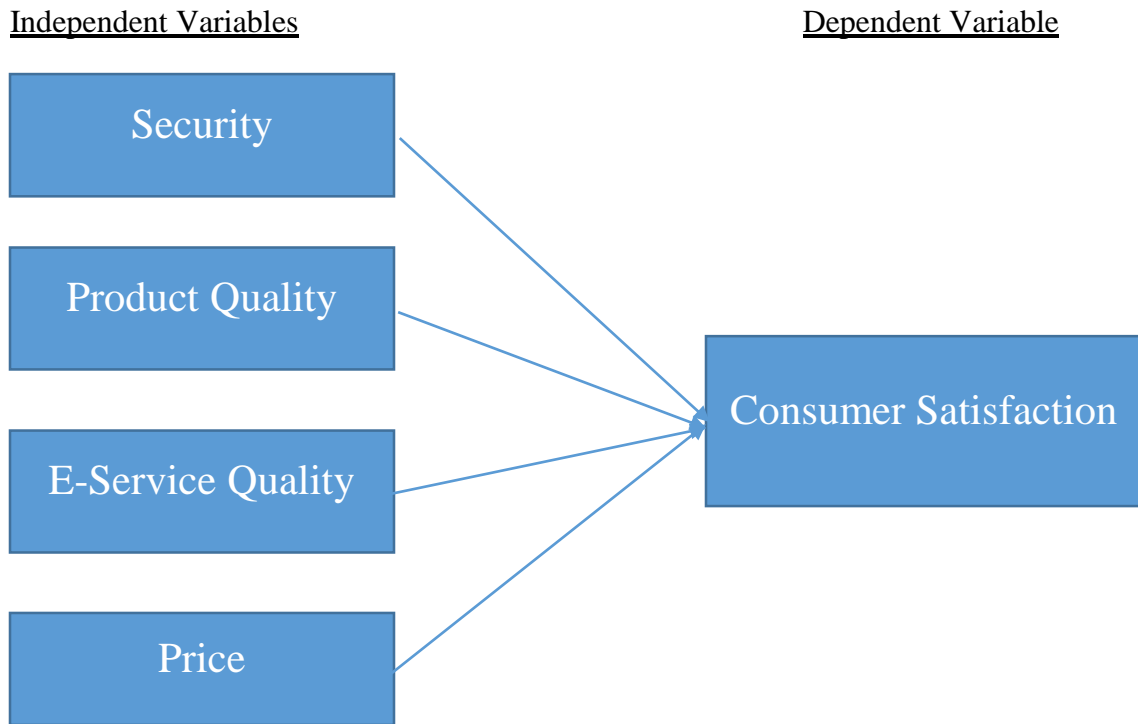
It is important to build relationship between consumer because they are the main contribution for any business (Sabir, Ghafoor, Hafeez, Akhtar, & Rehman, 2014). In the research indicated that in Pakistan food industry, most of the people are having meal outside. Consumer usually use saving of their income for better food and environment. Therefore, to implement a fair price may maximize the benefit of their savings for better food and environment, and not overpay for what they did not get. Besides that, promotion through personal selling and public relation may increase consumer satisfaction level and helps the company to build relationship with their consumer (Khan & all., 2012). It also helps the company to understand consumer's needs and wants and make different products or pricing strategies according to their demand (Sabir et al., 2014).

Gagić, Tešanović, & Jovičić (2013) also explained that price fairness is a vital components that affect guest satisfaction as it reflects good value for money, reasonable price items, and overall value of experience. It is important for price to be parallel with the product quality to reduce dissatisfaction, complaining, and bad word-of-mouth (Andaleeb and Conway, 2006).

In the research of Al-Msallam (2015) concluded that price is also an important factor for consumer to analyse the value of a product or service, therefore determined consumer satisfaction level will become more importance (Anderson et al., 1994) as consumer generate their satisfaction level based on the judgment on price and quality by the concept of "equity". Charging fair price are helpful in leveling consumer satisfaction, but also loyalty to build long-term profitable relationship with consumer (Al-Msallam, 2015).

2.3 Proposed Theoretical Framework

Figure 2.10: Proposed Theoretical Framework



Source: Developed for the research

The purpose of this research is to investigate the factors influencing consumer' satisfaction in online shopping. Based on the relevant theoretical framework that been stated in previous section, there are four independent variables which are security, product quality, e-service quality and price, and dependent variable are consumer' satisfaction will be studied in this research.

2.4 Hypotheses Development

2.4.1 Security

Online security was deemed as “a threat that creates a situation, condition, or event with possibility to cause economic hardship to data or network resources in the form of demolition, disclosures, data modification, services denial, and fraud cases, wastage and abuse” (Juan Carlos Roca, 2009). Online security also an important concern for any online shopper (Roman, 2008).

According to the study of Izyan and Boon, they found that online security and online consumer satisfaction do not have any significant relation between them (Ludin & Cheng, 2014). They found that the security do not decrease satisfaction of younger online consumer. There was other research which found that online security have significant impact on consumer satisfaction, online consumer was mainly concern of the online transaction’s security and personal information security (Karim & Karim, 2018).

From the research regarding consumer satisfaction on online shopping in China, there are eight factors have positive relationship with online consumer satisfaction (Guo, Ling, & Liu, 2012). The research ended with a conclusion where online sellers have to consider all eight factor in order to success in online market (Guo, Ling, & Liu, 2012).

According to Schaupp and Belangar’s research, online security do provide a positive relationship with online consumer satisfaction (Schaupp & Belanger, 2005). From the research of Zahra, Mohammad and Mohammad, they found the online security have significant impact on online consumer satisfaction (Tabaei, Fathian, & Gholamian, 2011). Every factors from the categories of product feature and website design which included security was found impactful to the online consumer satisfaction. However, online security provided the less impact on online consumer satisfaction within all nine variables in the research (Tabaei, Fathian, & Gholamian, 2011).

Based on the result of previous research, any of the information quality, security, payment system, delivery, customer service and online consumer loyalty have significant relationship with online consumer satisfaction (Delarosa, Dharmesti, Nugroho, & Mada, 2013).

Malaysia researchers found that majority of the respondents are very concern on the online shopping security and have huge impact on online consumer satisfaction. The research developed and tested a model for consumer satisfaction with online shopping experience by adjusting various components of service quality included security (Zarim, 2014). In a research in Greece, the researchers proved that product and service information quality together with user interface quality and security have a strong relation with online consumer satisfaction (Theodoridis, 2010). Although atmospheric or experiential has the strongest impact on online shopping satisfaction but shouldn't ignore that potential impact like privacy/ security, website design and customer service. The research proved that privacy/security have significant effect on online shopping satisfaction and together with customer service and atmospheric/ experiential had direct relationship with online shopping satisfaction (Teing, 2014).

The following hypothesis is being formulated after the section of literature review:

H₀: There is a negative relationship between security and consumer satisfaction.

H₁: There is a positive relationship between security and consumer satisfaction.

2.4.2 Product Quality

Quality represents an importance scale for an organization which can affect an organization's success, survival and continuity (Athiyah, 2016). Besides that, it will increase the loyalty as well as elevating the short and long term of organization profit (Athiyah, 2016). In other word, quality will leads to satisfaction, while satisfaction can leads to loyalty and lastly loyalty leads to profits. Therefore, there are a positive significance relationship between product quality and consumer satisfaction (Athiyah, 2016).

Tata Motors limited which is the largest automobile company in India (Jahanshahi et al., 2011). According to Jahanshahi, Gashti, Mirdamadi, Nawaser, & Khaksar (2011), Tata Motors Limited become the priority company in India which is provided the highest quality standards to achieve their customers' need. Tata Motors Limited know that if a product is fulfils the customer's expectation, they will accept the product or even high quality. (Jahanshahi et al., 2011). According to the Tata Motors (2018), the report shows that there are a robust growth of 55% over 2017 in the sale of passenger vehicles. Therefore, it is clearly to show that, there are a positive significant between product quality and consumer satisfaction.

Razak, Nirwanto, & Triatmanto (2016) stated that there is a positive and significant relationship between consumer satisfaction and product quality. If the perceived product quality is match the expectation, then the consumer will perceived it is a good quality and feel satisfied. Conversely, if the product quality is not match their expectation or below their expectation, consumer will qualified it as a bad quality.

The following hypothesis is being formulated after the section of literature review:

H₀: There is a negative relationship between product quality and consumer satisfaction.

H₁: There is a positive relationship between product quality and consumer satisfaction.

2.4.3 E-Service Quality

There are many researchers have focus on the role of service quality due to the rapid growth in electronic commerce (Park & Kim, 2003; Lee & Lin, 2005; Zeithaml, 2002; Santos, 2003; Trocchia & Janda, 2003; Singh, 2002; Yang et al., 2003). According to Santos (2003), e-service quality was defined as the overall evaluation and judgment of the performance for the quality of e-service that been offered in the virtual marketplace. It will affected the success of e-retailers (Zeithaml, 2002; Santos, 2003; Trocchia & Janda, 2003; Lee & Lin, 2005; Bauer et al., 2006; Fassnacht & Koese, 2006; Xing & Grant, 2006; Ahn et al., 2007).

The study of Ludin & Cheng (2014) indicated that there are a relation between the e-service quality and the satisfaction of consumer in online shopping environment. The result proved that the e-service quality construct that been investigated is constant with previous studies by Chang, Wang and Yang (2009) and also Luo, Ba and Zhang (2012). E-service quality would improve consumer' confidence level. In addition, Chang et al. (2009) stated in their research that online retailer provided different ways of communication channels to their consumer in order to increase the communication between the consumer and themselves. The various communication channels are provided the adaptability and convenience to their consumer to contact the online retailer in order to satisfy their consumer. Therefore, it is importance for an online retailers to put more emphasize on this criteria. The online retailers have to cover both pre-purchase and also post-purchase stage especially in e-service quality. Thus, by improving e-service quality, it could help to increase the consumer' satisfaction (Ludin & Cheng, 2014).

The following hypothesis is being formulated after the section of literature review:

H₀: There is a negative relationship between e-service quality and consumer satisfaction.

H₁: There is a positive relationship between e-service quality and consumer satisfaction.

2.4.4 Price

For the hypothesis development, Stanton, W. J., Michael J. E, and Bruce J. W. (1994) defined price as the amount of goods or cost in order to gain another goods attached with related services.

Kaura, Durga Prasad, & Sharma (2016) indicate that price fairness has more significant impact to consumer satisfaction in the selection of bank because the price structure and system is more complex than other industry like hotel and education. In the research also made a statement about price provides an insight to the surface of quality. When the seller provides fair price to the consumer, positive feelings toward the seller will be formed, and give impact to consumer satisfaction and loyalty (Yieh et al., 2007).

Al-Msallam (2015) argues that lower monetary price or lower cost does not necessary lead to higher consumer satisfaction. This is because consumer judge price and service quality equally, then decide their satisfaction level, therefore it implies to other factors as well, as if the consumer is satisfy with the price but not satisfy with the service quality, it might eventually lead them to lower consumer satisfaction too.

In the study of Rudansky-Kloppers (2014), concluded that price experience has an effect on shopping satisfaction from the same seller. If the consumer are not satisfy with the price experience, they would probably ignore the retailer in their future online shopping, else they would just buy again from the same seller. It is also said that in order to maximize online buying experience, price should be prioritized when market offerings are designed. It also bring impact to long-term relationships with their customers when customers are satisfy with the price experience offered by the similar retailers and tend to purchase more in the future.

The following hypothesis is being formulated after the section of literature review:

H₀: There is a negative relationship between price and consumer satisfaction.

H₁: There is a positive relationship between price and consumer satisfaction.

2.5 Conclusion

This chapter reviews and discusses empirical findings that are related to the factors influencing consumer satisfaction in online shopping. The foremost purpose of the literature review for the hypotheses will be examined in the following chapter by using appropriate data analysis techniques.

CHAPTER 3: METHODOLOGY

3.0 Introduction

In this chapter will discuss the research methods and procedures for data and information collection for further decision making and ultimately achieving research's target and objectives.

3.1 Research Design

Research design process proposed for analysis, collection and interpretation of data to provide the require information in a better, efficient and systematic way (Zikmund, 2013). This research will use quantitative research method. In this research, quantitative research method will be selected rather than using qualitative research method for a larger target respondents' sample size and include of multiple type of measurement and analysis (Sekaran, 2012). This method enable researcher to gather and analysis data collected and use for further hypothesis test as one of its extraordinary function is to determine the relation between dependent variables and independent variable (Madrigal, 2012).

This research method will help researchers to determine the relationship between the selected independent variables (security, product quality, e-service quality, price) and dependent variable (consumer satisfaction).

3.2 Data Collection Method

Data collection methods are the most vital parts of the research design (Sekaran, 2012). In this research, both primary data and secondary will be used. The primary data collection methods applied in the research are questionnaires. Website articles, journal articles, published researches, news and reports will be the selected secondary data collection methods (Sekaran, 2012).

3.2.1 Primary Data

Primary data is what known as first-hand data that is collected from others. First-hand data is able to be collected through data collection methods like questionnaire, survey, interview, observation, experiment, photographs, diaries, manuscripts and others (Hox & Boeije, 2005). In this research, questionnaires will be selected as primary data collection method and distributed to target respondents which is Facebook App user in Malaysia by using Google form.

3.2.2 Secondary Data

Able to review and provide direction for the further research of primary data on variables selection, development of instruments and discussion of the findings. Secondary data is the form of any data collected from other researchers or any primary data collected by previous researches for research conduct or other purposes can be used as secondary data (Hox & Boeije, 2005). In this study, secondary data like journal articles, website article, news, report and published researches are used to collect data for most part of the research.

3.3 Sampling Design

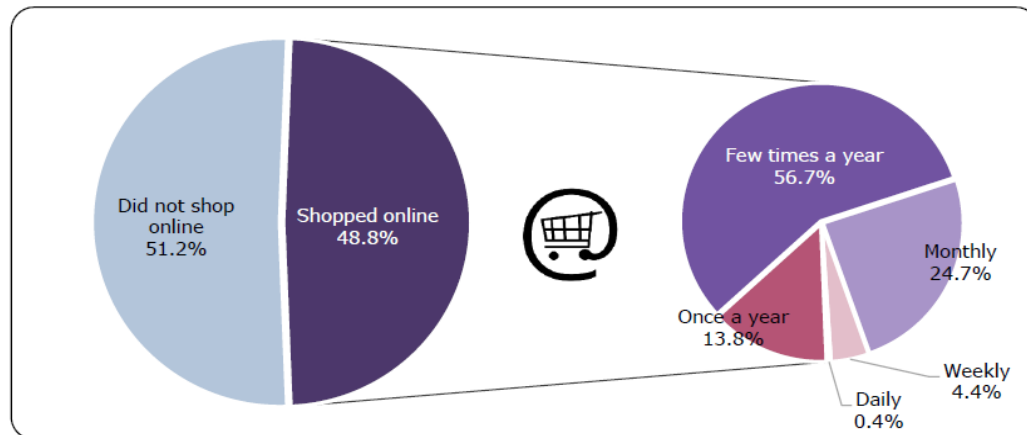
Defined as selection of certain part of population for data collection on the basis of the judgment or inference about the population. Sampling design is used because it is impossible to study every single person in the target population, so researchers will only select a portion of population in the target population which act to represent the whole target population (McLeod, 2014).

3.3.1 Target Population

The decided numbers of respondent to be selected for data collection. There will always be a group of people who have interest for the study or at least a common characteristic, and the group is known as target population (McLeod, 2014).

According to the research by Malaysian Communications and Multimedia Commission (MCMC), there are around 24.5 million users which consider as 76.9% who an access to internet and around 7.5 million users which consider as 23.1% do not have an access to the internet from the total population 32 million peoples in Malaysia (Muhammad Faizal Ahmad, 2018). Based on our Minister in the Prime Minister's Department, Dato Seri Nancy Shukri, said that there are an increasing users for internet from 2.5 million peoples in year 2006 to 24.5 million peoples in year 2017 (Adib Povera, 2018).

Figure 3.1: The percentage of Internet users by online shopping activity and percentage of online shopping frequencies in 2016



Source: Suruhanjaya Komunikasi dan Multimedia Malaysia. (2017). Internet Users Survey 2017, 1–52.

