

**YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF STATISTICS**

**FACTORS AFFECTING CONSUMERS' ATTITUDE
AND INTENTION TOWARDS ONLINE SHOPPING
IN YANGON**

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M.Econ (Statistics)
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SEPTEMBER, 2022

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This thesis submitted as a partial fulfillment towards
the Degree of Master of Economics (Statistics)

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ABSTRACT

Nowadays, the usage of internet is popular in daily life. Online Shopping make to easily the transaction of money for both buyer and seller, and it also use in daily based on the internet connection. This study investigated the consumers' attitude and intention towards online shopping in Yangon. In this study, primary data are used to analyze the feedbacks from a systematic random sample of 415 respondents. The statistical methods such as simple linear regression, multiple regression and hierarchical regression models are applied. And then, this study also used Pearson's correlation coefficient, analysis of variance and independent t test. According to the correlation results, positive correlation between time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment and consumers' attitude towards online shopping. The results from multiple regression showed that time saving, customer service, promotion, website's design and website's fulfillment variables have direct relationship and statistically significant with consumers' attitude towards online shopping. According to the results of t test and ANOVA, the demographic and socio-economic variables such as gender, age, marital status, education level and occupation are statistically significance. The results of hierarchical regression confirmed that education level and experience are met as the interaction effect on consumers' intention towards online shopping. Moreover, the results of linear regression revealed that there is a direct relationship between consumers' attitude and intention towards online shopping.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
B2B	Business-to- Business
B2C	Business-to-Consumer
COVID-19	Coronavirus Disease 2019
CSO	Civil Society Organization
FMCG	Fast-Moving Consumer Goods
IP	Internet Protocol
IT	Information Technology
KMO	Kaiser-Meyer-Olkin
MSE	Mean Square Error
MSR	Mean Square due to Regression
NA	Not Applicable
NGO	Non-government Organization
PCC	Pearson's Correlation Coefficient
PhD	Doctor of Philosophy
PPMCC	Pearson's Product-Moment Correlation Coefficient
Prob.	Probability
Q_Q	Quantile- Quantile
SAS	Statistical Analysis System
SEM	Structural Equation Modeling
SPSS	Statistical Package for the Social Science
SSE	Error Sum of Square
SSR	Regression Sum of Square
SST	Total Sum of Square
Std.Dev	Standard Deviation
Std.Error	Standard Error
Tol	Tolerance
VIF	Variance Inflation Factor
WWW	World Wide Web

CHAPTER I

INTRODUCTION

In the era of globalization electronic marketing is a great revolution. Over the last decade maximum business organizations are running with technological change. Online shopping or marketing is the use of technological change. Online shopping or marketing is the use of technology (i.e., computer) for better marketing performance. And retailers are devising strategies to meet the demand of online shoppers; they are busy in studying consumer behavior in the field of online shopping, to see the consumer attitudes towards online shopping. Therefore, consumer's attitudes towards online shopping and specifically the factors influencing consumers to shop online are studied in this thesis.

1.1 Rationale of the Study

Generally speaking the trend of e-commerce has been increased rapidly in the recent years with the development of internet and due to the easy accessibility of internet usage. Easy access to internet has driven consumers to shop online. Globally more than 7271 million people have done online shopping so far, World's biggest online shoppers include Germans and British. Books, airline tickets/reservations, clothing/shoes videos/games and other electronic products are the most popular items purchased on the internet. Through electronic marketing and internet communication business firms are coordinating different marketing activities such as market research, product development, inform customers about product features, promotion, customer services, customer feedback and so on. Online shopping is used as a medium for communication and electronic commerce, it is to increase or improve in value, quality and attractiveness of delivering customer benefits and better satisfaction, that is why online shopping is more convenience and day by day increasing its popularity (Dani, 2017).

Internet shopping has become a popular way for buyers. It is the process of buying goods and services from merchants who sell on the online. Online shopping

allows buyers to buy sooner, more choices and can order products and services with comparative reasonable price (Cuneyt & Gautam, 2004). E-commerce is a tool for reducing administrative costs and cycle time, streamlining business process, and improving relationships with business partners and customers (Charles, 1998). This new advanced pattern of shopping not only brings a wide range of products to consumers; it also deals a huge market and several business opportunities. In the past twenty years, the rapid growth of the internet and the geometric development of the internet users. Although the number of Asian Internet users was the maximum in the world, the internet penetration rate of Asia was lower than elsewhere. The penetration rate of internet users in Asia was just higher than Africa, as at 30 June 2022, according to the Internet World Statistics (2022). The highest was North America with a penetration rate of 93.4%. Online shopping has extent of changes in the attitude and behavior of people all over the world. The tremendous change was brought by the World Wide Web, which has entered every corner of the world. Due to this blessing, online shopping has emerged which influenced the lives of normal citizens (Jha, 2018).

In Myanmar, the internet usage continues to growth day by day. The internet has been available as of 2000 according to the World Report (2012). Military government adopted to control the internet use through the law and regulation, infrastructure constraints and technical constraints in September 2011. The internet usage increased significantly to 12.6% (over 6.6 million people) in 2015. According to the statcounter in GlobalStats, the number of internet users reaches over 25 million people with the 45.9% in January 2022.

The impact of internet on consumer purchase behavior and marketing practices is now a major and challenging area of research. Internet offers numerous choices of products, services and content. But several choices have altered the manner in which customers choose and buy products and services. Among the numerous new situations or possibilities raised by the emergence of internet, one can evoke the rapid and more expansive communications in a virtual world without face-to-face interaction. Indeed, the emerging of information technology (IT) in the world has brought a large change in the aspect of the market structure globally. Information technology has created a platform for the digital economy where emergence of the e-commerce has taken place. Opportunity has been given to almost everyone because internet enables organizations to conduct businesses in the cyberspace, or connect

people worldwide without geographical limitations unlike traditional commerce shop (Alkasassbeh, 2014). Laudon and Traver (2013) mentioned that the applications of e-commerce are inextricably linked to the internet. Since the introduction of the internet, growth in e-commerce has been incredibly fast until the tragedy of dotcom crash in 2000. This tragedy gives an implication to most of the business that ecommerce did come with potential of risks and benefits that need to be measured and to be taken into consideration before they started the internet-based business. The evolution of the internet and the web has made the function of the web and the internet better.

Currently, there are numerous studies interested in identifying the factors affecting consumers' attitudes toward online shopping. Such information is important to consumers who are interested in using the internet as a purchasing tool. More specifically, this study intends to understand consumers' attitude and intention towards online shopping and which factors influence attitudes towards online shopping.

1.2 Objectives of the Study

The objectives of the study are

- i. To describe the consumers' demographic and socio-economic characteristics
- ii. To find the effects of consumers' purchasing decision and attitude towards online shopping
- iii. To analyze the interaction effect of demographic and socio-economic variables on consumers' attitude and intention towards online shopping
- iv. To explore the factors affecting consumers' attitude and intention towards online shopping in Yangon

1.3 Method of Study

In this study, primary data from a self-administered online survey are used for data analyzing. In terms of online surveying, systematic sampling is used to sample sequential consumers to a website. It is conducted to demographic and socio-economic factors affecting on consumers' attitude and intention towards online shopping. Some demographic and socio-economic factors such as age, gender, marital status, education level, occupation, income and experience are described by descriptive statistics.

Multiple linear regression model is used to know the relationship between consumers' attitude toward online shopping and factors of consumers' purchasing decision such as time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment. Hierarchical regression analysis is applied to investigate the interaction effects of demographic and socio-economic factors such as age, gender, marital status, education level, occupation, income and experience on the relationship between attitude and intention towards online shopping. Simple linear regression model is also used to know the relationship between consumers' intention towards online shopping and customers' attitude toward online. And then, Pearson correlation coefficient, analysis of variance (ANOVA) and independent t-test were also used in this study.

1.4 Scope and Limitations of the Study

Data are collected from a systematic sample of 415 respondents in Yangon. This survey was conducted during 25 July to 15 August 2022. The first limitation of this study was time limited. The second limitations were the uses of demographic and socio-economic factors such as gender, age, marital status, education level, occupation, income and experience only. And then, the third limitations were the factors of consumers' purchasing decision influencing the consumers' attitude towards online shopping as time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment only.

1.5 Organization of the Study

This study comprises five chapters. Chapter I presents introduction: it mentioned rationale of the study, objectives of the study, method of study, scope and limitations of the study, and organization of the study. Chapter II discusses the literature review. Chapter III describes research methodology. Chapter IV analyzes the factors influencing on consumers' attitude and intention towards online shopping. Chapter V includes the conclusion with the findings and discussions, suggestions and further research.

CHAPTER II

LITERATURE REVIEWS

This chapter presents the background information of online shopping, demographic and socio-economic variables, factors of consumers' purchasing decision, attitude and behavioral intention in online shopping, related studies and conceptual framework.

2.1 Background Information of Online Shopping

Online shopping as defined by Mastercard Worldwide Insights (2008) is the process of purchasing goods and services from merchants who sell over the internet. Generally, it is also known as internet buying, electronic shopping, online purchasing or internet shopping. Kim and Kim (2004) further defined internet shopping as examining, searching for, browsing for or looking at a product to get more information with the possible intention of purchase on the internet. By looking at other perspective, Chiu et al. (2009) considered online shopping as an exchange of time, effort and money for receiving products or services. Retailers see it as internet/online retailing, e-commerce or e-store/online store, which refer to the sale of retail goods via online channels, valued at retail selling price (Datamonitor, 2009). As such, there are various ways of defining online shopping and it may depend on which perspective we are looking at or interested in. Hence, the above mentioned terms may be used interchangeably in this report.