Based on figure 3.1, there are around 48.8% has made purchase through online platforms and 51.2% did not shop online (Suruhanjaya Komunikasi dan Multimedia Malaysia, 2017). There are around over half which is 56.7% who only shop online few times a year and followed by a quarter on monthly basis (24.7%). There are 4.4% who are online shop on weekly and 0.4% on daily basis. The rest 13.8% did shop online once a year (Suruhanjaya Komunikasi dan Multimedia Malaysia, 2017).

Wee Huay Neo, the director of Malaysia Digital Economy Corporation (MDEC), she has stated that Malaysian consumer is a shopaholic (Ee Ann Nee, 2017). She mentioned that Malaysia has the highest penetration of online shoppers which is 67% of Malaysian online compare with Thailand and Singapore which are 57% and 52% respectively (Ee Ann Nee, 2017).

In this research, there are seven main e-commerce platforms that selected by researchers. The seven main e-commerce platforms are Amazon, Carousell, Lazada,

Lelong, Shopee, Taobao and 11 street. This seven e-commerce platforms are well known in Malaysia.

Amazon is one the biggest online store around the world and popular in Malaysia as well (Muhammad Sharizzat, 2016).

Carousell is one of the app that developed by Singaporean and have a good potential in Malaysia's e-commerce market which is increasing the market share around 59.6% (RM3.43 billion) in year 2015 compare to RM1.82 billion in year 2013 (Rezwana Manjur, 2015).

There are around four million Malaysia's users downloaded the **Lazada App** and there are 10,000 users shop at the platforms weekly (The Star Online, 2017).

According to the Janice Tan (2018), the author clearly to list that there are around 9.5 million Malaysian visit to **Lelong** monthly.

The author also listed that there are around 13.7 million and 13.2 million Malaysian users use **Shopee** and **11 street** respectively (Janice Tan, 2018).

Besides that, there are around two hundred and ten thousand peoples using **Taobao** as their e-commerce platform in Malaysia (Craig Smith, 2018). Therefore, it is clearly to shows that the reasons of this seven e-commerce platforms selected by researchers.

3.3.2 Sampling Frame and Sampling Location

Sampling frame is a list of all target in the selected population. It is a complete list of everyone or everything wanted to be studied. The main difference of population and sampling frame is population is more general which include every single person in the population while sampling frame is more specific (Stephanie, 2017). In this study, researchers will distribute questionnaires through Facebook App. It is because this app is the most famous and more users in Malaysia. There are around 97.3% (23.83 million) of Malaysian having a Facebook account (Suruhanjaya Komunikasi dan Multimedia Malaysia, 2017). Therefore, researchers can distribute the questionnaires efficiency.

3.3.3 Sampling Elements

Single individual in the selected population (Sekaran, 2012). In this study, the sampling element is Facebook Apps user in Malaysia. Researcher will post the questionnaires (Google form) to Facebook and encourage respondent to complete the form.

3.3.4 Sampling Technique

In this research, random sampling technique under probability sampling technique was selected as sampling technique. Probability sampling is able to represent the result from the population and able to provide more accurate and credible results than non-probability sampling technique as it reflects the characteristics of the whole population. Random sampling technique is selected for this study because the population of target respondent are too large and is difficult to identify every single individual. By using the random sampling technique every single person will have an equal possibility to be chosen as respondent (Jha, 2015).

3.3.5 Sampling Size

This is an amount of selected individual from the whole population to represent as a subset of the population (Sekaran, 2012).

The table below is the sample size that been taken by researchers based on the population that been found.

Table 3.1: Krejcie and Morgan table

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384
<i>Note: N is Population Size; S is Sample Size</i>					<i>Source: Krejcie & Morgan, 1970</i>				

Source: Krejcie, R.V., & Morgan, D.W. (1970). Determining Sample Size for Research Activities. Educational and Psychological Measurement, 30, 6.

Based on the Krejcie and Morgan table (1970), the sample size in this study is 384 respondents. It is because the total population that access on the internet is around 24.5 million people which have been exceed the maximum population size that been stated in the table 3.1. Therefore, researchers are choosing the maximum sample size, 384 respondent in order to make this study more accurate.

3.4 Research Instrument

3.4.1 Questionnaire Design

Questionnaire should be devise as clear, simple, specific and relevant to the research objective as close as possible. There were two purposes of the questionnaire to be designed in this format. First of all, it is easier for the respondent to understand the question. Secondly, it helps to limit the questionnaire length. It was suggested that questions should be focused on current respondent attitude and behavior to improve the accuracy of the research (Bradburn, 2003).

In this research, the first page of the questionnaire is attached with a cover page bearing the identity and information of the researchers, including the assurance of confidentiality to motivate the respondents to answer the questionnaire.

This questionnaire consists of three sections. The nominal and ordinal scale are used in Section A for the demographic profile, such as gender, age and income. The nominal scale is used to answer the questions of gender, whereas ordinal scale is used for age, income level, how often the respondent visit online shop and purchase online. Section B comprises of four independent variables, which is security, product quality, e-service quality and price. Section C is dependent variable of this research, which is consumer satisfaction.

Five-point scale options would use in this research, and it is the most commonly used (Brace, 2004). Questionnaire had been limited to 20 words per question, however it can consist of more than one sentence (Oppenheim, 1992).

Interval scale is used in the dependent and independent variables part. They are measured by the five-point Likert scales. Because of this, researchers use Pearson Correlation and Multiple Regression tests to analyze those data.

In order to modify this questionnaire be adaptive for target respondent, question that retrieved from other research or survey was altered and augmented to fit with this research. Any question or content is not related to Malaysian, not suitable for Malaysian will be revised and modified into question that will be understand better for a Malaysian or modify the option that may potential choose by a Malaysian. Any question retrieve that consists of online shopping website that will not or rarely surf by a Malaysian will be replaced by a localized website. At the same time, any behavior or feeling that is not potentially occurring within Malaysian will be revamp to fit this research.

3.4.2 Pilot Test

This test is used to conduct research project that uses sampling and aim for small-scale audiences but does not apply rigorous standards (Zikmund et al., 2003). It is usually conducted after the assembling of the questionnaire from different sources is completed and before the research project is carried out for large-scale audiences (Zikmund et al., 2003).

Pilot test's main objective is to allow researchers to identify errors and avoid problems such as confusing questions, poorly worded questions, or unclear instructions for filling the questionnaire.

Issac and Michael (1995) have the opinion that pilot study are sufficient with 10 to 30 sets of samples when there are limitations such as financial and time constraints. Therefore, there were 30 sets of survey questionnaires distributed to residents in Kampar area on 11 June 2018 (Monday). Collection of the questionnaires, data recording, data coding and tested for reliability using SAS system took about 2 days.

3.5 Construct Measurement

3.5.1 Section A - Demographic variable

Table 3.2: Section A - Demographic variable

Section A	Items	Scale of measurement
A	<p>Demographic variables</p> <ul style="list-style-type: none">• Gender• Age• Income• Frequency of visit online shop• Frequency of purchase online• Preferred shopping website	<ul style="list-style-type: none">• Nominal• Ordinal• Ordinal• Ordinal• Ordinal• Nominal

Source: Developed for the research

Table 3.2 shows the section A of the questionnaire, the researchers used nominal and ordinal scale to construct the questionnaire.

3.5.2 Section B – Dependent variable and independent variables

Table 3.3: Section B – Dependent variable and independent variables

Section	Items	Number of question	Sources	Scales
B	Security	4	Yue, L. (2012)	Interval (5-point Likert scale)
		1	SurveyMonkey. (2018)	
	Product quality	4	Shankar, H. (2006)	Interval (5-point Likert scale)
		1	Ghoti, V. M. (2016, May 31)	
	E-Service quality	3	Yue, L. (2012)	Interval (5-point Likert scale)
		1	Smith, S. (2018, May 14)	
		1	Shankar, H. (2006)	
	Price	2	Ghoti, V. M. (2016, May 31)	Interval (5-point Likert scale)
		2	SurveyMonkey. (2018)	
		1	Shankar, H. (2006)	
	Consumer satisfaction	2	Smith, S. (2018, May 14)	Interval (5-point Likert scale)
		1	Yue, L. (2012)	
		1	Markettest. (2018)	
		1	Ghoti, V. M. (2016, May 31)	

Source: Developed for the research

There are 4 items for security which fit to the research topic are adopted from Yue, L. (2012) and the remaining item is adopted from Surveymonkey (2018). Sample item include “Online Shopping Website able to Ensure Consumer Transactions, Personal Information and Financial Security” and “Shopping Online Is Risky” from both sources.

There are 4 items for product quality are adopted from Shankar, H. (2006) and 1 item from Ghoti, V. M. (2016). Sample item include “The Product Worked Out as Well as I Thought It Would” and “Products Purchased Online Have Better Quality” from both sources.

There are 3 items for e-service quality are adopted from Yue, L. (2012), 1 item from Smith, S. (2018) and 1 item from Shankar, H. (2006). Sample item include “Online Shopping Website is Easy to Browse and Operate”, “Problem was Resolved after Contacted Customer Service” and “Delivery Was Fast” from these sources.

There are 2 items for price are adopted from Ghoti, V. M. (2016), 2 items from Surveymonkey (2018) and 1 item from Shankar, H. (2006). Sample item include “I Purchase Online because of Free Shipping”, “I Prefer Online Shopping Only If Online Prices are Lower than Actual Price” and “Internet Reduces The Cost Of Shopping” from these sources.

There are 2 items for consumer satisfaction are adopted from Smith, S. (2018), 1 item from Yue, L. (2012), 1 item from Marketest (2018) and 1 item from Ghoti, V. M. (2016). Sample item include “I am Satisfied with my Decision to Buy Online”, “I will Recommend the Website to Others”, “The Online Shopping Website Constantly meet my Requirement” and “I am Satisfied with Online Purchase Experience” from these sources.

3.6 Data Processing

Paul Rudo (2013) defined data processing as a process of using the raw data convert to a meaningful information. There are four criteria (Data Checking, Data Coding, Data Entering and Data Transcribing) in data processing. Statistical Analysis System (SAS) Enterprise Guide 7.1 will be used in this research for data processing.

3.6.1 Data Checking

Data checking is also known as data validation. Data validation known as a process to make sure the final data was match with the research's demand by containing number of quality characteristics. The process will end with acceptance or rejection of the data as the data was suitable or unmatched. The aim of data validation is to make sure the final data was refined and accurate (Marco Di Zio, 2016). In this research, researchers will double check all the questionnaires that has been collected before proceed to following step.

3.6.2 Data Coding

During the data coding process, collected data will be extracted for the preliminary codes and it will be again filtered and refined to receive codes with better accuracy. The purpose of data coding is to summarize the collected data, remove unused data and bring meaning for the data (ReadingCraze.com, 2014). In this research, the minimum code range that has been used is "1" while the maximum is "8".

Table 3.4: Data coding for questions in Section A

Question No.	Coding
<u>Section A</u>	1 = Male
1) Gender	2 = Female
2) Age	1 = 18-23 years old 2 = 24-30 years old 3 = 31-40 years old 4 = 41-50 years old 5 = 51-60 years old
3) Income	1 = Less than RM1,000 2 = RM1,000 – RM2,000 3 = RM2,001 – RM3,000 4 = RM3,001 – RM4,000 5 = More than RM4,001
4) How often you visit online shop?	1 = Everyday 2 = Weekly 3 = Monthly 4 = Once within several Months 5 = Never
5) How often do you purchase online?	1 = Everyday 2 = Weekly 3 = Monthly 4 = Once within several Months 5 = Never
6) Which online shopping website did you used the most?	1 = Amazon 2 = Carousell 3 = Lazada

	4 = Lelong 5 = Shopee 6 = Taobao 7 = 11 street 8 = Other
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Source: Developed for the research

Table 3.5: Data coding for questions in Section B

Question No.	Label	Coding
<u>Section B</u> SE (Question 1 – Question 5)	Security	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
PQ (Question 1 – Question 5)	Product Quality	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
SQ (Question 1 – Question 5)	E-Service Quality	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
PR (Question 1 – Question 5)	Price	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Source: Developed for the research

Table 3.6: Data coding for questions in Section C

Question No.	Label	Coding
CS (Question 1 – Question 5)	Consumer Satisfaction	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Source: Developed for the research

3.6.3 Data Entering

This is a computerized way of inserting these collected data into table in the form of codes. Table which consists of row and line that represent the respondent and questionnaire and each column represents one field (Dialogue, 2011). This is the step which transferring the data into SAS system for the purpose of result interpretation. All the data will be checked to ensure it is consistent with the actual data in the questionnaires.

3.6.4 Data Transcribing

This is a process of transcribe or turn any form of data into written form to ensure they are able to study in detail and use together with analytic coding (Stuckey, 2014). In this step, researchers will use SAS system to convert all the information that has been generated into data mode. Therefore, researchers can read clearly and interpret about the result.

3.7 Data Analysis

3.7.1 Descriptive Analysis

This is the decoding of raw data into meaningful information with understanding that bring explanation to questions (Munoz & Civile, 1992). In this research analysis, the overview of demographic data was illustrated using pie chart and include useful information such as percentage and frequency of the respondents.

3.7.2 Reliability Analysis

Reliability analysis is a useful method to test data collected for reliability (Bonett & Wright, 2015). It is important to have reliable data to answer research questions because of necessary of accurate answer. If the sets of the data have high varieties, the data will have low consistency and it is difficult to make a conclusion. In this research analysis, reliability of each dimension is tested by Cronbach alpha test so this survey outcome will have consistency result. It is said that higher coefficient alpha value which closer to 1 has greater reliability and the minimum value of coefficient alpha value to be as accepted reliability is 0.6, any value less than 0.6 will be unacceptable reliability (Bonett & Wright, 2015).

Table 3.7 Coefficient Alpha Ranges:

Coefficient alpha value	Strength of Association
0.80 to 0.95	Very Good Reliability
0.70 to 0.80	Good Reliability
0.60 to 0.70	Fair Reliability
< 0.60	Poor Reliability

Source: Zikmund, W. G., Babin, B. J., Carr, J. C., and Griffin, M. (2013). *Business Research Methods (9th Edition)*.

The level of reliability can be categorized into four categories, which are **very good reliability** that range from 0.80 to 0.95, **good reliability** that range from 0.70 to 0.80, **fair reliability** that range from 0.60 to 0.70 and lastly **poor reliability** for value less than 0.60.

Table 3.8: Reliability test for pilot study

No	Variables	Cronbach Alpha for Pilot Study Test	Coefficient Alpha Range
1	Security	0.955086	>0.80
2	Product Quality	0.985152	>0.80
3	E-Service Quality	0.984734	>0.80
4	Price	0.961630	>0.80
5	Consumer Satisfaction	0.979954	>0.80

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

The four independent variables including security, product quality, e-service quality, price and the dependent variable, consumer satisfaction are having a very good reliability. This is because their Cronbach's alpha values are greater than 0.80 which are **very good reliability**.

3.7.3 Inferential Analysis

In this study, the analysis will involve the relationship between dependent variable and independent variables by using Pearson Correlation Coefficient and Multiple Regression.

3.7.3.1 Pearson Correlation Coefficient

Pearson correlation coefficient is used to measure the significance value of independent variables relationship to dependent variable (Williams, 1996). Correlation coefficient can be differentiate as positive linear relationship and negative linear relationship, where the value +1 represents strongest degree of relationship which the independent variables will positively affect dependent variable, while the value -1 represents strongest degree of relationship which the independent variables will negatively affect dependent variable.

In addition, the value of 0 represents neutral relationship which the independent variables will not affect dependent variable. Pearson Correlation Analysis is chosen to test the outcome of the survey to decide the relationship between independent variables and dependent variable from the hypothesis in the earlier chapter. The closer the value of alpha coefficient to +1 or -1, the more significant the independent variables to dependent variable, and positively related if the value is positive, else it is negatively related if the value is negative.

Table 3.9 Rule of Thumb for interpreting the size of a Correlation Coefficient

Size of Correlation	Interpretation
0.90 to 1.00 (-0.90 to -1.00)	Very high positive (negative) correlation
0.70 to 0.90 (-0.70 to -0.90)	High positive (negative) correlation
0.50 to 0.70 (-0.50 to -0.70)	Moderate positive (negative) correlation
0.30 to 0.50 (-0.30 to -0.50)	Low positive (negative) correlation
0.00 to 0.30 (0.00 to -0.30)	Negligible correlation

Source: Mukaka. M. M (2012). Statistics Corner: A guide to appropriate use of Correlation coefficient in medical research. *Malawi Medical Journal*.

3.7.3.2 Multiple Regression Analysis

This is a common and very flexible analytic system to analyze data whenever the dependent variable is a quantitative variable, and to be studied in relationship to independent variables. It is necessary for statistical hypothesis testing, estimation and power analysis and it is a popular method of causal analysis. Multiple regression analysis is a versatile, all-purpose system for data analysis in behavioral, social, biological sciences and technologies (Cohen & Cohen, 1984). In this research, hypothesis in earlier chapter are also tested using multiple regression analysis. The significance of the relationship between the proposed model and consumer satisfaction can be explained through the analysis of variance where the relationship is significant when the P-value which is $Pr > F$ is less than the alpha value of 0.05 and vice versa. Besides that, R-square value in the model summary reflects the degree of impact of the proposed model to consumer satisfaction by percentage. The regression equation can be broken down into the sum of parameter estimate of the constant value, security, product quality, e-service quality and price as the calculation of consumer satisfaction determined by the proposed model.

The formula for Multiple Regression model is as:

$$“Y = a + b_1 * X_1 + b_2 * X_2 + \dots + b_p * X_p + \epsilon”$$

Where

“Y = Dependent variable”

“a = Constant”

“ b_p = The regression coefficient associated with variable, X”

“ X_p = The independent variable, where $p = 1, 2, 3 \dots$ ”

“ ϵ = An error term, normally distributed about a mean of 0 (for the purpose of computation, the ϵ is assumed to be 0).”

Accept H_1 and reject H_0 if P-value is less than 0.05 ($p > 0.05$). Otherwise, reject H_1 and accept H_0 if P-value is greater than 0.05.

3.8 Conclusion

In conclusion, research methodologies are used to collect, analyze and interpret the data. The elements of sampling design such as target population, sampling frame, sampling location, sampling elements, sampling techniques, and sample size are identified before the questionnaire formed. To collect the data from audiences, primary data collection method is used which is questionnaire. Measurement scales such as interval, ordinal and in nominal scale are used to identify demographic profile of the audiences and measure the result of independent variables and dependent variable in the questionnaire.

Aiming to reduce the error before the research is conducted on large-scale audiences, a pilot test is conducted by distributing sample of the questionnaire to online shoppers. After ensuring the questionnaire is free from error, it is then distributed to online shoppers within Malaysia by using Google form. The result collected from the questionnaire are tested for reliability and validity by using SAS system and will be discussed in the later chapter with descriptive analysis, scale measurement and inferential investigation.

CHAPTER 4: RESEARCH RESULTS

4.0 Introduction

This chapter analysis the results of 384 sets questionnaires using the Statistical Analysis System (SAS) Enterprise Guide 7.1. SAS System will be used in order to analyze the data collected from the respondents from online shoppers and assessed based on the hypothesis set in Chapter 1. The analysis will be divided into a few parts which are descriptive analysis, scale measurement, inferential analysis and conclusion. The beginning of this chapter start with descriptive analysis which cover the analysis of demographic profiles of respondents and the constructs' measurement of central tendencies.

Later on, the results of the reliability test of the questionnaires will be presented and analyze using scale measurement. The reliability test will be measured with scale measurement in the aim to identify the significance level of the statements formed by each variables towards the surveys. For inferential analysis, the relationship between the four independent variables with consumer satisfaction will be tested using the Pearson Correlation Coefficient. Furthermore, Multiple Regression Analysis will be used to explore the impact of two or more independent variables on single dependent variables. At the end, a summary on the analysis of results in Chapter 4 will be further discussed.

4.1 Descriptive Analysis

4.1.1 Respondent Demographic Profile

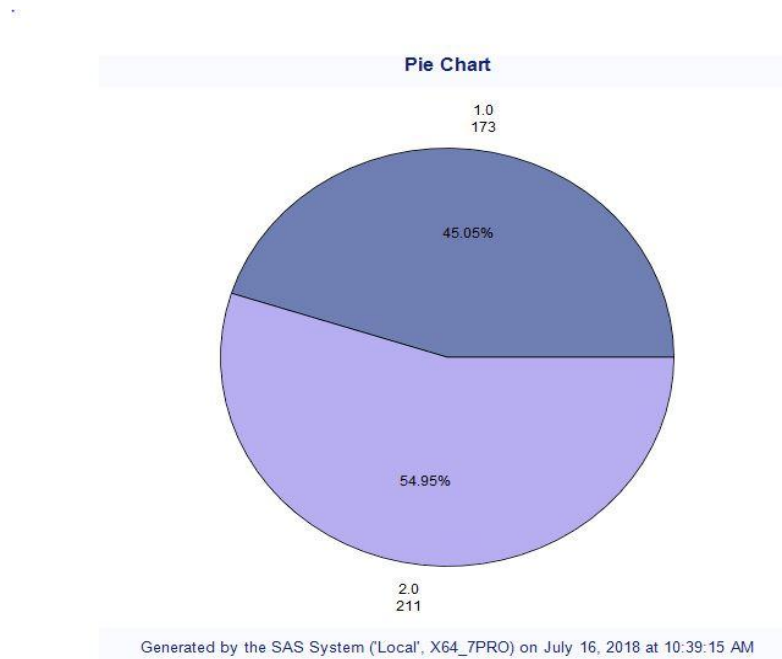
4.1.1.1 Gender

Table 4.1: Gender

Gender, 1=Male, 2=Female				
Gender	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
1	173	45.05	173	45.05
2	211	54.95	384	100%

Source: Data created for the research

Figure 4.1: Distribution of Gender



Source: Data created for the research

Figure 4.1 display the frequency of gender who are participated in answering the questionnaire, they are divided into male and female. The total number of the respondents is 384, which 173 (45.05%) of them are male and 211 (54.95%) are female.

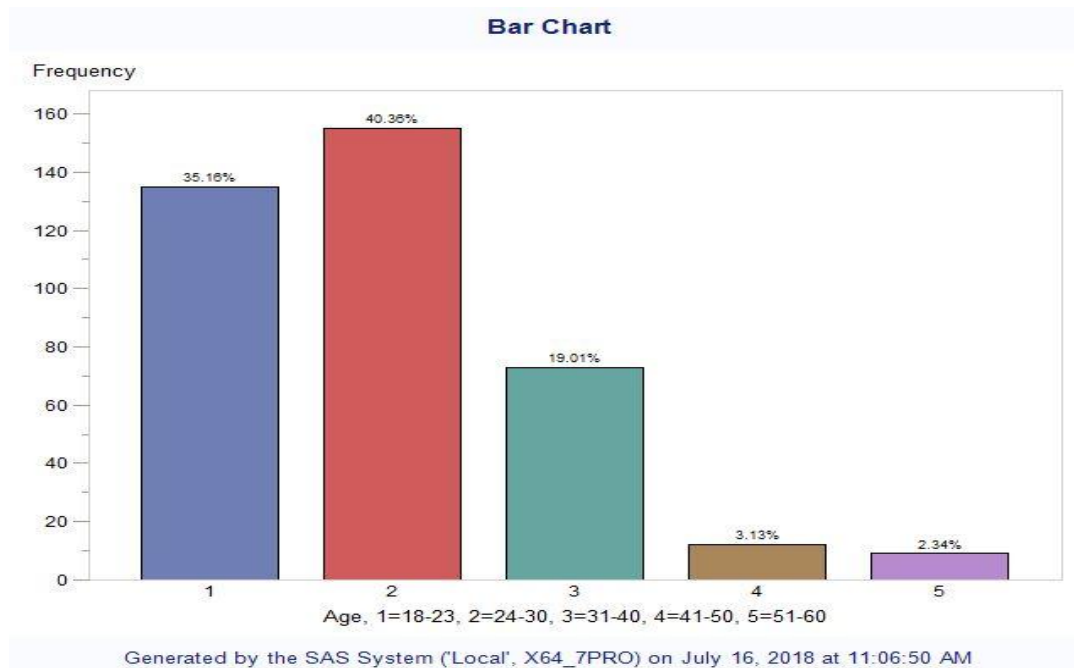
4.1.1.2 Age

Table 4.2: Age

Age, 1= 18-23 years old, 2= 24-30 years old, 3= 31-40 years old, 4= 41-50 years old, 5= 51-60 years old				
Age	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
1	135	35.16	135	35.16
2	155	40.36	290	75.52
3	73	19.01	363	94.53
4	12	3.13	375	97.66
5	9	2.34	384	100

Source: Data created for the research

Figure 4.2: Distribution of Age



Source: Data created for the research

Figure 4.2 display the frequency of different age groups of respondents who are participated in answering the questionnaire, they are divided into 18 to 23 years old, 24 to 30 years old, 31 to 40 years old, 41 to 50 years old and 51 to 60 years old. The total number of the respondents is 384, which 135 (35.16%) of them have the age of 18 to 23 years old, 155 (40.36%) of them have the age of 24 to 30 years old, 73 (19.01%) of them have the age of 31 to 40 years old, 12 (3.13%) of them have the age of 41 to 50 years old, and 9 (2.34%) of them have the age of 51 to 60 years old.

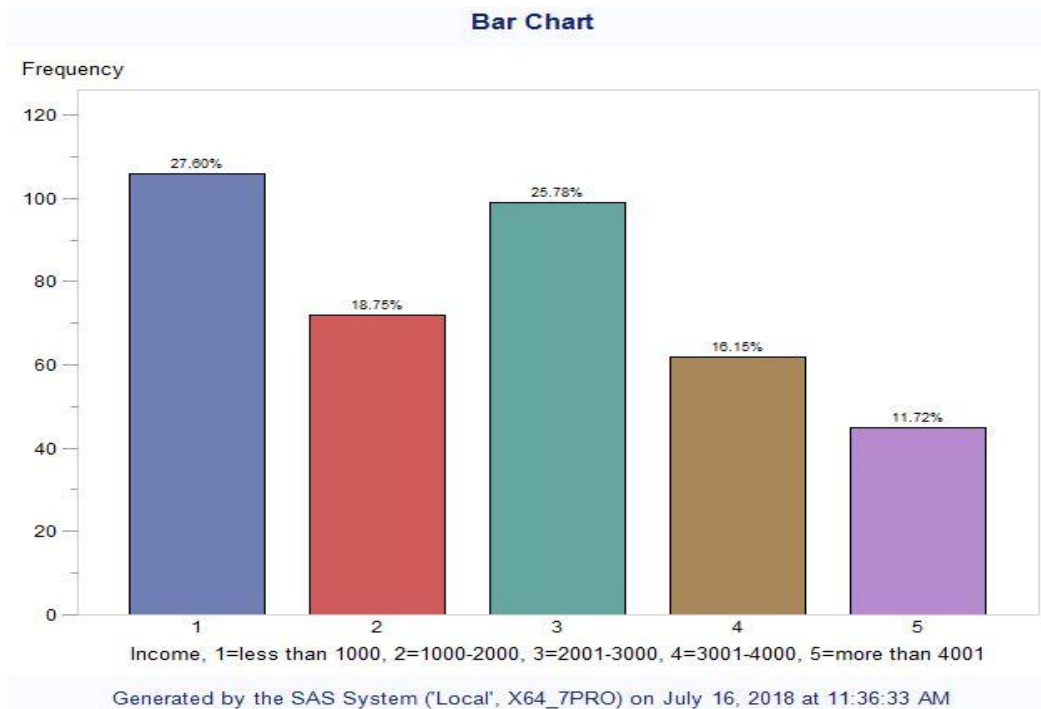
4.1.1.3 Income

Table 4.3: Income

Income, 1= less than RM1,000, 2= RM1,000-RM2,000, 3= RM2,001-RM3,000, 4= RM3,001-RM4,000, 5= more than RM4.001				
Income	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
1	106	27.60	106	27.60
2	72	18.75	178	46.35
3	99	25.78	277	72.13
4	62	16.15	339	88.28
5	45	11.72	384	100

Source: Data created for the research

Figure 4.3: Income



Source: Data created for the research

Figure 4.3 display the frequency of different income levels of respondents who are participated in answering the questionnaire, they are divided into income with less than RM1,000, income of RM1,000-RM2,000, income of RM2,001-RM3,000, income of RM3,001-RM4,000 and income of more than RM4,001. The total number of the respondents is 384, which 106 (27.60%) of them have the income less than RM1,000, 72 (18.75%) of them have the income of RM1,000-RM2,000, 99 (25.78%) of them have the income of RM2,001-RM3,000, 62 (16.15%) of them have the income of RM3,001-RM4,000, and 45 (11.72%) of them have the income of more than RM4,001.

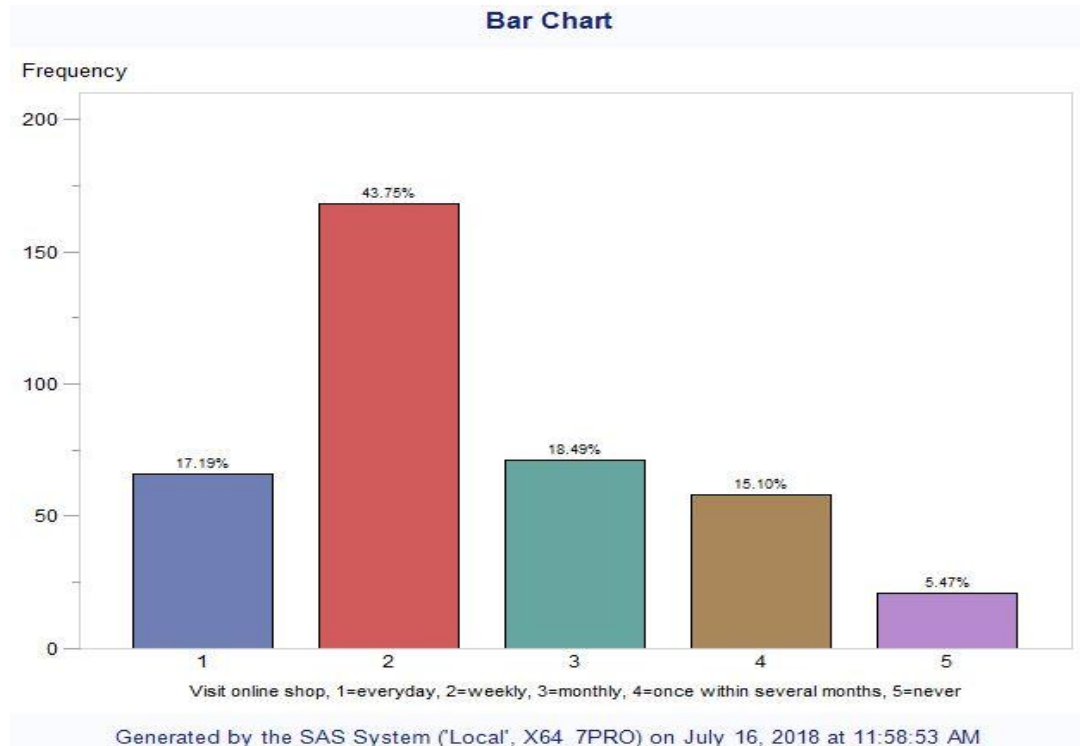
4.1.1.4 Frequency of Visiting Online Shop

Table 4.4: Frequency of Visiting Online Shop

Visit online shop, 1= Everyday, 2= Weekly, 3= Monthly, 4= Once within several months, 5= Never				
Income	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
1	66	17.19	66	17.19
2	168	43.75	234	60.94
3	71	18.49	305	79.43
4	58	15.10	363	94.53
5	21	5.47	384	100

Source: Data created for the research

Figure 4.4: Frequency of Visiting Online Shop



Source: Data created for the research

Figure 4.4 display the frequency of visiting online shop of respondents who are participated in answering the questionnaire, they are divided into frequency of everyday, weekly, monthly, once within several months, and never. The total number of the respondents is 384, which 66 (17.19%) of them visit online shop every day, 168 (43.75%) of them visit online shop weekly, 71 (18.49%) of them visit online shop monthly, 58 (15.10%) of them visit online shop once within several months, and 21 (5.47%) of them never visit online shop.