The earliest form of this e-commerce was invented by Michael Aldrich, English inventor as the e-shopping in 1979. This is allowed online processing transaction of business to consumers, or business to business. And the second promoter of these online shopping is the World Wide Web in 1990 as the first invention in web browser. If there was not internet connection, there would be no online shopping. Tim Berners Lee is an English computer best scientist known as the inventor of the World Wide Web. That man is the major reason in processing the

million people could be used the internet which occur the mass of e-commerce platforms.

The first online market place is Amazon.com which was established in 1995 as the biggest online shopping transformation. The second online market place is Alibaba.com was founded by Jack Ma, Chinese business magnate in 1999. There have a belief that internet playing field would reach by enabling smaller business to force innovation, grow technology and complete more effectiveness to domestic and global economies. In 2020, many people used the trades by choosing the online shopping on the Instagram, Facebook and Applications due to COVID-19 epidemic.

Fang and Salvendy (2003) founded that firms and organizations are exploited electronic channels to reach increasingly their customers and create new business opportunities. Electronic shops have been developed either offering products from a single firm or encompassing multiple individual electronic stores. Besides development activities, electronic shopping has attracted the attention of researchers who have studies various perspectives such as user attitude, critical success factors, security, technical aspects and so on.

Electronic commerce service industry is one of the shopping platforms created by the support of technological developments. Celik and Yilmaz (2016) illustrated that he existence of e-commerce service industry has attracted a lot of public attention and has had a major impact on the world economy. Kim-Vick and Park (2005) showed that consumers initially shopped traditionally through physical stores, changed their behavior to shop online through multichannel retailing.

There are two main concerns for e-commerce (online shopping); personalization and enhancement of customer experience. Anupam and Kumar (2011) stated that personalization addresses the ability to offer content tailored to the preferences of each customer. Preferences may be explicitly declared by the user, or derived by the system through inspecting user interaction. If the system dynamically reacts to the changes of visitor behavior, it is termed as adaptive. Lekakos and Giaglis (2006) showed that personalization allows customers to focus on the items that they are interested in, and enables electronic shops to make targeted suggestions and send promotions to customers. Park and Lee (2004) stated that another major issue in e-commerce is enhancement of user experience that two dimensions images and texts on the screen are not sufficient to provide information on product aspects such as physical dimensions, textures and manipulation feedback. Major e-commerce

categories that could benefit from giving a more accurate and/or complete view of the products include real estate brokers who could present detailed models of properties, furniture stores that could allow their customers to view how certain pieces would fit in the target place; Hughes, Brusilovsky and Lewis (2002).

Nowadays, e-commerce sites expose variable degrees of sophistication, functionality and complexity. Most e-commerce sites offer the lists of available products that are usually organized in categories. A brief description, price and a possible image for each product are made available to e-customers; more information items may be included depending on the e-commerce domain (customer reviews for books and music). A basic e-commerce site offers the same content to all its visitors.

According to Arlitt, Krishnamurthy and Rolia (2001), the categorization of users into groups and serving each group with specifically selected content is the first step towards offering services tailored to the user needs. Personalization provides a finer granularity for tailored content delivery because content formulation is based on the preferences and behavior of individual users, rather than aggregate data from user groups. According to Datta and VanderMeer (2001), preferences may be declared through static profiling where users declare their preferences through profile definition pages; dynamic profiles extend their static counterparts by incorporating information collected from user activities during the interaction sessions.

2.2 Demographic and Socio-economic Characteristics

The demographic and socio-economic characteristics such as gender, age, marital status, education level, occupation, income and experience are used in the data analysis of this study.

Gender

The motivation to shop online can be classified into two main categories which are utilitarian and hedonic motivations. Utilitarian motivation is rational in approach and is considered to be same as traditional buying purchasing. In contrast to this, hedonic motivation is emotional in approach. It states that people who purchase online are driven by emotions because out of excitement they enjoy the online shopping experience. Gender indeed plays a role in affecting consumer motivation. Seock and Bailey (2008) studied that females tend to have hedonic motivation because they tend to enjoy shopping more than male counterparts. Females are interested the brand conscious, price consciousness and have high shopping

confidence than males. Whereas, males tend to be driven by utilitarian approach because they have higher concerns about the saving time than females. Saving time is one of the beneficial functions and also the one of the elements of utilitarian motivation in online purchasing. This is in consistent with the findings of Huang and Yang (2010) which states males to be utilitarian purchasers. Facts which are typical to the utilitarian motivation are convenience, lack of sociality and time saving which males look into while shopping online.

Age

Young online shoppers reported more search behavior, before purchasing the younger shoppers reported searching for more products and services online than the older group. Though the search for products was more for younger consumers no significant difference was found in terms of the number of products purchased online classified by age. Joines, Scherer and Scheufele (2003) found that age did not impact search behavior but has an impact on purchase behavior, and younger consumers were found to purchase more than older consumers. The findings of Donthu and Garcia (1999) results who found that the purchasers in online were older and had higher incomes.

Marital Status

The marital status is one of the most important to predict the attitude towards online shopping. The findings of Sethi and Sethi (2017) emerged that gender and marital status has a significant effect on online purchase intention. The findings of Nguyen and Homolka (2021) finded that the significant difference in the satisfaction of online purchasing between three groups of marital status: single, married and divorced/ separated.

Education Level

The education level of online shoppers is one of the most important factors to predict the attitude towards online shopping. The findings of Mbah, Odike and Okon (2019) revealed that education has no significant effect on online shopping behavior in Nigeria. But, the findings of Mityko (2012) showed that education is significant on the consumers' perception of the products.

Occupation

The occupation is an important factor for predicting attitude towards online shopping. The finding of Jain and Deepak (2017) indicated that the perceived value towards online apparel shopping has an effect on income and occupation. According

to the Statista Research Department, it is state that the students and civil officers in Thailand are mostly used the online shopping in 2021.

Income

An income is “a gain or recurrent benefit usually measured in money that derives from capital or labor; also: the amount of such gain received in a period of time”. It is the cumulative money that a household receives from all sources such as wages, salaries, profit, interest payments and rents received in a given period of time. The more the income of the consumers, the more the purchasing powers of consumers and in turn the more the sales or profit of retailers. Punj (2012) described that consumers who have higher income levels are more likely to shop online than those who have lower income levels. Hernandez et al. (2011) revealed that gender, age and income have significantly affected the online shopping behavior.

Experience

Previous online shopping experience is an important factor in predicting attitude towards online shopping. Bellman, Loshe and Johnson (1995) investigated that many predictors for whether any consumer would buy online or not. This research concluded that demographic variables such as income, education and age have a modest impact on the individuals’ decision to buy online or not. This research found out that the most important factor determining whether an individual would make an online purchase on the website was previous experience such as earlier online purchases. “Once people are online, whether they buy there and how much they spend has more to do with whether they like to buy online and whether the time they have for buying is limited”. Hoffman and Novak (1997) studied that marketing in hypermedia computer-mediated environments. Two broad categories of behavior in which consumers engage during the phase of pre-purchase on the internet are goal-directed and experiential behavior. This research indicated that the flow experience is crucial antecedent of online purchase behavior. As flow experience occurs during network navigation, an issue e-marketers must consider is whether consumers’ skills are competent to meet the challenges of the virtual environment.

2.3 Factors of Consumers’ Purchasing Decision

There are many factors that influence and effect customers in order to how consumers make purchasing decision. The purchasing decision process starts before, during, and after actual purchase in online shopping.

Time Saving

Time saving means that reduces the time needed to perform a task, especially by using a shorter route or a more efficient method. It is one of most prompting factors of E- shopping. Purchaser can reduce effort and can save time by using the online shopping. Rohm and Swaminathan (2004) concluded that E-shopping saves time during the purchasing of goods and it can remove the traveling time required to go to the old-style store. On the other side, some respondents consider that it is also time taken for delivery of goods or service over online shopping. Additionally, Morganosky and Cude (2000) has concluded that time saving factor was reported to be primary reason among those consumers who have already experienced the online grocery buying. Hence, the significance of the time saving factor cannot be neglected.

Customer Service

Customer service means that the act of providing services to customers before, during and after a purchase. A department provides services to existing customers. Mpinganjira (2016) showed that the customer community has significant on customer attitude towards online stores. The finding of Katawetawaraks and Wang (2011) explained that customer service is one of the factors affecting product buying activity.

Promotion

Promotion means that the act of moving up and advancing to the next round. The finding of Hasim, Ishak and Affendy (2019) demonstrated that sale promotion and website quality have a positive significant influence on online impulse buying. Tu, et al. (2017) revealed that online promotion positively impacted on online impulsive buying behavior.

Price-consciousness

Price influences consumers' purchasing decisions mostly. Individual's decision is primarily driven by the price that is said to be price-consciousness. Price-consciousness means that aware of how much things cost and thus avoiding buying expensive items; looking for value for money. The finding of Rihn, Khachatryan and Wei (2018) showed that price-consciousness tends to be quicker decision makers than non-price consciousness. The finding of Heim and Sinha (2001), price was a main factor for consumers online shopping. Jayawardhena and Wright (2009) agreed that the buyers who value ease can get the benefits of products and services with less money spent and this would have a positive relationships with consumers excitement;

increasing search efficiency by removing travelling costs and psychological costs brings closeness in online-shopping.