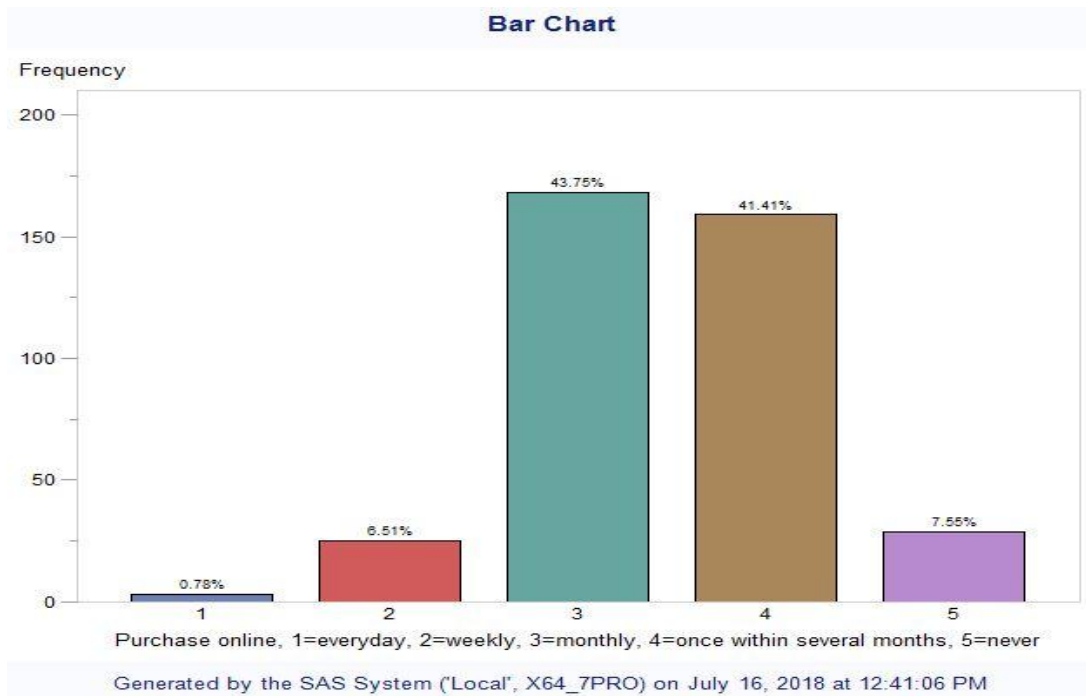
4.1.1.5 Frequency of Purchasing Online

Table 4.5: Frequency of Purchasing Online

Purchase online, 1= Everyday, 2= Weekly, 3= Monthly, 4= Once within several months, 5= Never				
Income	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
1	3	0.78	3	0.78
2	25	6.51	28	7.29
3	168	43.75	196	51.04
4	159	41.41	355	92.45
5	29	7.55	384	100

Source: Data created for the research

Figure 4.5: Frequency of Purchasing Online



Source: Data created for the research

Figure 4.5 display the frequency of purchasing online of respondents who are participated in answering the questionnaire, they are divided into frequency of everyday, weekly, monthly, once within several months, and never. The total number of the respondents is 384, which 3 (0.78%) of them purchase online every day, 25 (6.51%) of them purchase online weekly, 168 (43.75%) of them purchase online monthly, 159 (41.41%) of them purchase online once within several months, and 29 (7.55%) of them never purchase online.

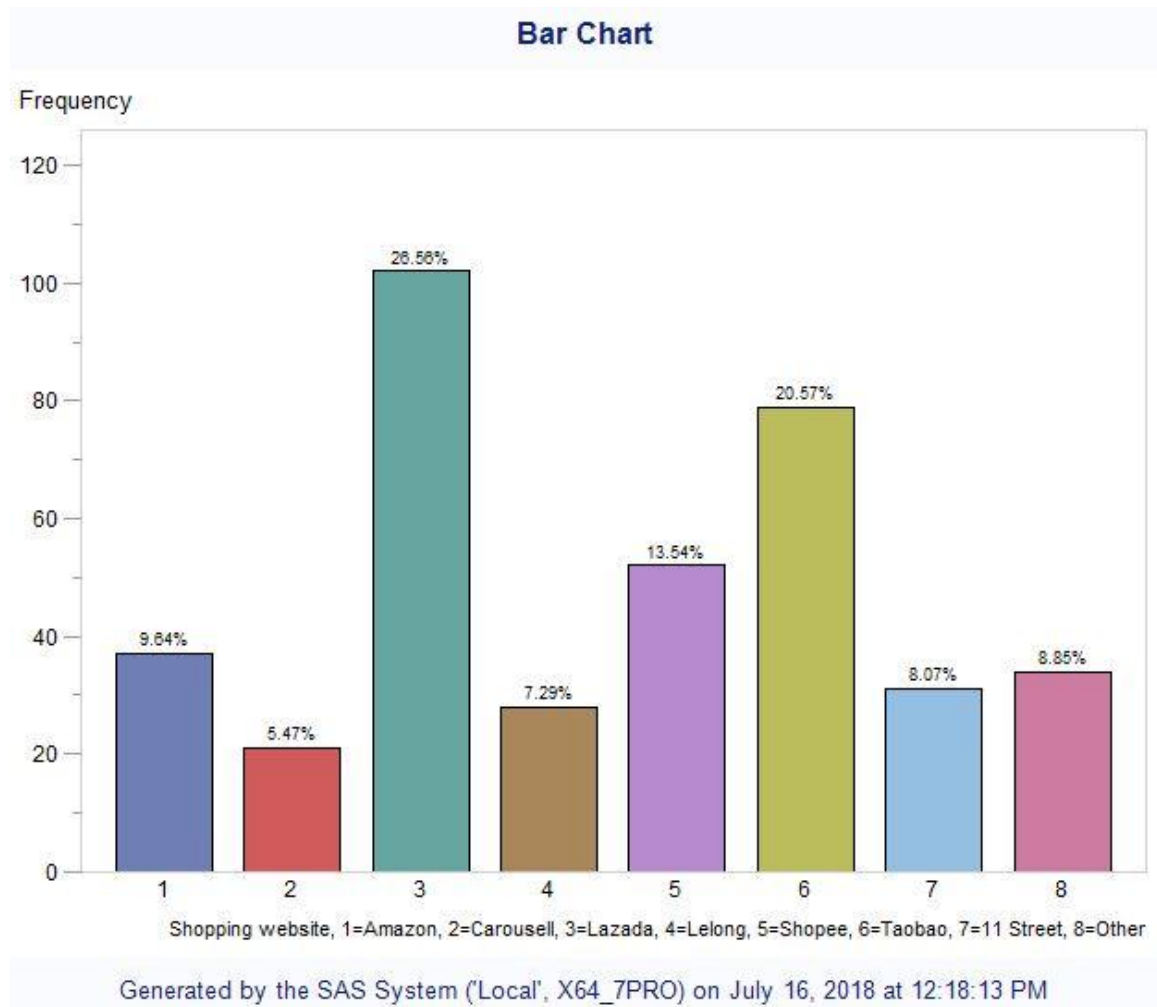
4.1.1.6 Most Used Online Shopping Website

Table 4.6: Most Used Online Shopping Website

Online shopping website, 1= Amazon, 2= Carousell, 3= Lazada, 4= Lelong, 5= Shopee, 6= Taobao, 7= 11 street, 8= Other				
Income	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
1	37	9.64	37	9.64
2	21	5.47	58	15.11
3	102	26.56	160	41.67
4	28	7.29	188	48.96
5	52	13.54	240	62.50
6	79	20.57	319	83.07
7	31	8.07	350	91.14
8	34	8.85	384	100

Source: Data created for the research

Figure 4.6: Most Used Online Shopping Website



Source: Data created for the research

Figure 4.6 display the frequency of online shopping website used by respondents participated in answering the questionnaire, they are divided into frequency of Amazon, Carousell, Lazada, Lelong, Shopee, Taobao, 11 Street, and other. The total number of the respondents is 384, which 37 (9.64%) of them used Amazon, 21 (5.47%) of them used Carousell, 102 (26.56%) of them used, 28 (7.29%) of them used Lelong, 52 (13.54%) of them used Shopee, 79 (20.57%) of them used Taobao, 31 (8.07%) of them used 11 Street, and 34 (8.85%) of them used other e-commerce platform.

4.1.2 Central Tendencies Measurement of Constructs

SAS system is used in this central tendencies to measure the mean and standard deviation for all the questions in the questionnaire.

4.1.2.1 Consumer Satisfaction

Table 4.7: Central Tendencies Measurement of Consumer Satisfaction

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
CS1	384	3.69271	0.79774	1418	1	5
CS2	384	3.73177	0.81014	1433	1	5
CS3	384	3.83854	0.86412	1474	1	5
CS4	384	3.65104	0.90146	1402	1	5
CS5	384	3.72917	0.80116	1432	1	5

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Table 4.7 shows the rankings of the mean and standard deviation for the five questions of consumer satisfaction designed in the questionnaire. The question which has the highest mean is CS3 with the value of 3.83854 and the question which has the lowest mean is CS4 with the value of 3.65104. Otherwise, the question which has the highest standard deviation is CS4 with the value of 0.90146 and the question which has the lowest standard deviation is CS1 with the value of 0.79774.

4.1.2.2 Security

Table 4.8: Central Tendencies Measurement of Security

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
SE1	384	3.50260	0.89091	1345	1	5
SE2	384	3.52865	0.88162	1355	1	5
SE3	384	3.50000	0.91691	1344	1	5
SE4	384	3.50521	0.96950	1346	1	5
SE5	384	2.59896	0.96443	998	1	5

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Table 4.8 shows the rankings of the mean and standard deviation for the five questions of consumer satisfaction designed in the questionnaire. The question which has the highest mean is SE2 with the value of 3.52865 and the question which has the lowest mean is SE5 with the value of 2.59896. Otherwise, the question which has the highest standard deviation is SE4 with the value of 0.96950 and the question which has the lowest standard deviation is SE2 with the value of 0.88162.

4.1.2.3 Product Quality

Table 4.9: Central Tendencies Measurement of Product Quality

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
PQ1	384	3.43490	0.87670	1319	1	5
PQ2	384	3.54427	0.87502	1361	1	5
PQ3	384	3.47656	0.89645	1335	1	5
PQ4	384	3.60417	0.88183	1384	1	5
PQ5	384	3.27083	0.88479	1256	1	5

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Table 4.9 shows the rankings of the mean and standard deviation for the five questions of consumer satisfaction designed in the questionnaire. The question which has the highest mean is PQ4 with the value of 3.60417 and the question which has the lowest mean is PQ5 with the value of 3.27083. Otherwise, the question which has the highest standard deviation is PQ3 with the value of 0.89645 and the question which has the lowest standard deviation is PQ2 with the value of 0.87502.

4.1.2.4 E-Service Quality

Table 4.10: Central Tendencies Measurement of E-Service Quality

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
SQ1	384	3.60156	0.85509	1383	1	5
SQ2	384	3.57552	0.83621	1373	1	5
SQ3	384	3.36979	0.88723	1294	1	5
SQ4	384	3.36198	0.90355	1291	1	5
SQ5	384	3.40885	0.96249	1309	1	5

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Table 4.10 shows the rankings of the mean and standard deviation for the five questions of consumer satisfaction designed in the questionnaire. The question which has the highest mean is SQ1 with the value of 3.60156 and the question which has the lowest mean is SQ4 with the value of 3.36198. Otherwise, the question which has the highest standard deviation is SQ5 with the value of 0.96249 and the question which has the lowest standard deviation is SQ2 with the value of 0.83621.

4.1.2.5 Price

Table 4.11: Central Tendencies Measurement of Price

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
PR1	384	3.77344	0.97393	1449	1	5
PR2	384	3.82292	0.91685	1468	1	5
PR3	384	3.75260	0.88724	1441	1	5
PR4	384	3.80729	0.89929	1462	1	5
PR5	384	3.74219	0.91901	1437	1	5

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Table 4.11 shows the rankings of the mean and standard deviation for the five questions of consumer satisfaction designed in the questionnaire. The question which has the highest mean is PR2 with the value of 3.82292 and the question which has the lowest mean is PR5 with the value of 3.74219. In other perspectives, the question which has the highest standard deviation is PR1 with the value of 0.97393 and the question which has the lowest standard deviation is PR3 with the value of 0.88724.

4.1.2.6 Summary of Central Tendencies Measurement

Table 4.12: Summary of Central Tendencies Measurement

Variable	Dimensions	Mean	Standard Deviation
Dependent Variable	Consumer Satisfaction	3.72865	0.66608
Independent Variables	Security	3.32708	0.62171
	Product Quality	3.46615	0.69335
	E-Service Quality	3.46354	0.67629
	Price	3.77969	0.71208

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Table 4.12 shows the mean and standard deviation for dependent variable and four independent variables. The variable which has the highest mean is price (PR) with the value of 3.77969 and the variable which has the lowest mean is security (SE) with the value of 3.32708. Otherwise, the variable which has the highest standard deviation is price (PR) with the value of 0.71208 and the variable which has the lowest standard deviation is security (SQ) with the value of 0.62171.

4.2 Scale Measurement

4.2.1 Reliability Test

The objective of conducting reliability test is to measure the consistency and stability of the variables of the study. There was 384 sets of questionnaire included in this reliability test and its results will be shown in the table below.

Table 4.13: Reliability Test Results for Actual Study

Variables	Dimensions	Cronbach's Alpha	Number of Item
Dependent Variables	Consumer Satisfaction	0.857547	5
Independent Variables	Security	0.704920	5
	Product Quality	0.844715	5
	E-Service Quality	0.819226	5
	Price	0.832836	5

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Based on table 4.13, the ranking of Cronbach's Alpha for all these variables in descending order are Consumer Satisfaction with the value of 0.857547, followed by Product Quality with the value of 0.844715, Price with the value of 0.832836, E-Service Quality with the value of 0.819226, and the lowest one is Security with the value of 0.704920.

From the result of the reliability test, it can be concluded that all the dimensions in the questionnaire is consistent and stable as the overall Cronbach's alphas lie between 0.70 to 0.95 which they have good reliability and very good reliability.

4.3 Inferential Analysis

4.3.1 Pearson's Correlation Coefficient

Pearson correlation coefficient is used to indicate the direction, strength and significance of the bivariate relationships amongst all the variables that are measured at an ratio or interval level.

4.3.1.1 Security and Consumer Satisfaction

Table 4.14: Correlations between Security and Consumer Satisfaction

		Consumer Satisfaction
Security	Pearson Correlation	0.63505
	P- Value	< 0.0001
	N	384

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Hypothesis One

H₀: There is a negative relationship between security and consumer satisfaction

H₁: There is a positive relationship between security and consumer satisfaction

According to table 4.14, the relationship between security and consumer satisfaction is significant because the p-value is (<0.0001), which is less than alpha value 0.05. Therefore, H₀ of hypothesis one will not be accepted and H₁ of hypothesis one will be accepted. The correlation coefficient of this relationship, 0.63505 is lie between the coefficient range of ± 0.41 to ± 0.70 , indicating the relationship between security and consumer satisfaction is moderate. As result, there is a **positive relationship** between security and consumer satisfaction.

4.3.1.2 Product Quality and Consumer Satisfaction

Table 4.15: Correlations between Product Quality and Consumer Satisfaction

		Consumer Satisfaction
Product Quality	Pearson Correlation	0.72418
	P- Value	< 0.0001
	N	384

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Hypothesis Two

H₀: There is a negative relationship between product quality and consumer satisfaction

H₁: There is a positive relationship between product quality and consumer satisfaction

According to table 4.15, the relationship between product quality and consumer satisfaction is significant because the p-value is (<0.0001), which is less than alpha value 0.05. Therefore, H₀ of hypothesis two will not be accepted and H₁ of hypothesis two will be accepted. The correlation coefficient of this relationship, 0.72418 is lie between the coefficient range of ± 0.71 to ± 0.90 , indicating the relationship between product quality and consumer satisfaction is strong. As result, there is a **positive relationship** between product quality and consumer satisfaction.

4.3.1.3 E-Service Quality and Consumer Satisfaction

Table 4.16: Correlations between E-Service Quality and Consumer Satisfaction

		Consumer Satisfaction
E-Service Quality	Pearson Correlation	0.70216
	P- Value	< 0.0001
	N	384

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Hypothesis Three

H₀: There is a negative relationship between e-service quality and consumer satisfaction

H₁: There is a positive relationship between e-service quality and consumer satisfaction

According to table 4.16, the relationship between e-service quality and consumer satisfaction is significant because the p-value is (<0.0001), which is less than alpha value 0.05. Therefore, H₀ of hypothesis three will not be accepted and H₁ of hypothesis three will be accepted. The correlation coefficient of this relationship, 0.70216 is lie between the coefficient range of ± 0.41 to ± 0.70 , indicating the relationship between e-service quality and consumer satisfaction is moderate. As result, there is a **positive relationship** between e-service quality and consumer satisfaction.