Website's Design

Website design means that the trade of a web designer; the creation of web pages, especially in terms of layout and presentation rather than functionality. Website design is one of the main influencing factors of E-shopping. Liang and Lai (2000) stated that Web design quality has significant impacts on buyers' choice of electronic stores. Kamariah and Salwani (2005) said that the higher website quality, the higher consumer intends to shop from internet. Yasim and Nik (2010) demonstrated that there is a significant relationship between online shopping activity and website features. Zhang et al. (1999) showed that website design features can be considered as a motivational factor that can create positive or negative feelings with a website.

Website's Fulfillment

Website fulfillment means that the orders are fulfilled, or assembled for shipping. Mpinganjira (2016) revealed that procurement and fulfillment have significant association with customer attitude towards online stores. Jain (2017) showed that website skill and website factors have a significant impact on the Web consumer. The finding of Zhang et al. (1999) showed that online payment process is another issue that should be taken the payment process to be as easy and secure as possible.

2.4 Attitude towards Online Shopping

“An attitude is a positive or negative evaluative reaction towards a stimulus such as a person, action object or concept”. According to the theory of planned behavior a person is more likely to engage in online shopping when he has a positive attitude towards online shopping which is consistent with the norms. Attitude is a person's favorable or unfavorable response to an object or condition. Attitude is learnt over a period of time from past experience or knowledge and can affect future behavior of the individual towards the object or condition. In other words, attitude indicates that people like or dislike online purchasing. Consumers' attitude is a directly affect the consumers' purchasing behavior. Fishbein and Ajzen (1975) define attitude towards a behavior as a person's evaluation of a specified behaviour involving an object or outcome.

2.5 Behavioral Intention

Behavioral intention is defined as a person's perceived likelihood to engage in a given behavior or subjective probability that he or she will engage in a given behavior. This is an outcome of all the motivational factors that influence an individual to perform a given behavior, where the stronger the intent to perform the behavior, the more likely the behavior would be performed. Behavioral intentions are subjective in nature and are influenced by the attitude of the individual regarding the expected outcome and the subjective evaluation of the risks and benefits of performing the given behavior. Behavioral intention of individual in evaluating is based on attitudes toward the behavioral Intention. Attitude toward the behavior is defined as the individual's positive or negative feelings about performing a behavior. It is determined through an assessment of one's beliefs regarding the consequences arising from a behavior and an evaluation of the desirability of these consequences.

2.6 Related Studies

Jarvenpaa and Todd (1996) revised that consumer' relations to electronic shopping on the world wide web by using regression analysis. The results showed that seven constructs such as price, convenience, product information, return policy, financial risk, product risk and delivery risk are significant with customer satisfaction to repurchase in e-stores.

Jarvenpaa et al. (2000) examined that consumer trust in an internet store by using path analysis. This results indicated that consumers' intention to shop online (or willingness to buy in an internet shop) is positively associated and statistically significant with attitude towards internet buying, and influences their decision-making and purchasing behavior.

Vellido et al. (2000) analyzed that quantitative characterization and prediction of online purchasing behavior: a latent variable approach. It is revealed that usage of online shopping represented by costs involved, level of awareness, time and convenience, quality of products and risks involved, had significant relationships on customer satisfaction.

Doolin et al. (2002) studied that perceived risk and the internet shopping experience in online purchasing behavior. This research used the correlation analysis and t-test results. The results showed that service quality offered by the website is statistically significant to online purchasing.

Li and Zang (2002) analyzed that consumer online shopping attitudes and behavior by using the primary data. This study used regression analysis. The study showed that taxonomy is developed based on the analysis. This results founded that personal characteristics, vender/ service/ product characteristics and website quality significant affect online shopping attitude and intention.

Wolfenbarger and Gilly (2002) explored that comQ scale, dimensionalizing, measuring, and predicting quality of the E-Tail Experience by using the structure equation modeling (SEM) approach. This study developed a four-dimensional scale; website design, reliability/ fulfillment, customer service and privacy/ security to measure the quality of an online retailing site. These four scales are strongly relationship with customer judgment of quality and satisfaction, customer loyalty and attitudes towards the website.

Lokken et al. (2003) examined that comparing online and non-online shoppers by using Chi-square test. This research suggested that the educational needs of consumers differ based on their previous experience with online shopping and shopping experience did not differ by gender.

Kim and Kim (2004) examined that predicting online purchase intention for clothing products. This study used the multiple regression analysis. The analysis suggested that price, convenience, product information, return policy, financial risk, product risk and delivery risk are significant with customer satisfaction based on survey data.

Delafrooz et al. (2009) analyzed that factors affecting students' attitude toward online shopping. This research applied the multiple regression analysis. The analysis showed that the level of online shopping intention was relatively high and direction of attitude towards online shopping was positive among the postgraduate students in Malaysia.

Kiyici (2012) investigated that internet shopping behavior of college of education students. This study tested the hypotheses and analysis of variance. It is showed that male student teacher is more familiar and has more attitude than female student teacher. It is also revealed that teacher students who have more monthly income and have more internet self-efficiency have positive attitude and intention to shop online.

Pappas et al. (2014) reported that moderating effects of online shopping experience on customer satisfaction and repurchase intentions. It is applied the

structural equation modeling (SEM) and multi-group analysis to examine the moderating role of experience in a conceptual model estimating the intention to repurchase. This research showed that experience has moderating effects on the relationships between satisfaction and intention to repurchase.

Vakula (2016) described that a study on consumer attitude towards E-commerce. This study described that demographic factors are the common variables analyzed in online shopping researches by using path analysis. The study showed that attitude towards online shopping is influenced by demographic factors such as gender, age and income. This study also showed that four independent variables as demographic profiles, perceived benefits, perceived ease of use, and trust, and the dependent variable as consumers' attitude towards e-commerce are significant and positive link.

Bauerová (2018) explored that 'Are online purchases affected by demographic factors in the Czech Republic?' This study applied One-Way ANOVA and the Post Hoc Test (Turkey's test). The results revealed that the age, education, and economic activity have a significant impact on online shopping.

Mani and Tripathi (2019) revised that 'Does education affect the online impulse buying in Millennials?' This study used Pearson Correlation and ANOVA. The study confirmed that there is significant differential impact of educational qualification on the online impulsive buying.

Mbah et al. (2019) examined that effect of education on online shopping behavior in Nigeria by using the analysis of variance (ANOVA). This research revealed that education has no significant effect on online shopping behavior in Nigeria.

Nassar and Gad (2021) explored that the effect of demographic variables on price sensitivity of customers. This study used the multiple discriminant analysis. The results found that the four underlying demographic variables as gender, income level, family life cycle and age are significant determinants of price sensitivity in FMCG market in Egypt were reached comprising.

Many previous studies have investigated the influence of attitudes in the adoption of online shopping and indicated that attitudes is important in predicting online shopping intentions or behaviors.

2.7 Conceptual Framework

Ansari (2017) studied that interaction effect of demographic variables as gender, age, income and experience on attitude towards online shopping. Based on previous study, the conceptual framework was constructed and expanded to study other relations. Figure (2.1) indicates the relationship between attitude towards online shopping and factors of consumers' purchasing decision (time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment). In addition, the figure shows that the relationship between attitude and intention towards online shopping with respect to the impact of demographic and socio-economic factors such as gender, age, marital status, education level, occupation, income and experience.

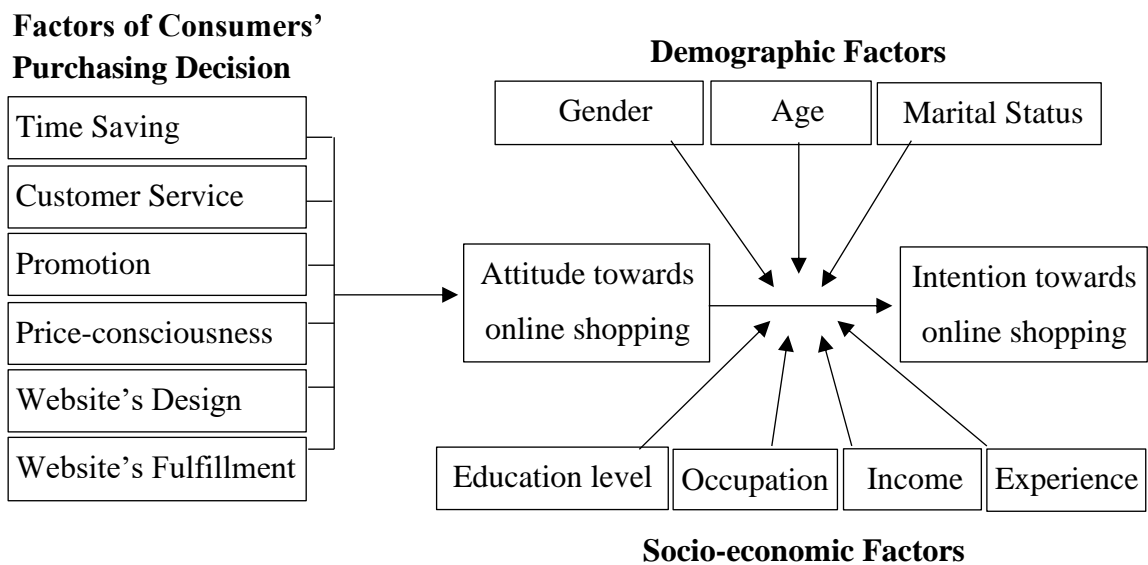


Figure (2.1): Conceptual Framework

Source: Own Complication (2022)

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the reliability analysis, regression analysis such as simple linear regression model and multiple linear regression model, hypotheses testing, Pearson's correlation coefficient and analysis of variance (ANOVA).