4.3.1.4 Price and Consumer Satisfaction

Table 4.17: Correlations between Price and Consumer Satisfaction

		Consumer Satisfaction
Price	Pearson Correlation	0.65686
	P- Value	< 0.0001
	N	384

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Hypothesis Four

H₀: There is a negative relationship between price and consumer satisfaction

H₁: There is a positive relationship between price and consumer satisfaction

According to table 4.17, the relationship between price and consumer satisfaction is significant because the p-value is (<0.0001), which is less than alpha value 0.05. Therefore, H₀ of hypothesis four will not be accepted and H₁ of hypothesis four will be accepted. The correlation coefficient of this relationship, 0.65686 is lie between the coefficient range of ± 0.41 to ± 0.70 , indicating the relationship between price and consumer satisfaction is moderate. As result, there is a **positive relationship** between price and consumer satisfaction.

4.3.2 Multiple Regression Analysis

Multiple regression analysis use more than one independent variable to explain variance in a dependent variable.

Table 4.18: Analysis of Variance

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	109.94564	27.48641	173.68	< 0.0001
Error	379	59.97926	0.15826		
Corrected Total	383	169.92490			

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Hypothesis Five

H₀: There is a significant negative relationship between the four variables (security, product quality, e-service quality, and price) and consumer satisfaction

H₁: There is a significant positive relationship between the four variables (security, product quality, e-service quality, and price) and consumer satisfaction

Based on table 4.18, the relationship between the F-statistic is significant because the value is (<0.0001), which is less than alpha value 0.05. The result indicates that the proposed model of this study is good contributor to the study of the relation between the independent variables (security, product quality, e-service quality, and price) and dependent variable (consumer satisfaction).

Table 4.19: Model Summary

Root MSE	0.39781	R-Square	0.6470
Dependent Mean	3.72865	Adj R-Sq	0.6433
Coeff Var	10.66915		

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

The amount of R-square value indicates the effectiveness of independent variables to explain the dependent variable. The height of the R-square value reflects the degree of impact of the proposed model to the dependent variable. According to table 4.19, the model has 64.70% of impact to the dependent variable while there is another 35.3% of area which is unidentified by the current model with the existing independent variables of security, product quality, e-service quality, and price. Therefore, there will be other variables that are important in explaining consumer satisfaction have yet to be considered in this research.

Table 4.20: The Estimates of Parameter

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	0.46226	0.12929	3.58	0.0004
SE	1=SD, 2=D, 3=N, 4=A, 5=SA	1	0.16676	0.04829	3.45	0.0006
PQ	1=SD, 2=D, 3=N, 4=A, 5=SA	1	0.27569	0.05114	5.39	< 0.0001
SQ	1=SD, 2=D, 3=N, 4=A, 5=SA	1	0.20340	0.04949	4.11	< 0.0001
PR	1=SD, 2=D, 3=N, 4=A, 5=SA	1	0.27819	0.03651	7.62	< 0.0001

Source: Data generated by Statistical Analysis System (SAS) Enterprise Guide 7.1.

Table 4.20 shows the significance of explanation of each independent variable towards the dependent variable by comparing the p-value of each independent variable with the alpha value, which is 0.05. Security is significant in predicting consumer satisfaction because of its p-value of 0.0006 is less than the alpha value 0.05. Product quality is also significant in predicting consumer satisfaction because of its p-value of (<0.0001) is less than the alpha value of 0.05. The remaining two independent variables are also both significant in predicting consumer satisfaction because of their p-value respectively, which are (<0.0001) and also (<0.0001) are both less than alpha value of 0.05.

Regression Equation

The multiple linear regression equation is represented as below:

$$Y = a + b1(X1) + b2(X2) + b3(X3) + b4(X4)$$

Y = Consumer satisfaction

a = Constant value

X1: Security (SE)

X2: Product quality (PQ)

X3: E-Service quality (SQ)

X4: Price (PR)

$$\text{Consumer satisfaction} = 0.46226 + 0.16676 \text{ (SE)} + 0.27569 \text{ (PQ)} + 0.20340 \text{ (SQ)} + 0.27819 \text{ (PR)}$$

The best predictor for the model is price as it has the highest parameter estimate of 0.27819 and bring the most impact to consumer satisfaction, followed by the second highest variable, product quality with parameter estimate of 0.27569, and third highest belongs to e-service quality with parameter estimate of 0.20340 and lastly security with parameter estimate of 0.16676.

4.4 Conclusion

As a conclusion, different type of tests between independent variables and dependent variable in this chapter lead to a significant relationship that could affect the consumer satisfaction of online shoppers in Malaysia.

The results of the tests can be used as reference for researchers to conduct research in the future which will be further discussed in Chapter 5 about how the results of this research can be important and beneficial for online shopper, online seller and manager to manage their business in the future.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter studied the statistical analyses by transferring and summarizing the data from Chapter 4. Researchers tend to find out the implication and limitation of the research and provide some suggestions. Researchers will concluded the overall study of this research.

5.1 Summary of Statistic Analysis

5.1.1 Summary of Descriptive Analysis

The purpose of this chapter is to study the statistical analyses from the previous chapter by transferring and summarizing the computed data. Besides that, this chapter will discuss regarding the major finding by comparing the research questions and hypotheses and their result of relationship. This chapter will then followed by the implications of the study which listed the potential benefit the research brings. At last, the chapter will end with discussing the limitation of the study, follow by the recommendations and a conclusion for the study.

Table 5.1 Summary of Demographic Information

Demographic Factors	Categories	Frequency	Percentage (%)
Gender	Male	173	45.5
	Female	211	54.95
Age	18-23	135	35.16
	24-30	155	40.36
	31-40	73	19.01
	41-50	12	3.13
	51-60	9	2.34
Income	Less than RM1,000	106	27.60
	RM1,000-RM2,000	72	18.75
	RM2,001-RM3,000	99	25.78
	RM3,001-RM4,000	62	16.15
	More than RM4,001	45	11.72
Frequency of Visiting Online Shop	Everyday	66	17.19
	Weekly	168	43.75
	Monthly	71	18.49
	Once within several months	58	15.10
	Never	21	5.47
Frequency of Purchasing Online	Everyday	3	0.78
	Weekly	25	6.51
	Monthly	168	43.75

	Once within several months	159	41.41
	Never	29	7.55
Most Used Online Shopping Website	Amazon	37	9.64
	Carousell	21	5.47
	Lazada	102	26.56
	Lelong	28	7.29
	Shopee	52	13.54
	Taobao	79	20.57
	11street	31	8.07
	Other	34	8.85

Source: Developed for the research

Based on table 5.1, it displays the summary of demographic information that collected through the survey. It shows that more female respondent was participated in the research with a percentage of 57.31% compare to number of male respondents which is only 42.69%.

In the other hand, there are a large number of the respondents was from the group 19 to 23 years old and group 24 to 30 years old which provided 35.16% and 40.36% respectively, while group 51 to 60 years old was the smallest respondents group which only consists of 9 respondents or 2.34% from the total data collected.

Income of respondents balance split between each group which income group of less than RM1, 000 was the largest group that consists of 106 (27.6%) and group with the income of more than RM4,001 became the smallest group with 45(11.72%) respondents.

In additional, most of the respondents or 168 (43.75%) respondents visit the online shopping website weekly while only 21 or 5.47% of the respondents said that they never visit any online shopping website.

Furthermore, more than 80% of the respondents said that they would either purchase online monthly or once within several months. 168 (43.75%) respondents purchase online monthly and 159 (41.41%) respondents purchase once within several months. The result of the survey also showed that majority or 102 (26.56%) respondents purchase at Lazada and 79 (20.57%) respondents said they choose to purchase at Taobao. Besides that, none of the website able to reach the 20% mark.

5.1.2 Summary of the Inferential Analysis

5.1.2.1 Scale Measurement

Table 5.2: Central Tendencies Measurement of Constructs

Variables	Dimensions	Mean	Standard Deviation
Dependent Variables	Consumer Satisfaction	3.72865	0.66608
Independent Variables	Security	3.32708	0.62171
	Product Quality	3.46615	0.69335
	E-Service Quality	3.46354	0.67629
	Price	3.77969	0.71208

Source: Developed for the research

5.1.2.2 Reliability Test

Table 5.3 Summary of Reliability Test Result

Variables	Dimensions	Cronbach's Alpha	Reliability
Dependent Variable	Consumer Satisfaction	0.857547	Very Good
Independent Variables	Security	0.704920	Good
	Product Quality	0.844715	Very Good
	E-Service Quality	0.819226	Very Good
	Price	0.832836	Very Good

Source: Developed for the research

5.1.2.3 Person Correlation Analysis

Table 5.4: Summary of Pearson Correlations Result

N=384

Consumer Satisfaction		Security	Product Quality	E-service Quality	Price
	Person Correlation	0.63505	0.72418	0.70216	0.65686
	P- Value	<0.0001	<0.0001	<0.0001	<0.0001
	Strength of Association	Fair Positive Correlation	Strong Positive Correlation	Strong Positive Correlation	Fair Positive Correlation

Source: Developed for the research

5.1.2.4 Multiple Regression Analysis

Table 5.5: Summary of Multiple Regression Analysis Result

Variable	Parameter Estimate	Pr > t	R - Square
Intercept	0.46226	0.0004	0.6470
Security	0.16676	0.0006	
Product Quality	0.27569	< 0.0001	
Service Quality	0.20340	< 0.0001	
Price	0.27819	< 0.0001	

Source: Developed for the research

5.2 Discussions of Major Findings

Table 5.6: The Summary of Pearson Correlation Coefficient Result

No.	Research Questions	Hypothesis	Result
1.	Is there positive or negative relationship between security and consumer satisfaction?	H1: Security has a significant relationship with consumer satisfaction.	There is a positive significant relationship. $r = 0.63505$ $p = <0.0001$
2.	Is there positive or negative relationship between product quality and consumer satisfaction?	H2: Product Quality has a significant relationship with consumer satisfaction.	There is a positive significant relationship. $r = 0.72418$ $p = <0.0001$
3.	Is there positive or negative relationship between e-service quality and consumer satisfaction?	H3: E-service Quality has a significant relationship with consumer satisfaction.	There is a positive significant relationship. $r = 0.70216$ $p = <0.0001$
4.	Is there positive or negative relationship between price and consumer satisfaction?	H4: Price has a significant relationship with consumer satisfaction.	There is a positive significant relationship. $r = 0.65686$ $p = <0.0001$

Source: Developed for the research

5.2.1 Security

H₁: Security has a significant relationship with consumer satisfaction.

Based on table 5.6, the value of Pearson correlations of 0.63505 able to prove that there is a positive relationship between security and consumer satisfaction. This result was similar with the finding of online shopping is not trustworthy and reliable to online consumer because of the online payment system and personal privacy (Karim, 2013). The finding was yet again strengthen by the result of security was within one of the five antecedents that affect consumer satisfaction besides of information quality, payment system, delivery and customer service (Nugroho, 2012).

5.2.2 Product Quality

H₂: Product Quality has a significant relationship with consumer satisfaction.

The table above shows the value of Pearson correlations of product quality and consumer satisfaction. The value of 0.72418 implied that product quality and consumer satisfaction has a positive relationship. The similar result was the in previous research. A consumer preferences study shows product quality was within one of the three most researchable factors that give impact of changes to online consumer satisfaction (Schaupp, 2005). The result was strengthen by the research by Luo, Ba and Zhang (2012), where the research was done on eight determinants and reconfirmation that proved product quality was together with website design, security, information quality, payment method, e-service quality, product variety and delivery service.

5.2.3 E-service Quality

H3: E-service Quality has a significant relationship with consumer satisfaction.

According to the table 5.6, the value of 0.72418 for Pearson's correlations shows that both E-service quality and consumer's satisfaction has a positive relationship. The result was similar with the outcome of product delivery, warranties, return policies and lack of customer service will affect the online consumer satisfaction (Karim, 2013). At the same time, the result was supported by e-service quality and information quality was two variables that affecting consumer satisfaction (Izyan Hizza Bt. Hila Ludin, 2014). The finding for e-service quality and consumer satisfaction construct also consistent with studies of Luo, Ba and Zhang (2012). The researchers stated that e-service quality could help to improve trust and satisfaction for consumer as there was low visibility on the sellers (Luo, Ba and Zhang, 2012).

5.2.4 Price

H4: Price has a significant relationship with consumer satisfaction.

Table 5.6 shows the relationship between price and consumer satisfaction was positive significant with a Pearson's correlations value of 0.65686. The result shared the similar outcome with the past finding which the price of the product is the most important within the attribute of product value in affecting online consumer satisfaction (L. Christian Schaupp, 2005). The result is again strengthened with the finding of price rationality and product quality did positively affect the online consumer satisfaction (Liya Zhao, 2015).

5.3 Implications of the Study

5.3.1 Managerial Implication

This research focused on four of the common factors that would affect the consumer satisfaction that already studied by previous researchers which again strengthen the positive relationship between consumer satisfaction and security, product quality, e-service quality and price from the aspect of online shopping. The research helps to improve the overall study of the most anticipated industry, e-commerce. The result of this research provides a guideline for online sellers to generate their strategies to improve their business through increase consumer satisfaction. It is important that the business concerns of all four factors affecting consumer satisfaction and evaluate it into further strategies.

5.3.1.1 Security

Security is the protection provided by the online seller to online consumer. It can be in the form of personal data protection or user authentication protection (Guo, 2012). Without security, online consumer will not have the feel of safety to purchase at that website. By having good security, consumer will feel secure and satisfy.

Certain commitment must be done by the online seller in order to reach the needed level of security. First of all, selecting the correct online marketplace is a must for a successful online business. Online marketplaces like Amazon, Lazada, Lelong and Taobao have their own security system. Choosing a platform that already has more reliable security system will improve the satisfaction of consumer regarding the security (Schiff, 2013).

At the same time, remember to not store sensitive private data like consumers' credit card numbers, web money account number and e-wallet account number (Schiff, 2013). By stated in agreement during registration, purchase or transaction will allow consumer to feel more secure on their private data and this allow more online consumer to willing to purchase online.

5.3.1.2 Product Quality

Product quality was always one of the standards to retain consumer (STAFF, 2018). By having good product quality, consumer will satisfy, continue to purchase and even suggest to others. However, if poor quality product was delivered, consumer satisfaction will decrease and occasionally look for substitution. Online sellers not only have to ensure the product quality before the delivery, sellers do need to ensure the condition of product was mint when it reached the consumer.

To improve product quality, quality checking process is a must. By checking every product, sellers ensure that there was no defected product before the delivery of product. Every product that been examined can be seal with a quality seal (Bee, 2017). It served as prove that the product was confirmed to be mint and it was unopened during the delivery process.

Choosing a good deliver company is also a way to ensure product quality when they reached consumer. Sometimes, online sellers tried their best to make sure they provide the best product but it had been ruined during the delivery. Deliver have huge impact in having good quality product because there are uncertainty during the process and the well-produced product will be damaged during it.

5.3.1.3 E-Service Quality

E-service not only includes the process before the transaction, after sales services also an important factor of affecting consumer satisfaction. Many online which only putting their efforts in every before sales service but forgot about after sales service will only lose their customer (Kendre, 2016).

To improve before sales service, online seller can provide more contact option (Hendricks, 2017). Many online sellers nowadays still provide only old type of contact like telephone, fax and email. As an online seller, the trend of social network must be followed. Social network like Facebook, Twitter, live chat and Skype must be included in the contact list. It not only able to closer the gap with younger generation consumer, it also able to self-advertises.

Quality of the search engine was provided to ensure the satisfaction of consumer and at the same time prevent any unnecessary contact or customer service that eventually wasting both seller and buyer time (Hendricks, 2017). A well designed search engine not only improved consumer satisfaction through shorter surfing time, it also helps seller to promote their product in a better and easier way.

5.3.1.4 Price

Price always a main concern for a consumer to choose where to purchase. Consumer will compare the quality of product with the listed price. Online sellers must understand their position, how much their product worth and how much people were willing to pay for it. Extra fees, charges and tax was certainly an important concern for both parties.

The word “Free Shipping” is seems to be very sensitive in this research and also previous researches. A free shipping offer was believed to be more effective in attracting customer than provide a same amount of discount. High shipping placed at first place for factor affecting consumer satisfaction by previous researcher and was main reason for consumer to purchase online (Laja, 2017).