3.1 Reliability Analysis

Reliability is the scale construction counterpart of precision and accuracy in physical measurement. Reliability refers to measure of consistency for collected data. To establish the reliability of the data, the reliability coefficient (Cronbach Alpha) was verified. There are a number of different reliability coefficients. One of the most commonly used is Cronbach's alpha. Cronbach's alpha can be interpreted as a correlation coefficient; it ranges a value from 0 to 1. If Cronbach's alpha is greater than 0.7, it means high reliability and if Alpha is smaller than 0.3, it means low reliability.

Reliability Test

Before using the factor analysis, it is very important to test the reliability of the dimensions in the questionnaires. Cronbach's alpha, a statistical test used to examine the internal consistency of attributes, was determined for each dimension. This statistical test shows that the attributes are related to each other and to the composite scores. The composite scores for each section of the questionnaires were obtained by summing up the scores of individual statements. Cronbach's alpha is defined as follow.

$$\alpha = \frac{K}{K-1} \left[1 - \frac{\sum_{i=1}^k S_i^2}{S_T^2} \right] \quad (3.1)$$

where, α = Cronbach's alpha,

K = Number of Statement

S_i^2 = variance of each statement

S_T^2 = variance for sum of all items

If alpha value is high, then this suggests that all of the items are reliable and the entire test is internally consistent. If alpha is low, then at least one of the items is unreliable and must be identified via item analysis procedure. However, the Cronbach's alpha value should be above 0.7.

3.2 Testing for Sampling Adequacy

According to Deviant (2000), Kaiser-Meyer-Oklin (KMO) test is the measure of how suited the data for Factor Analysis. The test measures sampling adequacy for each variable in the model and for the complete model. The statistics is a measure of the proportion of variance among variables that might be common variance. The lower the proportion, the more suited the data is for Factor Analysis. KMO takes the value between 0 and 1. A rule of thumb is for interpreting the statistic. KMO value lies between 0.7 and 1.0 indicate the sampling is adequate. KMO value less than 0.5 indicate the sampling is not adequate and the remedial action should be taken. KMO values close to zero means that there are large partial correlations compared to the sum of correlations. In other words, there are widespread correlations which are a large problem for factor analysis.

The Bartlett's test of Spherically relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. For a large sample, Bartlett's test approximates a Chi-square distribution. However, the Bartlett's test compares the observed correlation matrix to the identity matrix. Therefore, Bartlett's test forms something of a bottom line test for large samples, but is less reliable for small samples. For factor analysis to be recommended suitable, the Bartlett's Test of Sphericity must be less than 0.05. In addition, very small values of significance (below 0.05) indicate a high probability that is significant relationship between the variables, whereas higher values (0.1 or above) indicate the data is inappropriate for factor analysis.

3.3 Regression Analysis

In the latter period of the 19th century, Sir Francis Galton developed the regression analysis as first. A set of statistical processes to estimate the relationships between a dependent variable and one or more independent variables in the statistical modeling is regression analysis. The dependent variable also called the outcome variable, the response variable, a label learning parlance in machine, and the

independent variables often called the predictor variables, the explanatory variables, covariates or features. The linear regression is commonly the useful form of regression analysis, which one finds the line or the more complex linear combination that fits the data close at hand according to the specific mathematical criterion. This linear regression allows the researcher for estimating the conditional expectation (population average value) of the dependent variable when the independent variables take on a given set of values. Less common forms of regression use slightly the different procedures for estimating the alternative location parameters (e.g., quartile regression) or estimating the conditional expectation across a broader collection of non-linear models (e.g., nonparametric regression).

Primarily, regression analysis is conceptually used for two distinct purposes. Regression analysis is first used for predicting and forecasting widely. Secondly, regression analysis is also used for influencing the causal relationships between the dependent and independent variables in some situations. Importantly, regressions by themselves reveal the relationships between a dependent variable and the independent variables' collection in a fixed dataset only.

Regression and correlation analyses will explain to study both nature and strength of relationship between two variables. To carry on the regression and correlation analyses, the value of an unknown variable based on past observation of that variable and others. In regression analysis, the model estimations construct and calculate to get the degree of variables relationship by using the mathematical formula.

3.3.1 Simple Linear Regression Model

Simple linear regression is a linear regression model with a single explanatory variable. It concerns two-dimensional sample points with one independent variable and one dependent variable and finds a linear function as accurately as possible predicts the dependent variable values as a function of the independent variable.

In fitting the regression line, consider the model

$$Y_i = \alpha + \beta X_i + \varepsilon_i; \quad i = 1, 2, \dots, n \quad (3.2)$$

where, Y_i = dependent variable

α = intercept term (constant)

β = slope

X_i = independent variable

ε_i = error term (residual)

The goal is to find the estimated values of the parameters $\hat{\alpha}$ and $\hat{\beta}$ which would provide the best fit in some sense for the data points. The article of the best fit knows as the least-squares approach that a line minimizes the sum of squared residuals $\hat{\epsilon}_i$ (differences between actual and predicted values of the dependent variable y).

$$\hat{\alpha} = \bar{y} - \hat{\beta} \bar{x}$$

$$\hat{\beta} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sum_{i=1}^n (x_i - \bar{x})^2} = \frac{s_{xy}}{s_x^2}$$

where, \bar{x} = average of x_i

\bar{y} = average of y_i

s_x^2 = sample variance

s_{xy} = sample covariance

3.3.2 Multiple Linear Regression Model

Multiple regression analysis is a common use in the statistical tools that used to describe the relationship between one dependent variable and two or more independent variables. The result of regression is an equation that represents the best prediction of a dependent variable from several independent variables. The equation is used if independent variables are also correlated with one another. The dependent variable has only one in proposed estimating equation. But, the independent variables are applied more than one variable. The independent variables are adding the model to improve the accuracy for prediction that is being studies.

The introduction of a model in multiple regression analysis is very similar to introduce the concept in simple linear regression. The equation which describes how the dependent variable Y is related to the independent variables X_1, X_2, \dots, X_k and e is an error in multiple linear regression model.

General multiple linear regression models take the following form;

$$Y_i = \beta_0 + \beta_1 X_{1j} + \beta_2 X_{2j} + \dots + \beta_j X_{ij} + \epsilon_i ; \quad i = 1, 2, \dots, n \quad (3.3)$$

$$j = 1, 2, \dots, k$$

where, Y_i = value of the dependent variable in the i^{th} trial

β_0 = constant in the equation which indicates the value of Y when all $X_{ij}=0$

β_1, \dots, β_j = regression coefficient associated with each of the X_j independent variable

X_{ij} = value of the j^{th} independent variable in the i^{th} trail

ε_i = random error in the i^{th} trail or observation associated with the process of sampling

3.3.3 Assumptions for the Multiple Linear Regression Model

There are the following assumptions in multiple linear regression models.

1. Linear relationship: There exists a linear relationship between each predictor variable and the response variable.
2. No Multicollinearity: any predictor variables are highly correlated with each other.
3. Homoscedasticity: The residuals have constant variance at every point in the linear model.
4. Multivariate Normality: The residuals of the model are normally distributed.

If one or more of these assumptions are violated, then the results of the multiple linear regression may be unreliable.

Assumption 1: Linear Relationship

Multiple linear regression assumes that there is a linear relationship between each predictor variable and the response variable. The easiest way to determine if this assumption is met is to create a scatter plot of each predictor variable and the response variable.

Assumption 2: Multicollinearity

Multiple linear regression assumes that none of the predictor variables are highly correlated with each other. When one or more predictor variables are highly correlated, the regression model suffers from multicollinearity, which causes the coefficient estimates in the model to become unreliable. Any time two or more independent variables are linear relation, there exists multicollinearity. The direct way of testing for multicollinearity is to produce a correlation matrix for all variables in the model. If a correlation is greater than 0.7 or less than -0.7, the independent variables are highly correlated. If a correlation is less than 0.5, it can be concluded that multicollinearity is not problem. Another way to detect multicollinearity is to use the value of tolerance and the value of variance inflation (VIF). If the value of tolerance is not less than 0.2, it can be said that there is no multicollinearity problem in this study. In general, multicollinearity is not considered a significant problem

unless the of a single X_i measure at least 5 or the sum of VIF's for all X_i is at least 5. The value of VIF and tolerance are defined as follow.

$$\text{VIF}(X_i) = \frac{1}{1-R_i^2}, \quad \text{Tol} = 1 - R_i^2 \quad (3.4)$$

where, R_i^2 = coefficient of determination

Assumption 3: Homoscedasticity

Multiple linear regression assumes that the residuals have constant variance at every point in the linear model. When this is not the case, the residuals are said to suffer from heteroscedasticity. When heteroscedasticity is present in a regression analysis, the results of the regression model become unreliable. The simplest way to determine if this assumption is met is to create a plot of standardized residuals versus predicted values.

Assumption 4: Multivariate Normality

Multiple linear regression assumes that the residuals of the model are normally distributed. There are two common ways to check if this assumption is met:

1. Check the assumption visually using Q-Q plots.
2. A Q-Q plot is a type of plot that we can use to determine whether or not the residuals of a model follow a normal distribution. If the points on the plot roughly form a straight diagonal line, then the normality assumption is met.
3. Check the assumption using a formal statistical test like Shapiro-Wilk, Kolmogorov-Smirnov, Jarque-Barre, or D'Agostino-Pearson.
4. Keep in mind that these tests are sensitive to large sample sizes – that is, they often conclude that the residuals are not normal when the sample size is extremely large. This is why it's often easier to use graphical methods like a Q-Q plot to check this assumption.

3.4 Test for Significance of Overall Multiple Linear Regression Model (ANOVA)

The F test is used to determine whether there exists a significant relationship between the dependent variable and the entire set of independent variables in the model. The overall F test is used to test for the significance of overall multiple linear regression models. The ANOVA procedure tests the null hypothesis that all the β values are zero against the alternative that at least one β is not zero.

Null Hypothesis; $H_0: \beta_1 = \beta_2 = \dots = \beta_k = 0$

Alternative Hypothesis; $H_1: \text{At least one } \beta_j \neq 0$

The ratio of test statistics;

$$F^* = \frac{MSR}{MSE} \quad (3.5)$$

where, MSR = mean square due to regression

MSE = mean square of error

The decision rule for this test,

If $F^* \geq F_{(1-\alpha, k, n-k-1)}$, Reject H_0

If $F^* < F_{(1-\alpha, k, n-k-1)}$, Do not reject H_0

The existence of regression relation by itself does not ensure that useful predictions can be made by using it.

3.5 The Coefficient of Multiple Determination (R^2)

The coefficient of determination can be calculated by using the error sums of squares (SSE) and regression sums of squares (SSR), and total sums of square (SST).

The coefficient of multiple determinations is defined as;

$$R^2 = \frac{SSR}{SST} = 1 - \frac{SSE}{SST} \quad (3.6)$$

where, SSR = Regression Sum of Square

SST = Total Sum of Square

SSE = Error Sum of Square

The R^2 measure the variation in Y that is explained by the independent variable X in the simple linear regression model. In multiple linear regressions, the coefficient of multiple determinations represents the proportion of the variation in Y that is explained by the set of independent variables. The value of coefficient of multiple determinations will be between zero and one.

3.6 The Adjusted Coefficient of Multiple Determinations (\bar{R}^2)

A measure that recognized the number of independent variables in the regression model is called the adjusted coefficient of multiple determination and denoted by \bar{R}^2 ,

$$\bar{R}^2 = \frac{\sum((Y_i - \hat{Y})^2)}{(n-k-1)} \bigg/ \frac{\sum(Y_i - \bar{Y})^2}{(n-1)} \quad (3.7)$$

Reporting the adjusted R^2 is extremely important in comparing two or more regression models that predict the same dependent variable but have a different number of independent variables.

3.7 Pearson's Correlation Coefficient

It was developed by Karl Pearson from a related idea introduced by Francis Galton in the 1880s, and for which the mathematical formula was derived and published by Auguste Bravais in 1844.

Pearson's correlation coefficient is the covariance of the two variables divided by the product of their standard deviations. The form of the definition involves a product moment that is the mean (the first moment about the origin) of the product of the mean-adjusted random variables; hence the modifier product-moment in the name.

In statistics, the Pearson's correlation coefficient (PCC) also known as Pearson's r , the Pearson's product-moment correlation coefficient (PPMCC), the bivariate correlation, or colloquially simply as the correlation coefficient is a measure of linear correlation between two sets of data. It is the ratio between the covariance of two variables and the product of their standard deviations; thus it is essentially a normalized measurement of the covariance, such that the result always has a value between -1 and 1 . As with covariance itself, the measure can only reflect a linear correlation of variables, and ignores many other types of relationship or correlation.

For a population, Pearson's correlation coefficient is commonly represented by the greek letter ρ (rho) and may be referred to as the population correlation coefficient or the population Pearson correlation coefficient. Given a pair of random variables, the formula for ρ is

$$\rho_{X,Y} = \frac{\text{cov}(X,Y)}{\sigma_X \sigma_Y} \quad (3.8)$$

where, cov = covariance

σ_X = standard deviation of X

σ_Y = standard deviation of Y

The formula for ρ can be expressed in terms of mean and expectation as

$$\text{cov}(X,Y) = E[(X - \mu_X)(Y - \mu_Y)]$$

The formula for ρ can also be written as

$$\rho_{X,Y} = \frac{E[(X - \mu_X)(Y - \mu_Y)]}{\sigma_X \sigma_Y}$$

where: σ_X and σ_Y are defined as above

μ_X = the mean of X

μ_Y = the mean of Y

E = the expectation.

The formula for ρ can be expressed in terms of the uncentered moments. Since

$$\mu_X = E(X)$$

$$\mu_Y = E(Y)$$

$$\sigma^2_X = E [X - E(X)]^2 = E(X^2) - [E(X)]^2$$

$$\sigma^2_Y = E [Y - E(Y)]^2 = E(Y^2) - [E(Y)]^2$$

$$E [(X - \mu_X)(Y - \mu_Y)] = E [(X - E(X))(Y - E(Y))] = E(XY) - E(X) \cdot E(Y)$$

$$\rho_{X,Y} = \frac{E(XY) - E(X) \cdot E(Y)}{\sqrt{E(X^2) - [E(X)]^2} \cdot \sqrt{E(Y^2) - [E(Y)]^2}}$$

For a sample, Pearson's correlation coefficient is commonly represented by r_{xy} and may be referred to as the sample correlation coefficient or the sample Pearson correlation coefficient. We can obtain a formula for r_{xy} by substituting estimates of the variances and covariances based on a sample into the formula above. Given the paired data consisting of n pairs, r_{xy} is defined as:

$$r_{xy} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2} \cdot \sqrt{\sum_{i=1}^n (y_i - \bar{y})^2}} \quad (3.9)$$

where: n = sample size

x_i and y_i are the individual sample points indexed with i

$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$ (the sample mean); and analogously for \bar{y}

CHAPTER IV

ANALYSIS OF INFLUENCING FACTORS ON CONSUMERS' ATTITUDE AND INTENTION TOWARDS ONLINE SHOPPING

In this chapter, descriptive analyses of demographic and socio-economic characteristics of respondents are presented. Data analyses of consumers' attitude and intention towards online shopping are calculated by using the statistical techniques such as simple linear regression model, multiple regression model, hierarchal regression model, correlation coefficient and analysis of variance. Factors affecting on consumers' attitude and intention towards online shopping are measured by separating the five points Likert scale.

4.1 Survey Design

This study aims to investigate the factors affecting consumers' attitude and intention towards online shopping in Yangon. The research design sought to identify the relationships between consumers' attitude and intention towards online shopping in order to analyze the interaction effect of demographic and socio-economic characteristics on this relation. The study intends to utilize the data collected from actual online buyers in Yangon.

To identify the sample size, the following formula of Cochran's formula (1977) is applied.

$$n = \frac{Z^2 pq}{e^2}$$

where, n = sample size

Z = z score at 95% confidence level (1.96)

p = proportion of the population (50%)

q = 1-p

e = margin of error ($\pm 5\%$ precision)

Substituting the values,

$$n = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 384.16 \approx 385$$

The required sample size was at least 385 consumers. The appropriate sample size was based on 95% level of confidence and a margin of error of 5% was sufficient to estimate the population characteristics to get the sample from a population in Yangon.

It is assumed that response rate (\bar{r}) is 93%. The sample size adjusted for this response rate (n_0) was calculated as follows.

$$n_0 = \frac{n}{\bar{r}} = \frac{385}{0.93} = 413.98 \approx 414$$

The data was received from 415 consumers who are actual online buyers in Yangon.

To get the required sample size was chosen the Google Forms, one of the best online survey software and questionnaire tools. The questionnaire was constructed in Google Drive via sharing the website-based software as Facebook, Telegram, Instagram, Messenger and Viber. In Facebook, this questionnaire was shared to some research groups and private group in order to high response. Moreover, participants were informed along with the agreement letter that the consumer who completely filled the questionnaire had mobile top-up 1000 kyats chances by lottery drawing to encourage the high response rate. There was used 100,000 kyats for 100 lucky persons. By the time the survey was terminated, 415 valid questionnaires were collected by using systematic sampling. According to Fielding, Lee and Blank (2008), systematic sampling is the selection of every k^{th} element from a sampling frame or from a sequential stream of potential respondents. Systematic sampling has the advantage that a sampling frame does not need to be assembled beforehand. In terms of internet surveying, systematic sampling can be used to sample sequential visitors to a website. The resulting sample is considered to be a probability sample as long as the sampling interval does not coincide with a pattern in the sequence being sampled and a random starting point is chosen. There are important analytical and practical considerations associated with how one draws and subsequently analyzes the results from each of these types of probability-based sampling schemes.

While online surveys using list-based sampling frames can be conducted either via the web or by e-mail, if an all-electronic approach is preferred the invitation to take the survey will almost always be made via e-mail. And, because e-mail lists of general populations are generally not available, this survey approach is most applicable to large

homogeneous groups for which a sampling frame with e-mail address can be assembled (for example, universities, government organizations, large corporations, etc.).