5.4 Limitations of Study

There are some limitations were found during the research process. The methods that used in this research had encountered a lot of barriers during the data collection. In order to prevent similar situation happen in future research, some recommendations have been done to reduce the chance for other researchers that working on the similar research occur the same condition.

First of all, independent variables in this research were found to be too common and had been done by many researchers. In order to accurately measure the factor affecting online consumer satisfaction, some innovative ideal must be included in the study. This research may further proved the result of past researches. However to study an industry that changes in very quick pace like e-commerce, continuously study and prove similar research will be effective.

Furthermore, demographic status of the respondents was found to be unbalanced. Limited respondents beside students were received and this would cause the research unable to gather data from every range, income and races. Distributions done by sharing the link through social network were believed to be only able to receive responses from similar social group. Respondent from similar race, social status, income and interest might cause the research outcome to be limited.

5.5 Recommendations for Future Research

At the aim of attaining a more convincing result regarding the dependent variable (consumer satisfaction), innovative independent variables was recommended. Payment method is the suggested independent variable. Payment method is not mean by credit card, bank in or debit card which already done by many researchers. However, the payment method we should include is Paypal, Alipay and electronic wallets. These are new type of payment methods which begins to be widely used since past few years. Through the investment by Jack Ma's Alibaba, Alipay was introduced in Malaysia and become one of the available online payment method especially for online consumer that purchase in China's website like Taobao.

To prevent responses from similar races, social status, income level and ideal, questionnaires should not be distributed privately. Future researchers were suggested to look for more reliable method of distribution of questionnaire to include more respondents from different demographic status. A professional survey website can be a good choice for future researcher to receive wider range of respondents.

5.6 Conclusion

Result of the research implied that Security, Product Quality, E-Service Quality and Price of items has a significant relationship with Online Consumer Satisfaction. The result of research could help to enhance the understanding the relationship between security, product quality, e-service quality and price with online consumer satisfaction. This research believed to be able to benefit the growing market of online shopping or e-commerce through allowing researchers and business to understand factors affecting the online consumer satisfaction.

For future research, in order to help future researchers' studies, implication, limitation and recommendation for future researches were provided. This research may utilized by future researchers for reference purposes.

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APPENDICES

Appendix A: Questionnaire Reference

No	Questionnaire	Reference
	Section A-Demographic	
6	Which online shopping website did you used the most?	marketest. (2018). <i>Online shopping</i> . Retrieved from marketest.co.uk: http://www.marketest.co.uk/market-research-questionnaire/74/online-shopping
Security	Section B-Independent Variable	
SE1	Online shopping website able to ensure my transactions, personal information and financial security.	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Lepp ävaara: Laurea University of Applied Sciences .
SE2	Online seller will make up for me because their system's guard was sufficient.	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Lepp ävaara: Laurea University of Applied Sciences .
SE3	Online shopping website was able to accurately provide service and services information (include the buyer/seller credit rating, trading rules, sales activities information, etc.)	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Lepp ävaara: Laurea University of Applied Sciences .
SE4	Online shopping website had clearly after sale rules (include complain policies, return policies,etc)	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Lepp ävaara: Laurea University of Applied Sciences .
SE5	Shopping online is risky.	surveymonkey. (2018). <i>Online shopping-Indian Consumer's Perspective</i> . Retrieved from surveymonkeycom: https://www.surveymonkey.com/r/6SRDW9V
Product Quality		

PQ1	The product worked out as well as I thought it would.	Shankar, H. (2006). <i>Online Shopping Questionnaire</i> . Retrieved from scribd.com: https://www.scribd.com/doc/124762423/Online-Shopping-Questionnaire
PQ2	My choice to buy the product online was a wise choice.	Shankar, H. (2006). <i>Online Shopping Questionnaire</i> . Retrieved from scribd.com: https://www.scribd.com/doc/124762423/Online-Shopping-Questionnaire
PQ3	If I could do it over again, I'd buy the same product / model.	Shankar, H. (2006). <i>Online Shopping Questionnaire</i> . Retrieved from scribd.com: https://www.scribd.com/doc/124762423/Online-Shopping-Questionnaire
PQ4	I feel good about my decision to buy the product.	Shankar, H. (2006). <i>Online Shopping Questionnaire</i> . Retrieved from scribd.com: https://www.scribd.com/doc/124762423/Online-Shopping-Questionnaire
PQ5	Products purchased online have better quality.	Ghoti, V. M. (2016, May 31). <i>QUESTIONNAIRE</i> . Retrieved from http://shodhganga.inflibnet.ac.in : http://shodhganga.inflibnet.ac.in/bitstream/10603/97614/18/18_appendix.pdf
E-Service Quality		
SQ1	Online shopping website is easy to browse and operate.	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Leppävaara: Laurea University of Applied Sciences .
SQ2	The information cataloged simply and clearly in online shopping website.	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Leppävaara: Laurea University of Applied Sciences .
SQ3	FAQ page of the website was able to resolve my problem.	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Leppävaara: Laurea University of Applied Sciences .

SQ4	Problem was resolved after contacted customer service.	Smith, S. (2018, May 14). <i>Customer Satisfaction Survey Questions: 5 Sample Templates You Can Use Today</i> . Retrieved from qualtrics.com: https://www.qualtrics.com/blog/customer-satisfaction-survey-questions/
SQ5	Delivery was fast.	Shankar, H. (2006). <i>Online Shopping Questionnaire</i> . Retrieved from scribd.com: https://www.scribd.com/doc/124762423/Online-Shopping-Questionnaire
Price		
PR1	I purchase online because of free shipping.	Ghoti, V. M. (2016, May 31). <i>QUESTIONNAIRE</i> . Retrieved from http://shodhganga.inflibnet.ac.in : http://shodhganga.inflibnet.ac.in/bitstream/10603/97614/18/18_appendix.pdf
PR2	I prefer online shopping only if online prices are lower than actual price.	surveymonkey. (2018). <i>Online shopping-Indian Consumer's Perspective</i> . Retrieved from surveymonkey.com: https://www.surveymonkey.com/r/6SRDW9V
PR3	Online seller offer better price.	surveymonkey. (2018). <i>Online shopping-Indian Consumer's Perspective</i> . Retrieved from surveymonkey.com: https://www.surveymonkey.com/r/6SRDW9V
PR4	Internet reduces the cost of shopping.	Shankar, H. (2006). <i>Online Shopping Questionnaire</i> . Retrieved from scribd.com: https://www.scribd.com/doc/124762423/Online-Shopping-Questionnaire
PR5	I purchase online because there is more discount while purchasing more quantity online.	Ghoti, V. M. (2016, May 31). <i>QUESTIONNAIRE</i> . Retrieved from http://shodhganga.inflibnet.ac.in : http://shodhganga.inflibnet.ac.in/bitstream/10603/97614/18/18_appendix.pdf
Consumer Satisfaction	Section C-Dependent Variable	

CS1	I am satisfied with my decision to buy online.	Smith, S. (2018, May 14). <i>Customer Satisfaction Survey Questions: 5 Sample Templates You Can Use Today</i> . Retrieved from qualtrics.com: https://www.qualtrics.com/blog/customer-satisfaction-survey-questions/
CS2	I will recommend the website to others.	Yue, L. (2012). <i>Chinese customer satisfaction survey of online</i> . Laurea Lepp ävaara: Laurea University of Applied Sciences .
CS3	I would buy again at the same website.	Smith, S. (2018, May 14). <i>Customer Satisfaction Survey Questions: 5 Sample Templates You Can Use Today</i> . Retrieved from qualtrics.com: https://www.qualtrics.com/blog/customer-satisfaction-survey-questions/
CS4	The online shopping website constantly meet my requirement	marketest. (2018). <i>Online shopping</i> . Retrieved from marketest.co.uk: http://www.marketest.co.uk/market-research-questionnaire/74/online-shopping
CS5	I am satisfied with online purchase experience.	Ghoti, V. M. (2016, May 31). <i>QUESTIONNAIRE</i> . Retrieved from http://shodhganga.inflibnet.ac.in : http://shodhganga.inflibnet.ac.in/bitstream/10603/97614/18/18_appendix.pdf

Appendix B: Permission Letter for Conducting Survey



UNIVERSITI TUNKU ABDUL RAHMAN
Wholly Owned by UTAR Education Foundation (Company No. 578227-M)

13th June 2018

To Whom It May Concern

Dear Sir/Madam,

Permission to Conduct Survey

This is to confirm that the following students are currently pursuing their *Bachelor of Business Administration (Hons)* program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

I would be most grateful if you could assist them by allowing them to conduct their research at your institution. All information collected will be kept confidential and used only for academic purposes.

The students are as follows:

Name of Student

Kevin Chai Yee Sheng
Li Yeen Yeen
Lim Woei Luen
Ong Sheng Peng

Student ID

11ABB02276
15ABB08069
14ABB06802
10ABB03320

If you need further verification, please do not hesitate to contact me.

Thank you.

Yours sincerely,

Dr Choong Yuen Onn
Head of Department,
Faculty of Business and Finance
Email: choongyo@utar.edu.my

Cik Khairunnisa Binti Ishak
Supervisor,
Faculty of Business and Finance
Email: khairunnisa@utar.edu.my

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
Sungai Long Campus : Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia
Tel: (603) 9086 0288 Fax: (603) 9019 8868
Postal Address: PO Box 11348, 50744 Kuala Lumpur, Malaysia
Website: www.utar.edu.my

Appendix C: Questionnaire



**UNIVERSITI TUNKU ABDUL RAHMAN (UTAR KAMPAR)
FACULTY OF BUSINESS AND FINANCE (FBF)
BACHELOR OF BUSINESS ADMINISTRATION (HONS)
FINAL YEAR PROJECT**

Factors Influencing Consumer Satisfaction in Online Shopping

Dear Respondents:

We are students of Bachelor of Business Administration (Hons) from Universiti Tunku Abdul Rahman (UTAR). We are currently doing our final year project with title of **“Factors Influencing Consumer Satisfaction in Online Shopping”**.

The purpose of this research is to identify the significant relationship between security, product quality, e-service quality, price with consumer satisfaction among online shopping user in Malaysia. This research will help to improve the consumer satisfaction in online shopping.

Instructions:

- 1) This questionnaire consists **THREE** (3) sections. Please answer ALL questions in ALL sections.
- 2) Completion of this form will take you approximately Three (3) to Five (5) minutes.
- 3) The contents of this questionnaire will be kept **strictly confidential**.
- 4) Please be informed that in accordance with Personal Data Protection Act 2010 (“PDPA”) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (“UTAR”) is hereby bound to make notice and require consent

in relation to collection, recording, storage, usage and retention of personal information.

Acknowledgment of Notice

[] I have been notified by you and that I hereby understood, consented and agreed per UTAR notice (refer to Appendix I).

[] I disagree, my personal data will not be processed.

Questionnaire

Section A: Demographic Profile

Please place a tick “√” for each of the following questions.

1. Gender

- ☐ Male
- ☐ Female

2. Age:

- ☐ 18 – 23 years old
- ☐ 24 – 30 years old
- ☐ 31 – 40 years old
- ☐ 41 – 50 years old
- ☐ 51 – 60 years old

3. Income

- ☐ Less than RM1,000
- ☐ RM1,000 – RM2,000
- ☐ RM2,001 – RM3,000
- ☐ RM3,001 – RM4,000
- ☐ More than RM 4,001

4. How often you visit online shop?
- ☐ Everyday
 - ☐ Weekly
 - ☐ Monthly
 - ☐ Once within several months
 - ☐ Never
5. How often do you purchase online?
- ☐ Everyday
 - ☐ Weekly
 - ☐ Monthly
 - ☐ Once within several months
 - ☐ Never
6. Which online shopping website did you used the most?
- ☐ Amazon
 - ☐ Carousell
 - ☐ Lazada
 - ☐ Lelong
 - ☐ Shopee
 - ☐ Taobao
 - ☐ 11 street
 - ☐ Other

Section B: Independent Variables-the factors influencing consumer satisfaction

The following set of statement related to the component of factors influencing consumer satisfaction. The number 1 to 5 represents a continuum with 1 being strong disagreement and 5 being strong agreement. Based on your experience as a customer, please circle the answer that best reflects your opinion about that statement.

SD : Strongly Disagree

D : Disagree

N : Neutral

A : Agree

SA : Strongly Agree

Security

		SD	D	N	A	SA
SE 1	Online shopping website able to ensure my transactions, personal information and financial security.	1	2	3	4	5
SE 2	Online seller will make up for me because their system's guard was sufficient.	1	2	3	4	5
SE 3	Online shopping website was able to accurately provide service and services information (include the buyer/seller credit rating, trading rules, sales activities information, etc.).	1	2	3	4	5
SE 4	Online shopping website had clearly after sale rules (include complain policies, return policies,etc).	1	2	3	4	5
SE 5	Shopping online is risky.	1	2	3	4	5

Product Quality

		SD	D	N	A	SA
PQ 1	The product worked out as well as I thought it would.	1	2	3	4	5
PQ 2	My choice to buy the product online was a wise choice.	1	2	3	4	5
PQ 3	If I could do it over again, I'd buy the same product / model.	1	2	3	4	5
PQ 4	I feel good about my decision to buy the product.	1	2	3	4	5
PQ 5	Products purchased online have better quality.	1	2	3	4	5

E-Service Quality

		SD	D	N	A	SA
SQ 1	Online shopping website is easy to browse and operate.	1	2	3	4	5
SQ 2	The information cataloged simply and clearly in online shopping website.	1	2	3	4	5
SQ 3	FAQ page of the website was able to resolve my problem.	1	2	3	4	5
SQ 4	Problem was resolved after contacted customer service.	1	2	3	4	5
SQ 5	Delivery was fast.	1	2	3	4	5

Price

		SD	D	N	A	SA
PR 1	I purchase online because of free shipping.	1	2	3	4	5
PR 2	I prefer online shopping only if online prices are lower than actual price.	1	2	3	4	5
PR 3	Online seller offer better price.	1	2	3	4	5
PR 4	Internet reduces the cost of shopping.	1	2	3	4	5
PR 5	I purchase online because there is more discount while purchasing more quantity online.	1	2	3	4	5

Section C: Dependent Variables-consumer satisfaction level

Consumer Satisfaction

		SD	D	N	A	SA
CS 1	I am satisfied with my decision to buy online.	1	2	3	4	5
CS2	I will recommend the website to others.	1	2	3	4	5
CS3	I would buy again at the same website.	1	2	3	4	5
CS4	The online shopping website constantly meet my requirement.	1	2	3	4	5
CS5	I am satisfied with online purchase experience.	1	2	3	4	5

Thank you for Your Participation

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 (“PDPA”) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (“UTAR”) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-
 - For assessment of any application to UTAR
 - For processing any benefits and services
 - For communication purposes
 - For advertorial and news
 - For general administration and record purposes
 - For enhancing the value of education
 - For educational and related purposes consequential to UTAR
 - For the purpose of our corporate governance
 - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan
2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.
3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.
2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.
3. You may access and update your personal data by writing to us at [fyp012018@gmail.com].

Thank you for your time, opinion and comments.

Appendix D: Pilot Test Reliability

Cronbach's Alpha of Security

Correlation Analysis

The CORR Procedure

5 Variables: SE5_R SE1 SE2 SE3 SE4

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
SE5_R	30	3.23333	1.07265	97.00000	2.00000	5.00000	
SE1	30	3.23333	1.07265	97.00000	2.00000	5.00000	Ensure security, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE2	30	3.13333	1.22428	94.00000	1.00000	5.00000	System guard, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE3	30	3.93333	1.08066	118.00000	2.00000	5.00000	Service information, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE4	30	3.20000	1.09545	96.00000	1.00000	4.00000	After sale rules, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.954983
Standardized	0.955086

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
SE5_R	0.909720	0.938623	0.906647	0.938978	
SE1	0.909720	0.938623	0.906647	0.938978	Ensure security, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE2	0.948955	0.931434	0.949669	0.931513	System guard, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE3	0.792184	0.957783	0.792487	0.958183	Service information, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE4	0.820338	0.953310	0.821000	0.953467	After sale rules, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach's Alpha of Product Quality

Correlation Analysis									
The CORR Procedure									
5 Variables: PQ1 PQ2 PQ3 PQ4 PQ5									
Simple Statistics									
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label		
PQ1	30	3.06667	0.82768	92.00000	2.00000	4.00000	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		
PQ2	30	3.33333	1.18419	100.00000	2.00000	5.00000	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		
PQ3	30	2.66667	1.44636	80.00000	1.00000	5.00000	Buy same product, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		
PQ4	30	3.23333	1.16511	97.00000	2.00000	5.00000	Good decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		
PQ5	30	2.56667	1.33089	77.00000	1.00000	5.00000	Better quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		
Cronbach Coefficient Alpha									
Variables		Alpha							
Raw		0.977863							
Standardized		0.985152							
Cronbach Coefficient Alpha with Deleted Variable									
Deleted Variable	Raw Variables		Standardized Variables		Label				
	Correlation with Total	Alpha	Correlation with Total	Alpha					
PQ1	0.924535	0.982911	0.924774	0.985923	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree				
PQ2	0.987071	0.964701	0.990645	0.976355	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree				
PQ3	0.961324	0.972401	0.961470	0.980622	Buy same product, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree				
PQ4	0.961692	0.968672	0.957544	0.981192	Good decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree				
PQ5	0.945386	0.971880	0.942939	0.983308	Better quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree				

Cronbach's Alpha of E-Service Quality

Correlation Analysis

The CORR Procedure

5 Variables: PQ1 PQ2 PQ3 PQ4 PQ5

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PQ1	30	3.06667	0.82768	92.00000	2.00000	4.00000	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ2	30	3.33333	1.18419	100.00000	2.00000	5.00000	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ3	30	2.66667	1.44636	80.00000	1.00000	5.00000	Buy same product, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ4	30	3.23333	1.16511	97.00000	2.00000	5.00000	Good decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ5	30	2.56667	1.33089	77.00000	1.00000	5.00000	Better quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.977863
Standardized	0.985152

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
PQ1	0.924535	0.982911	0.924774	0.985923	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ2	0.987071	0.964701	0.990645	0.976355	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ3	0.961324	0.972401	0.961470	0.980622	Buy same product, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ4	0.961692	0.968672	0.957544	0.981192	Good decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ5	0.945386	0.971880	0.942939	0.983308	Better quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach's Alpha of Price

Correlation Analysis

The CORR Procedure

5 Variables: PR1 PR2 PR3 PR4 PR5

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PR1	30	3.40000	1.10172	102.00000	1.00000	5.00000	Free shipping, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR2	30	3.13333	1.30604	94.00000	1.00000	5.00000	Lower price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR3	30	3.06667	1.14269	92.00000	1.00000	5.00000	Better price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR4	30	3.80000	1.06350	114.00000	2.00000	5.00000	Reduce cost, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR5	30	3.76667	1.25075	113.00000	2.00000	5.00000	More discount, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.961029
Standardized	0.961630

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
PR1	0.779582	0.968816	0.774456	0.971238	Free shipping, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR2	0.951517	0.941765	0.952771	0.942234	Lower price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR3	0.950805	0.941931	0.950087	0.942686	Better price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR4	0.886397	0.953233	0.884120	0.953641	Reduce cost, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR5	0.898577	0.950645	0.899114	0.951176	More discount, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach's Alpha of Consumer Satisfaction

Correlation Analysis

The CORR Procedure

5 Variables: CS1 CS2 CS3 CS4 CS5

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
CS1	30	3.33333	1.18419	100.00000	2.00000	5.00000	Satisfy decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS2	30	3.40000	1.35443	102.00000	1.00000	5.00000	Recommend, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS3	30	3.36667	1.27261	101.00000	1.00000	5.00000	Buy again, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS4	30	2.76667	1.25075	83.00000	1.00000	4.00000	Meet requirement, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS5	30	3.66667	1.18419	110.00000	2.00000	5.00000	Satisfy experience, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.979267
Standardized	0.979954

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
CS1	0.913535	0.978058	0.913300	0.979111	Satisfy decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS2	0.961809	0.971226	0.961946	0.971856	Recommend, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS3	0.889226	0.981709	0.888507	0.982758	Buy again, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS4	0.954698	0.971798	0.955539	0.972819	Meet requirement, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS5	0.984593	0.967949	0.984732	0.968411	Satisfy experience, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Appendix E: Actual Study Reliability

Cronbach's Alpha of Security

Correlation Analysis

The CORR Procedure

5 Variables: SE1 SE2 SE3 SE4 SE5_R

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
SE1	384	3.50260	0.89091	1345	1.00000	5.00000	Ensure security, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE2	384	3.52865	0.88162	1355	1.00000	5.00000	System guard, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE3	384	3.50000	0.91691	1344	1.00000	5.00000	Service information, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE4	384	3.50521	0.96950	1346	1.00000	5.00000	After sale rules, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE5_R	384	2.59896	0.96443	998.00000	1.00000	5.00000	Risky, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.696119
Standardized	0.704920

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
SE1	0.607650	0.580566	0.616608	0.588990	Ensure security, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE2	0.642417	0.566113	0.650744	0.573414	System guard, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE3	0.637706	0.564297	0.639766	0.578455	Service information, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE4	0.630126	0.563046	0.635206	0.580540	After sale rules, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SE5_R	-.088458	0.850317	-.090047	0.851345	Risky, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach's Alpha of Product Quality

Correlation Analysis

The CORR Procedure

5 Variables: PQ1 PQ2 PQ3 PQ4 PQ5

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PQ1	384	3.43490	0.87670	1319	1.00000	5.00000	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ2	384	3.54427	0.87502	1361	1.00000	5.00000	Wise choice, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ3	384	3.47656	0.89645	1335	1.00000	5.00000	Buy same product, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ4	384	3.60417	0.88183	1384	1.00000	5.00000	Good decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ5	384	3.27083	0.88479	1256	1.00000	5.00000	Better quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.844537
Standardized	0.844715

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
PQ1	0.693785	0.801256	0.694672	0.801211	Work well, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ2	0.708303	0.797305	0.708654	0.797344	Wise choice, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ3	0.643939	0.814807	0.643886	0.815045	Buy same product, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ4	0.644423	0.814614	0.643787	0.815071	Good decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ5	0.566933	0.835156	0.567113	0.835331	Better quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach's Alpha of E-Service Quality

Correlation Analysis

The CORR Procedure

5 Variables: SQ1 SQ2 SQ3 SQ4 SQ5

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
SQ1	384	3.60156	0.85509	1383	1.00000	5.00000	Easy browse operate, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ2	384	3.57552	0.83621	1373	1.00000	5.00000	Simple and clear catalogue, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ3	384	3.36979	0.88723	1294	1.00000	5.00000	FAQ resolve problem, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ4	384	3.36198	0.90355	1291	1.00000	5.00000	Customer service resolve problem, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ5	384	3.40885	0.96249	1309	1.00000	5.00000	Fast delivery, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha

Variables	Alpha
Raw	0.817039
Standardized	0.819226

Cronbach Coefficient Alpha with Deleted Variable

Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
SQ1	0.600874	0.783291	0.605840	0.785161	Easy browse operate, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ2	0.644288	0.771370	0.650129	0.771983	Simple and clear catalogue, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ3	0.633025	0.773581	0.632833	0.777164	FAQ resolve problem, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ4	0.645483	0.769642	0.643298	0.774034	Customer service resolve problem, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ5	0.525206	0.808091	0.523307	0.808962	Fast delivery, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach's Alpha of Price

Correlation Analysis																																															
The CORR Procedure																																															
5 Variables: PR1 PR2 PR3 PR4 PR5																																															
Simple Statistics																																															
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label																																								
PR1	384	3.77344	0.97393	1449	1.00000	5.00000	Free shipping, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																								
PR2	384	3.82292	0.91685	1468	1.00000	5.00000	Lower price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																								
PR3	384	3.75260	0.88724	1441	1.00000	5.00000	Better price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																								
PR4	384	3.80729	0.89929	1462	1.00000	5.00000	Reduce cost, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																								
PR5	384	3.74219	0.91901	1437	1.00000	5.00000	More discount, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																								
<div>Cronbach Coefficient Alpha</div> <table><tr><th>Variables</th><th>Alpha</th></tr><tr><td>Raw</td><td>0.832918</td></tr><tr><td>Standardized</td><td>0.832836</td></tr></table>								Variables	Alpha	Raw	0.832918	Standardized	0.832836																																		
Variables	Alpha																																														
Raw	0.832918																																														
Standardized	0.832836																																														
<div>Cronbach Coefficient Alpha with Deleted Variable</div> <table><tr><th rowspan="2">Deleted Variable</th><th colspan="2">Raw Variables</th><th colspan="2">Standardized Variables</th><th rowspan="2">Label</th></tr><tr><th>Correlation with Total</th><th>Alpha</th><th>Correlation with Total</th><th>Alpha</th></tr><tr><td>PR1</td><td>0.662666</td><td>0.790729</td><td>0.662085</td><td>0.790798</td><td>Free shipping, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree</td></tr><tr><td>PR2</td><td>0.691052</td><td>0.782657</td><td>0.689518</td><td>0.782908</td><td>Lower price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree</td></tr><tr><td>PR3</td><td>0.596531</td><td>0.809172</td><td>0.597677</td><td>0.808919</td><td>Better price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree</td></tr><tr><td>PR4</td><td>0.624231</td><td>0.801665</td><td>0.624376</td><td>0.801476</td><td>Reduce cost, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree</td></tr><tr><td>PR5</td><td>0.587624</td><td>0.811813</td><td>0.586800</td><td>0.811924</td><td>More discount, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree</td></tr></table>								Deleted Variable	Raw Variables		Standardized Variables		Label	Correlation with Total	Alpha	Correlation with Total	Alpha	PR1	0.662666	0.790729	0.662085	0.790798	Free shipping, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	PR2	0.691052	0.782657	0.689518	0.782908	Lower price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	PR3	0.596531	0.809172	0.597677	0.808919	Better price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	PR4	0.624231	0.801665	0.624376	0.801476	Reduce cost, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	PR5	0.587624	0.811813	0.586800	0.811924	More discount, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
Deleted Variable	Raw Variables		Standardized Variables		Label																																										
	Correlation with Total	Alpha	Correlation with Total	Alpha																																											
PR1	0.662666	0.790729	0.662085	0.790798	Free shipping, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																										
PR2	0.691052	0.782657	0.689518	0.782908	Lower price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																										
PR3	0.596531	0.809172	0.597677	0.808919	Better price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																										
PR4	0.624231	0.801665	0.624376	0.801476	Reduce cost, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																										
PR5	0.587624	0.811813	0.586800	0.811924	More discount, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree																																										

Cronbach's Alpha of Consumer Satisfaction

Correlation Analysis

The CORR Procedure

5 Variables: CS1 CS2 CS3 CS4 CS5

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
CS1	384	3.69271	0.79774	1418	1.00000	5.00000	Satisfy decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS2	384	3.73177	0.81014	1433	1.00000	5.00000	Recommend, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS3	384	3.83854	0.86412	1474	1.00000	5.00000	Buy again, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS4	384	3.65104	0.90146	1402	1.00000	5.00000	Meet requirement, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS5	384	3.72917	0.80116	1432	1.00000	5.00000	Satisfy experience, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.856245
Standardized	0.857547

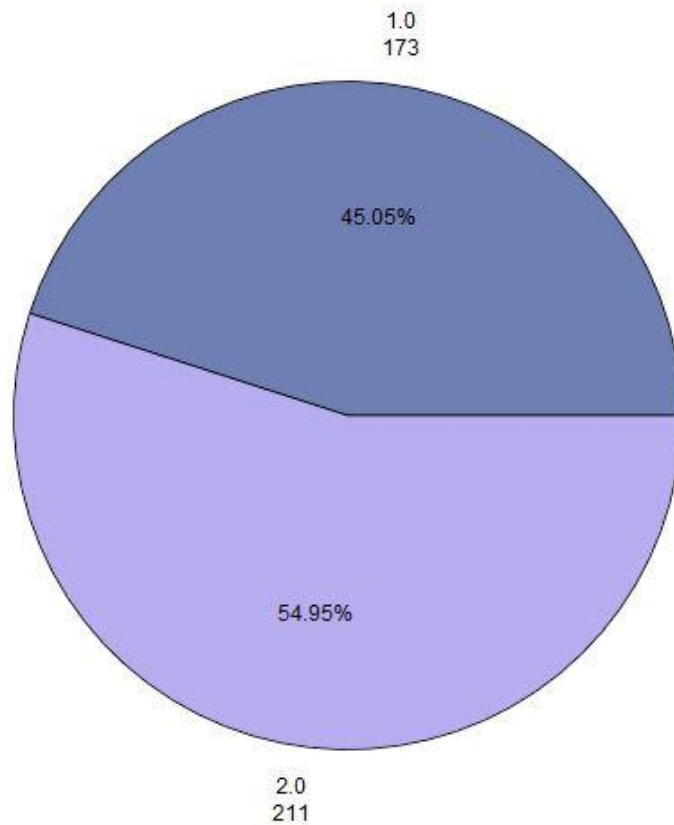
Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
CS1	0.668110	0.827364	0.671725	0.828274	Satisfy decision, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS2	0.749034	0.806589	0.750376	0.807639	Recommend, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS3	0.673559	0.825832	0.671349	0.828371	Buy again, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS4	0.635564	0.837045	0.633714	0.837979	Meet requirement, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS5	0.635796	0.835258	0.638075	0.836874	Satisfy experience, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Appendix F: Demographic Profile Frequency

Gender

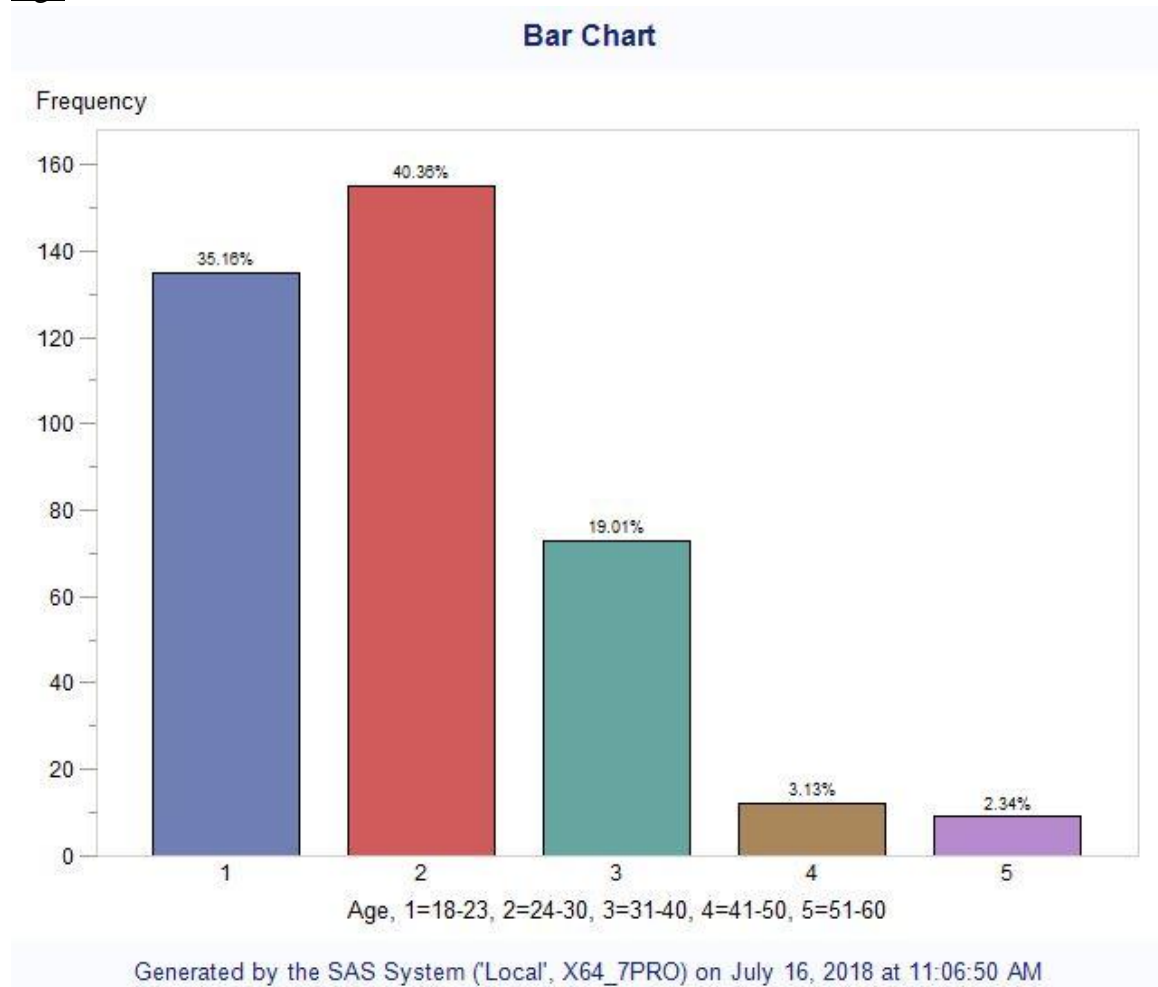
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Pie Chart