In this study, the data were collected initially the random starting point as 2nd respondent from the first five inbox of e-mail lists occurred by using random calculator. And then, the sample was chosen every 3rd respondent from the feedback of consumers. The survey was conducted from 25 July to 15 August 2022, with a target of receiving the adjusted sample size. Invalid questionnaires were excluded in line with the following criteria: questionnaires with (1) linearly/ diagonally responses on all items throughout the entire set of the measures; (2) questionnaires with either unknown or oversea IP address.

To meet the goals and objectives of this study, factors of consumers' purchasing decision cognitive evaluation items are generated and measured on 1 (strongly disagree) to 5 (strongly agree) point Likert scales. Also, five items affective consumers' attitude towards online shopping are employed and five items are used to analyze the intention towards online shopping. At last, 415 usable questionnaires were obtained for data analysis. Basic characteristics of the final sample are shown in Table (4.1).

Table (4.1): Demographic and Socio-economic Characteristics of Respondents

Sr. No	Demographic and Socio-economic Characteristics	Frequency	Percentage
1.	Gender		
	- Male	145	34.94 %
	- Female	270	65.06 %
2.	Age Group		
	- Under 20	87	20.96 %
	- 20-25	67	16.14 %
	- 25-30	123	29.64 %
	- 30-35	62	14.94 %
	- 35-40	18	4.34 %
	- 40-45	26	6.27 %
	- 45-50	11	2.65 %
- 50 and above	21	5.06 %	

Sr. No	Demographic and Socio-economic Characteristics	Frequency	Percentage
3.	Marital Status		
	- Single	275	66.27 %
	- Married	134	32.29 %
	- Divorced	2	0.48 %
	- Separated	1	0.24 %
	- Widowed	3	0.72 %
4.	Education Level		
	- Middle and High School	97	23.37 %
	- Bachelor and Diploma	126	30.36 %
	- Master	107	25.78 %
	- Ph.D	20	4.82 %
	- Other	65	15.66 %
5.	Occupation		
	- Student	116	27.95 %
	- Self-Owned	22	5.30 %
	- Government	208	50.12 %
	- Private/ Company	30	7.23 %
	- NGOs/ CSOs	2	0.48 %
	- Other	37	8.92 %
6.	Monthly Income (Ks)		
	- Under 200,000 Ks	147	35.42 %
	- 200,000-400,000 Ks	231	55.66 %
	- 400,000-600,000 Ks	15	3.61 %
	- 600,000-800,000 Ks	5	1.20 %
	- 800,000-1,000,000 Ks	7	1.69 %
	- 1,000,000 Ks and above	10	2.41 %
7.	Experience		
	- 1-5 times	217	52.29 %
	- 6-10 times	100	24.10 %
	- 11-15 times	19	4.58 %
	- 15 times over	79	19.04 %

Source: Survey Data (2022)

The main reason of respondents by gender can adequately reflect the differences and inequalities in the condition of male and female. According to Table (4.1), 34.94% of respondents are male and 65.06% of respondents are female respectively. Therefore, female respondents are nearly two times of male respondents.

The age group of respondents is one of the most characteristics to understand their knowledge and views in online shopping. They are classified into eight different groups in the age of respondents such as under 20, 20-25, 25-30, 30-35, 35-40, 40-45, 45-50 and 50 and above. According to Table (4.1), the highest percentage of respondent is in 25-30 years old age group while the lowest percentage of respondent is in 45-50 years old age group. The feedback of respondents under 35 years old is over 80% of respondents. Therefore, it can be concluded that younger people are more knowledgeable than older people.

The marital status of respondents is also one of the most important characteristics to study the effect of socio-economic characteristics. The attitude and intention of the respondents can differ by the marital status of respondents. They are classified into five different groups in the marital status of respondents such as single, married, divorced, separated and widowed. According to Table (4.1), over 95% of respondents are the single and married. The divorced, the separated and the widowed of respondents are 0.48%, 0.24% and 0.72% respectively. Most of the respondents are single and almost none in the respondents are divorced, separated and widowed. Therefore, it can be said that single respondents are more interested than married respondents and others (divorced, separated and widowed).

The education level of respondents is also one of the most important characteristics to study the effect of socio-economic characteristics. They are classified into five different groups in the education level of respondents such as middle and high school, bachelor and diploma, master, Ph.D and other. According to Table (4.1), over 75% of the respondents have the middle and high school level, the bachelor degree and diploma holders and the master degree, 4.82% of respondents have Ph.D degree and 15.66% of respondents have other educational level respectively. Therefore, most of the respondents are bachelor degree and diploma holders.

The occupation of respondents is also one of the most important characteristics to study the effect of socio-economic characteristics on customers' attitude and intention towards online shopping. They are classified into six different

groups in the occupation of respondents such as students, self-owned, government, private and company, NGOs and CSOs and other. According to Table (4.1), about 80% of respondents are students and government employee, 5.30% of respondents are their own business, 7.23% of respondents are the private and company employee, 0.48% of respondents are the employee of NGOs and CSOs, and the 8.92% of respondents are other sectors of occupation respectively. Therefore, most of the respondents are government employee.

The income of respondents is one of the most characteristics to study the effect of demographic characteristics in purchasing the online shop. There are classified into six different groups in the income of respondents such as under 200,000 Ks, 200,000-400,000 Ks, 400,000-600,000 Ks, 600,000-800,000 Ks, 800,000-1,000,000 Ks and 1,000,000 Ks and above. According to Table (4.1), over 90% of respondents earned the monthly income of below 400,000 Ks. Hence, most of respondents earned the monthly income of below 400,000 Ks in purchasing the online shopping.

The experience of respondents is also one of the most characteristics to study the effect of demographic characteristics in purchasing from online shops. There are classified into four different groups in the experience of respondents such as 1-5 times, 6-10 times, 11-15 times and over 15 times purchased in online shopping. According to Table (4.1), 52.29% of respondents are 1-5 times purchased in online shopping, 24.10% of respondents are 6-10 times purchased in online shopping, 4.58% of respondents are 11-15 times purchased in online shopping, and 19.04% of respondents are over 15 times purchased in online shopping respectively. Most of the respondents have purchased in online shopping 1-5 times. Therefore, it can be seen that many respondents are new users in purchasing the online shopping and the experienced users are nearly half of all respondents.

4.2 Reliability and Validity Tests

The reliability analysis was referred to measure the degree of the accuracy and consistency of the collected factors. To examine the consistency of the collected factors, Cronbach's alpha is calculated. To determine the validity analysis, Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's Test of Sphericity are used

for both the correlation matrix and individual variables to appraise the suitability of applying factor analysis.

Cronbach's alpha and KMO measure of sampling adequacy for each variables: time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment are described in Table (4.2).

Table (4.2): Reliability and Validity

No.	Variables	Items	Cronbach's Alpha	Validity KMO
1	Time Saving	5	0.916	0.593
2	Customer Service	5	0.905	0.704
3	Promotion	5	0.894	0.818
4	Price-consciousness	5	0.891	0.854
5	Website's Design	5	0.893	0.839
6	Website's Fulfillment	5	0.893	0.839
7	Attitude	5	0.895	0.813
8	Intention	5	0.895	0.812

Source: Survey Data (2022)

Since the reliability coefficient is the recommended value of 0.7, the instruments of measure can be concluded as higher reliability. The measurement of the sampling adequacy by KMO Validity for each variables turned out to be the recommended value of 0.5, thus all items included in the variables are suitable for analysis.

4.3 Consumers' Attitude on Factors of Consumers' Purchasing Decision

There are six factors of consumers' purchasing decision: time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment are used to measure the consumers' attitude. The mean value of each component, the standard deviation, and overall mean value are presented in the Tables (4.3) to (4.8).

To analyze the consumers' attitude on time saving factor, the following statements are used and findings are presented in Table (4.3).

Table (4.3): Time Saving

No.	Description	Average	Std. Dev
1	Online shopping doesn't waste time for going to the market yourself.	4.17	0.69
2	Online shopping takes to reduce time for choosing the product in many markets.	4.05	0.77
3	Online shopping reduces the queuing time to check out in counter.	4.20	0.7
4	Online shopping takes less time in evaluating the cost of product while shopping online.	4.13	0.71
5	Online shopping is useful in time saving.	4.01	0.78
Overall		4.11	0.62

Source: Survey Data (2022)

According to Table (4.3), the overall mean value of consumers' attitude towards time saving is 4.11 thus indicating the agree level of time saving by consumers' attitude. A maximum average value of 4.20 indicates that online shopping reduces the queuing time to check out in counter by consumers. The minimum average value of 4.01 indicates that online shopping is useful in time saving.

To measure the perception level of respondents in customer service factor, the following five statements are used and the result is presented in Table (4.4).

Table (4.4): Customer Service

No.	Description	Average	Std. Dev
1	The website takes ease of vendor contact and consumer communication channels.	3.90	0.61
2	The consumers can take the assessment on sales person.	3.78	0.78
3	Inquiries are answered promptly.	3.43	0.9
4	When you have a problem, the website shows a sincere interest in solving it.	3.32	0.9
5	The website accepts the simple payment methods for consumers. (E.g., Cash on delivery, Wave money, KBZ pay, etc.)	4.09	0.58
Overall		3.71	0.54

Source: Survey Data (2022)

According to Table (4.4), the overall mean value of consumers' attitude towards customer service is 3.71 thus indicating the agree level of customer service by consumers' attitude. A maximum average value of 4.09 indicates that the website accepts the simple payment methods for consumers. The minimum average value of 3.32 indicates that when you have a problem, the website shows a sincere interest in solving it.