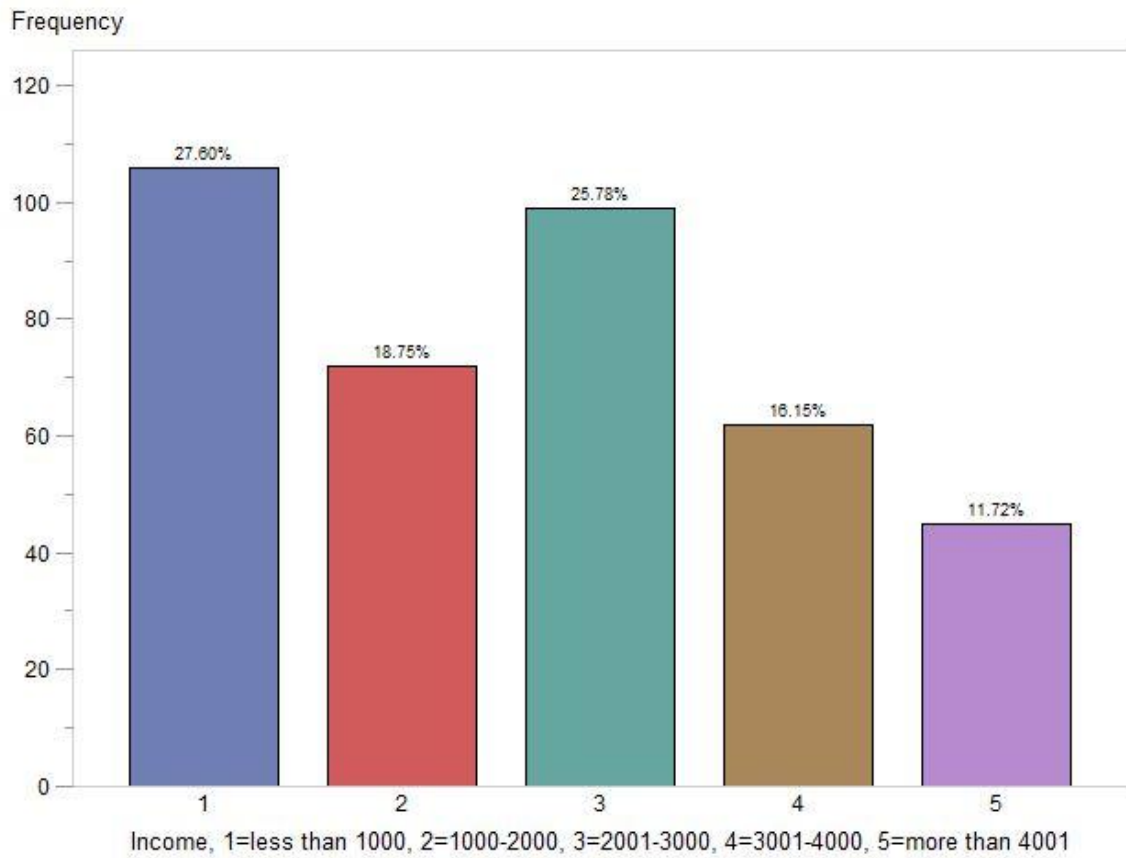
Generated by the SAS System ('Local', X64_7PRO) on July 16, 2018 at 10:39:15 AM

Age



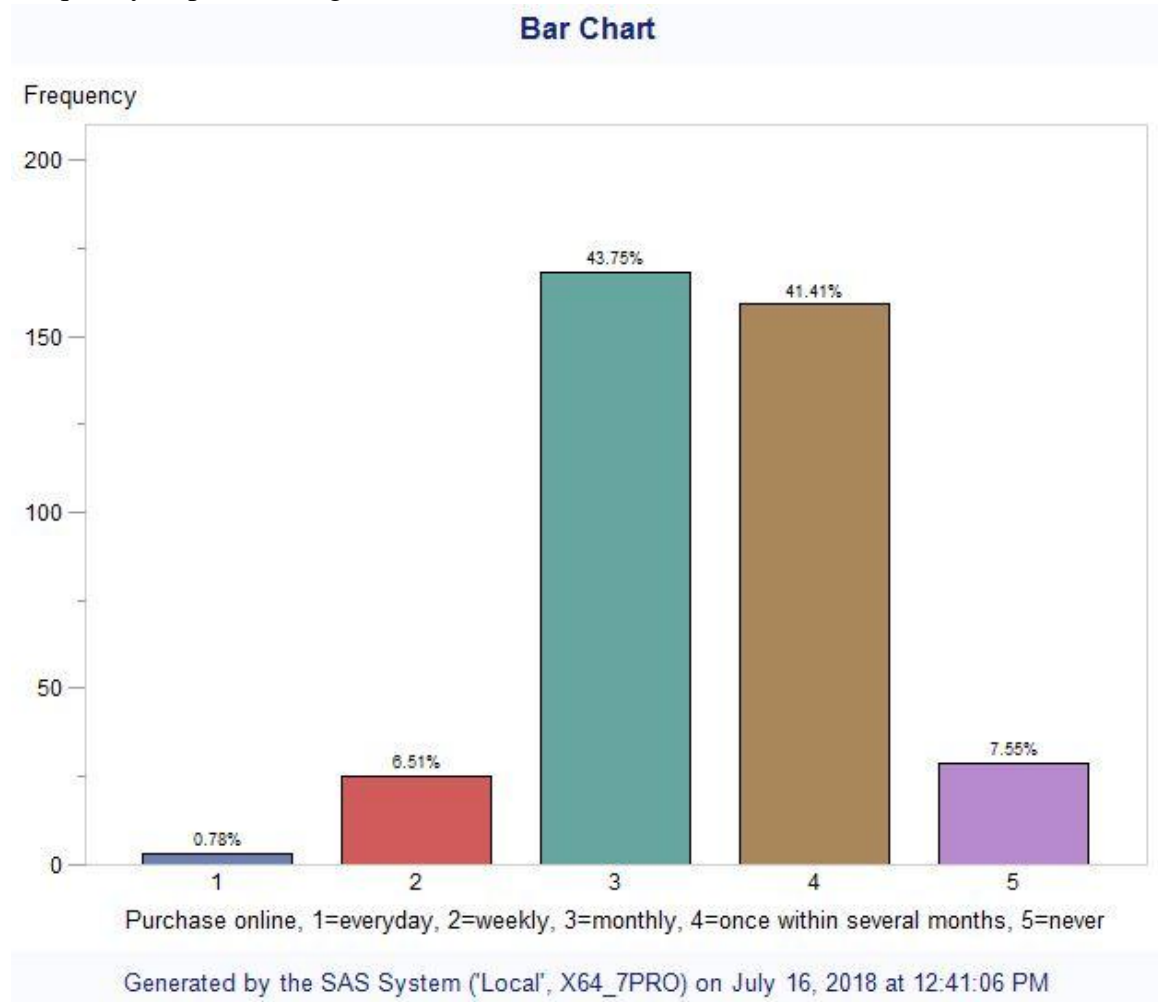
Income

Bar Chart



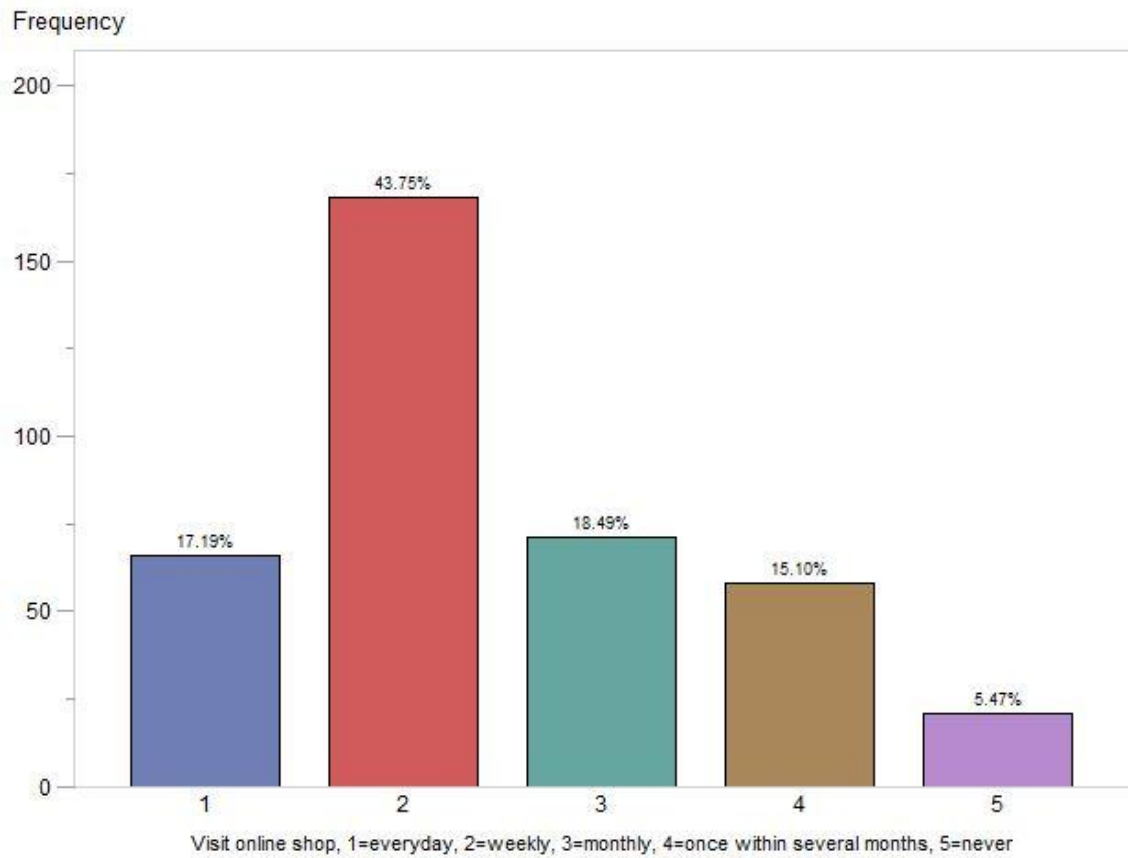
Generated by the SAS System ('Local', X64_7PRO) on July 16, 2018 at 11:36:33 AM

Frequency of purchasing online



Frequency of visiting online shopping website

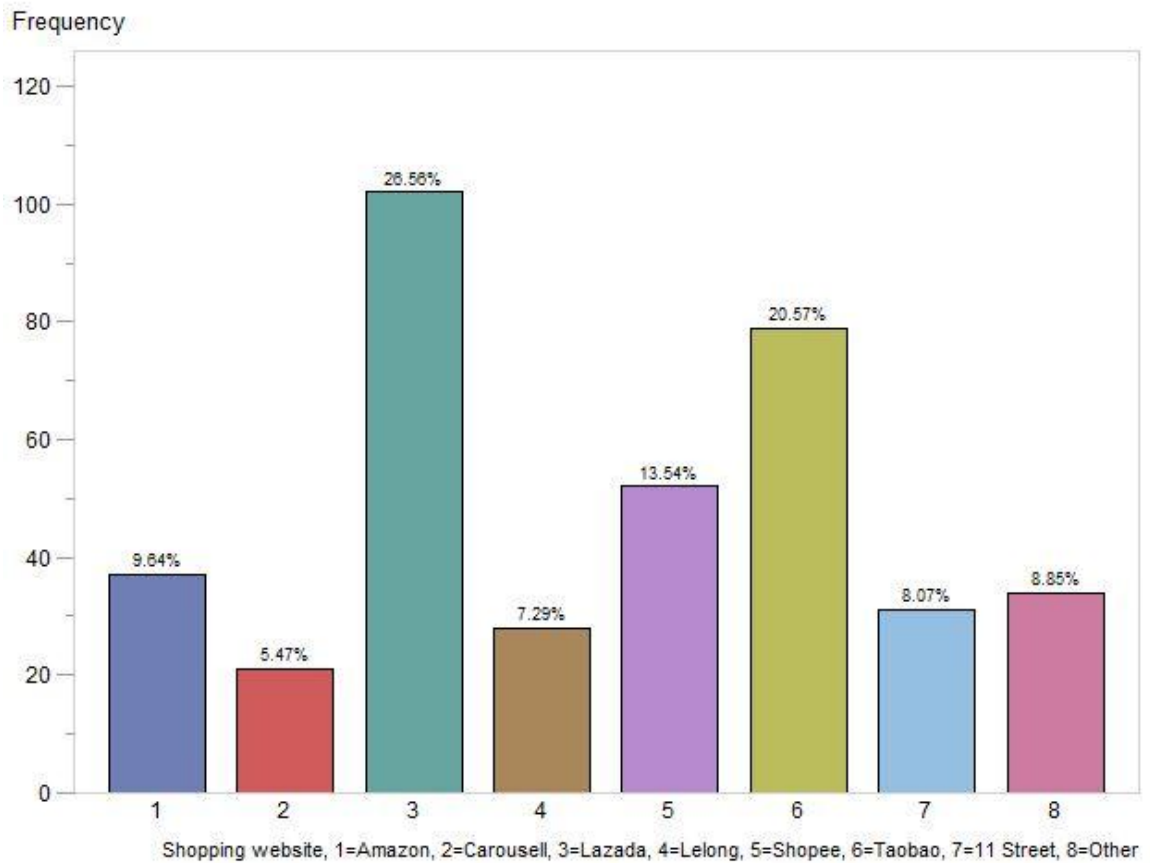
Bar Chart



Generated by the SAS System ('Local', X64_7PRO) on July 16, 2018 at 11:58:53 AM

Most visited online shopping website

Bar Chart



Generated by the SAS System ('Local', X64_7PRO) on July 16, 2018 at 12:18:13 PM

Appendix G: Pearson Correlation Analysis

Correlation Analysis

The CORR Procedure

5 Variables: SE PQ SQ PR CS

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
SE	384	3.32708	0.62171	1278	1.00000	5.00000	Security, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PQ	384	3.46615	0.69335	1331	1.00000	5.00000	Product quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
SQ	384	3.46354	0.67629	1330	1.00000	5.00000	E-Service Quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
PR	384	3.77969	0.71208	1451	1.00000	5.00000	Price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree
CS	384	3.72865	0.66608	1432	1.00000	5.00000	Consumer satisfaction, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Disagree

Pearson Correlation Coefficients, N = 384 Prob > r under H0: Rho=0						
	SE	PQ	SQ	PR	CS	
SE	1.00000	0.71626	0.65141	0.46847	0.63505	
Security, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		<.0001	<.0001	<.0001	<.0001	
PQ	0.71626	1.00000	0.75654	0.56986	0.72418	
Product quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		<.0001	<.0001	<.0001	<.0001	
SQ	0.65141	0.75654	1.00000	0.59562	0.70216	
E-Service Quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		<.0001	<.0001	<.0001	<.0001	
PR	0.46847	0.56986	0.59562	1.00000	0.65686	
Price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree		<.0001	<.0001	<.0001	<.0001	
CS	0.63505	0.72418	0.70216	0.65686	1.00000	
Consumer satisfaction, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Disagree		<.0001	<.0001	<.0001	<.0001	

Appendix H: Multiple Linear Regression

Linear Regression Results

The REG Procedure

Model: Linear_Regression_Model

Dependent Variable: CS Consumer satisfaction, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Disagree

Number of Observations Read	384
Number of Observations Used	384

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	109.94564	27.48641	173.68	<.0001
Error	379	59.97926	0.15826		
Corrected Total	383	169.92490			

Root MSE	0.39781	R-Square	0.6470
Dependent Mean	3.72865	Adj R-Sq	0.6433
Coeff Var	10.66915		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	0.46226	0.12929	3.58	0.0004
SE	Security, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	1	0.16676	0.04829	3.45	0.0006
PQ	Product quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	1	0.27569	0.05114	5.39	<.0001
SQ	E-Service Quality, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	1	0.20340	0.04949	4.11	<.0001
PR	Price, 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree	1	0.27819	0.03651	7.62	<.0001