To measure the perception level of respondents in promotion factor, the following five statements are used and the result is presented in Table (4.5).

Table (4.5): Promotion

No.	Description	Average	Std. Dev
1	Promotion expiry date influences me in making an order.	3.96	0.74
2	The products purchase to reach the fitted promotion item/ amount.	3.47	0.96
3	The notifications and promotion of online shopping support for willing to buy the sales promotion.	3.50	0.88
4	Terms and conditions of promotion are important to me before shopping online.	3.88	0.74
5	Provided discount encourages me to shop online.	3.48	0.89
Overall		3.66	0.61

Source: Survey Data (2022)

According to Table (4.5), the overall mean value of consumers' attitude towards promotion is 3.66 thus indicating the agree level of promotion by consumers' attitude. A maximum average value of 3.96 indicates that promotion expiry date influences me in making an order. The minimum average value of 3.47 indicates that the products purchase to reach the fitted promotion item/ amount.

To analyze the consumers' attitude on price-consciousness factor, the following statements are used and findings are presented in the following Table (4.6).

Table (4.6): Price Consciousness

No.	Description	Average	Std. Dev
1	If the products same, the cheaper price always choose.	3.91	0.89
2	Online shopping gives the points based on the payments and this point can use next time purchases for cut-rating.	3.94	0.81
3	Delivery price of online shopping is reasonable.	3.29	0.97
4	Tax price in using online shop is reasonable.	3.45	0.86
5	Overall price of online shopping is affordable.	3.60	0.77
Overall		3.64	0.59

Source: Survey Data (2022)

According to Table (4.6), the overall mean value of consumers' attitude towards price-consciousness is 3.64 thus indicating the agree level of price-consciousness by consumers' attitude. A maximum average value of 3.94 indicates that online shopping gives the points based on the payments and this point can use next time purchases for cut-rating. The minimum average value of 3.29 indicates that delivery price of online shopping is reasonable.

To measure the perception level of respondents in website's design factor, the following five statements are used and the result is presented in Table (4.7).

Table (4.7): Website's Design

No.	Description	Average	Std. Dev
1	The website design helps me in searching the products easily.	4.05	0.68
2	While shopping online, I prefer to purchase from a website that provides safety and ease of navigation and order.	3.76	0.76
3	The website layout helps me in searching and selecting the right product while shopping online.	3.90	0.72
4	Familiarity with the website before making actual purchase reduces the risk of shopping online.	3.96	0.69
5	Online shopping prefers to buy from website that provides with the quality of information.	3.82	0.82
Overall		3.90	0.55

Source: Survey Data (2022)

According to Table (4.7), the overall mean value of consumers' attitude towards website's design is 3.90 thus indicating the agree level of website's design by consumers' attitude. A maximum average value of 4.05 indicates that the website design helps me in searching the products easily. The minimum average value of 3.76 indicates that online shopping prefers to buy from website that provides with the quality of information.

To measure the perception level of respondents in website's fulfillment factor, the following five statements are used and the result is presented in Table (4.8).

Table (4.8): Website's Fulfillment

No.	Description	Average	Std. Dev
1	The website gets things what you needed from the website.	3.51	0.90
2	The website fulfill easy-to-use for consumers by using the updated technology.	3.60	0.80
3	The website directly handles all of the picking, packing and shipping to process your orders.	3.58	0.76
4	The website states the order tracing status of the order.	3.51	0.93
5	The website serves center utilize automated barcode scanner when receiving a product to verify the current item has been received.	3.66	0.95
Overall		3.57	0.64

Source: Survey Data (2022)

According to Table (4.8), the overall mean value of consumers' attitude towards website's fulfillment is 3.57 thus indicating the agree level of website's fulfillment by consumers' attitude. A maximum average value of 3.66 indicates that the website serves center utilize automated barcode scanner when receiving a product to verify the current item has been received. The minimum average value of 3.51 indicates that the website gets things what you needed from the website and the website states the order tracing status of the order.

4.4 Analysis on Factors of Consumers' Purchasing Decision

There are six components in factors of consumers' purchasing decision in the identification of consumers' attitude towards online shopping. They are:

- (1) Time saving,
- (2) Customer service,
- (3) Promotion,
- (4) Price-consciousness,
- (5) Website's design, and
- (6) Website's fulfillment.

The analyses on these components in factors of consumers' purchasing decision are presented in Table (4.9).

Table (4.9): Analysis on Factors of Consumers' Purchasing Decision

Sr. No	Description	Mean	Std. Dev	Attributes Item
1	Time saving	4.11	0.62	5
2	Customer Service	3.71	0.54	5
3	Promotion	3.66	0.61	5
4	Price-consciousness	3.64	0.59	5
5	Website's design	3.90	0.55	5
6	Website's fulfillment	3.57	0.64	5

Source: Survey Data (2022)

According to Table (4.9), the maximum overall mean value of consumers' attitude is 4.11 in agree level of time-saving by consumers' attitude. The minimum overall mean value of consumers' attitude is 3.57 in agree level of website's fulfillment by consumers' attitude. Each belief factors is measured by the five attributes item.

4.5 Analysis on Attitude towards Online Shopping

Respondents were also questioned about their overall level of attitude towards online shopping. The results were summarized in Table (4.10).

Table (4.10): Attitude towards Online Shopping

No.	Description	Average	Std. Dev
1	Online shopping starts by looking through websites or applications.	4.03	0.58
2	Online applications know from sharing my friends.	3.78	0.81
3	Choosing many products in search engine makes often.	3.94	0.73
4	Navigation bar in application is helpful.	3.84	0.72
5	Online buying experience shares the friends and family to shop online because there have many benefits.	3.62	0.86
Overall		3.84	0.53

Source: Survey Data (2022)

According to the result of Table (4.10), the overall mean of attitude towards online shopping is 3.84. The maximum average value of 4.03 indicates that online shopping starts by looking through websites or applications. The minimum average value of 3.62 indicates that online buying experience shares the friends and family to shop online because there have many benefits.

4.6 Analysis on Intention towards Online Shopping

Respondents were also questioned about their overall level of intention towards online shopping. The results were summarized in Table (4.11).

Table (4.11): Intention towards Online Shopping

No.	Description	Average	Std. Dev
1	Online application service for 24/7.	3.88	0.86
2	Purchasing in online shopping by using the short time.	3.90	0.79
3	Online services can easily use that no need to use motor vehicles to shop.	4.05	0.63
4	Purchasing in online shopping save the energy for going to market and handling the products.	4.08	0.62
5	Purchasing in online shopping accept for the next time because online shopping can easily and quickly make the shopping process.	3.92	0.74
Overall		3.96	0.57

Source: Survey Data (2022)

According to the result of Table (4.11), the overall mean of intention towards online shopping is 3.96. The maximum average value of 4.08 indicates that purchasing in online shopping save the energy for going to market and handling the products. The minimum average value of 3.88 indicates that online application service for the whole day (24 hours).

4.7 Analysis on the Relationship between Factors of Consumers' Purchasing Decision and Attitude towards Online Shopping

One of the objectives of this study is to analyze the relationship between the factors of consumers' purchasing decision and attitude towards online shopping. To reach this objective, a correlation coefficient is firstly measured the strength of relationship between two variables: the attitude towards online shopping and the factors of consumers' purchasing decision measured with six factors: time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment.

The major intention of this section is to determine the factors that influenced consumers' attitude towards online shopping overall levels of consumers' purchasing decision, the six factors were used in model was employed because it provided the most accurate interpretation of the independent variables.

In order to find a best model of the data, it is required to have significant correlation between dependent variable (attitude towards online shopping) and six independent variables (time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment). The results of correlation coefficients are showed in Table (4.12).

Table (4.12): Correlation between Factors of Consumers' Purchasing Decision and Attitude towards Online Shopping

		Attitude	Time saving	Customer service	Promotion	Price-consciousness	Website's design	Website's fulfillment
Attitude	Correlation	1						
	Sig.(2-tailed)	-						
Time saving	Correlation	0.390***	1					
	Sig.(2-tailed)	0.000	-					
Customer service	Correlation	0.656***	0.408***	1				
	Sig.(2-tailed)	0.000	0.000	-				
Promotion	Correlation	0.593***	0.387***	0.622***	1			
	Sig.(2-tailed)	0.000	0.000	0.000	-			
Price-consciousness	Correlation	0.491***	0.317***	0.509***	0.635***	1		
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	-		
Website's design	Correlation	0.621***	0.538***	0.695***	0.643***	0.498** *	1	
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	0.000	-	
Website's fulfillment	Correlation	0.660***	0.328***	0.721***	0.660***	0.562** *	0.671***	1
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	-

***Significant at 1% level, **5% level and *10% level

Source: Survey Data (2022)

Table (4.12) shows the correlation between factors of consumers' purchasing decision and attitude towards online shopping. The results show positive correlation between the all variables. The correlations among the variables are weakly, moderately and strongly positive correlation respectively. The moderately correlation

between attitude with website's design and website's fulfillment were 0.66. It means that there is significant relationship on attitude with website's design and website's fulfillment at 1% level equally. The correlations between attitude with other variables such as time saving, customer service, promotion and price-consciousness were 0.39, 0.59, 0.49 and 0.62 which show weakly and moderately positive relationship between the variables.

The moderately correlation was between time saving and website's design, 0.54. It means that there is significant relationship between time saving and website's design at 1% level. The correlations between time saving with other variables such as customer service, promotion, price-consciousness and website's fulfillment were 0.41, 0.39, 0.32 and 0.33 which show moderately and weakly positive relationship between the variables. Similarly, the correlation between customer service with other variables such as promotion, price-consciousness, website's design and website's fulfillment were 0.62, 0.51, 0.70 and 0.72 which show moderately and strongly positive relationship between the variables. In the same way, the correlations between promotion with other variables such as price-consciousness, website's design and website's fulfillment were 0.64, 0.64 and 0.66 which show strongly positive relationship between the variables. Moreover, the correlation between price-consciousness with other variables such as website's design and website's fulfillment was 0.50 and 0.56 which show moderately positive relationship between the variables. Finally, the correlation value between website's design and website's fulfillment was 0.67 which shows that there was strongly positive relationship between these variables.

The multiple linear regression equation is

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon_i$$

where, Y_i = attitude towards online shopping
 β_0 = intercept term (constant)
 X_1 = time saving
 X_2 = customer service
 X_3 = promotion
 X_4 = price-consciousness
 X_5 = website's design
 X_6 = website's fulfillment

$\beta_1, \dots, \beta_6 =$ regression coefficients of X_1 and X_6

$\varepsilon_i =$ residual terms

The findings show the effects of consumers' purchasing decision and attitude towards online shopping in Table (4.13).

Table (4.13): Effect of Consumers' Purchasing Decision on Attitude towards Online Shopping

Variable	Coefficient	Std. Error	t-test	Prob.	Collinearity Statistics	
					Tolerance	VIF
C	0.755	0.164	4.618	0.000	NA	NA
Time saving	0.063*	0.037	1.709	0.088	0.695	1.438
Customer Service	0.247***	0.055	4.501	0.000	0.386	2.591
Promotion	0.108**	0.047	2.308	0.022	0.411	2.436
Price-consciousness	0.052	0.043	1.223	0.222	0.556	1.799
Website's Design	0.135**	0.055	2.438	0.015	0.365	2.738
Website's Fulfillment	0.224***	0.048	4.728	0.000	0.370	2.704
R-squared	0.541					
Adjusted R-squared	0.534					
F-statistic	80.160					
Prob.(F-stat)	0.000***					

***Significant at 1% level, **5% level and *10% level

Source: Survey Data (2022)

According to Table (4.13), the estimated multiple linear regression equation is

$$\hat{Y}_i = 0.75 + 0.06 X_1 + 0.25 X_2 + 0.11 X_3 + 0.05 X_4 + 0.13 X_5 + 0.22 X_6$$

The value of the correlation coefficient is 0.54 indicate that there is fairly positive relationship between attitude towards online shopping and its six independent (exogenous) variables. The value of the adjusted correlation coefficient is 0.53 indicate that 53% of variation in attitude towards online shopping is explicated by its six independent (exogenous) variables.

Time saving has positively relationship with attitude towards online shopping. Statistically, it is significant at 10% level. If time saving increases by one unit,

attitude towards online shopping will increase by 0.06 units when other factors remain unchanged.

Customer service has positively relationship with attitude towards online shopping. Statistically, it is highly significant at 1% level. If customer service increases by one unit, attitude towards online shopping will increase by 0.24 units when other factors remain unchanged.

Promotion has positively relationship with attitude towards online shopping. Statistically, it is significant at 5% level. If promotion increases by one unit, attitude towards online shopping will increase by 0.11 units when other factors remain unchanged.

Price-consciousness has positively relationship with attitude towards online shopping. Statistically, it is not significant at 1%, 5% and 10% level. This may be that some consumers don't purchase the things although they get the price cheaper. If price-consciousness increases by one unit, attitude towards online shopping will increase by 0.05 units when other factors remain unchanged.

Website's design has positively relationship with attitude towards online shopping. Statistically, it is significant at 5% level. If website's design increases by one unit, attitude towards online shopping will increase by 0.13 units when other factors remain unchanged.

Website's fulfillment has positively relationship with attitude towards online shopping. Statistically, it is highly significant at 1% level. If website's fulfillment increases by one unit, attitude towards online shopping will increase by 0.22 units when other factors remain unchanged.

Generally, a VIF above 5 or Tolerance below 0.2 indicates that multicollinearity might exist. The results indicate that none of the predictor variables are highly correlated with each other because the values of VIF and Tolerance of all independent variables exist less than 5 and above 0.2.

The results of checking the assumptions for multiple regressions analysis are described in Appendix (B).

1. According to the results of Figure (1), there is a linear relationship between each predictor variable and the response variable.
2. Based on the results of Table(1), it was found that the VIF of all independent variables less than 5. Therefore, none of the predictor variables are highly correlated with each other.

3. Regarding the Figure (2), the graph of the standardized values in the model predicted against the standardized residuals obtained. Homoscedasticity means that having the same scatter, the points must be about the same distance from the line. It is founded that heteroscedasticity is not present.
4. According to Figure (3), it can be said that the multiple regression model fitted to represent the relationship between the factors of consumers' purchasing decision and attitude towards online shopping is valid.

4.8 Analysis on Relationship between Demographic and Socio-economic Characteristics and Intention towards Online Shopping

The next objective of this study is to analyze the demographic and socio-economic characteristics and intention towards online shopping. To reach this objective, t-test, F-test and Pearson correlation coefficient is firstly analyzed the relationship between attitude towards online shopping and demographic and socio-economic characteristics measured with seven factors: gender, age, marital status, education level, occupation, income and experience.

The major intention of this section is to determine the interaction effects of demographic and socio-economic factors on the relationship between attitude and intention towards online shopping. Hierarchal regression analysis was applied because is provided to show the significant amount of variance in dependent variable after accounting for all other variables and to determine the significant improvement in R^2 after adding the new variables.

In order to calculate the testing for needed hypothesis, t-test, F-test and Pearson correlation coefficient is analyzed the relationship between demographic and socio-economic characteristics and attitude towards online shopping. Table (4.14) is presented the results of testing the hypotheses.

Table (4.14): Analysis on Relationship between Demographic and Socio-economic Characteristics and Attitude towards Online Shopping

Hypotheses	Analysis Method	F-test/ t-test	Prob.	Decision
There is no difference in attitude towards online shopping when segmented by gender.	Independent t-test	-2.374	0.018**	Rejected
There is no difference in attitude towards online shopping when segmented by age.	Analysis of Variance (ANOVA)	1.941	0.062*	Rejected
There is no difference in attitude towards online shopping when segmented by marital status.	Analysis of Variance (ANOVA)	2.478	0.044**	Rejected
There is no difference in attitude towards online shopping when segmented by education level.	Analysis of Variance (ANOVA)	5.231	0.000***	Rejected
There is no difference in attitude towards online shopping when segmented by occupation.	Analysis of Variance (ANOVA)	4.931	0.000***	Rejected
There is no difference in attitude towards online shopping when segmented by income.	Analysis of Variance (ANOVA)	0.609	0.693	Accepted
There is no difference in attitude towards online shopping when segmented by experience.	Analysis of Variance (ANOVA)	1.582	0.193	Accepted
There is no relationship between attitude and intention towards online shopping.	Pearson Correlation Coefficient	17.766	0.000***	Rejected

***Significant at 1% level, **5% level and *10% level

Source: Survey Data (2022)

In the analysis of testing hypotheses, the value of t-test for gender is -2.37 and it is statistically significant at 5% level given that the probability value is 0.02. Based on the decision, there is the difference in attitude towards online shopping when

segmented by gender. For age, the value of F-test is 1.94 and it is statistically significant at 10% level given that the probability value is 0.06. Based on the observation, there is the difference in attitude towards online shopping when segmented by age. For marital status, the value of F-test is 2.48 and it is statistically significant at 5% level given that the probability value is 0.04. Based on the decision, there is the difference in attitude towards online shopping when segmented by marital status. For education level, the value of F-test is 5.23 and it is statistically significant at 1% level given that the probability value is 0.0004. Based on the observation, there is the difference in attitude towards online shopping when segmented by education level. For occupation, the value of F-test is 4.93 and it is statistically significant at 1% level given that the probability value is 0.0002. Based on the decision, there is the difference in attitude towards online shopping when segmented by occupation. For income, the value of F-test is 0.61 and it isn't statistically significant at 10% level given that the probability value is 0.69. Based on the observation, there is no difference in attitude towards online shopping when segmented by income. For experience, the value of F-test is 1.58 and it isn't statistically significant at 10% level given that the probability value is 0.19. Based on the observation, there is no difference in attitude towards online shopping when segmented by experience.

To test the correlation of attitude and intention towards online shopping, Pearson correlation coefficient is calculated. The value of t-test is 17.77 and it is statistically significant at 1% level given that the probability value is 0.0000. Based on the decision, there is the relationship between attitude and intention towards online shopping.

According to Baron and Kenny (1986), a moderator can be a qualitative or quantitative variable which can affect the direction and/or strength of the relationship between an independent and dependent variables. Hierarchical regression is a technique that can use to compare several different linear models. This analysis to show the significant amount of variance in dependent variable after accounting for all other variables and to determine the significant improvement in R^2 after adding the new variables. If the R-squared (the proportion of variance in the response variable that can be explained by the explanatory variables) in the second model is significantly higher than the R-squared in the previous model, this means the second model is better. In this study, hierarchical regression analysis is applied to investigate the interaction effects of demographic and socio-economic factors on the relationship

between attitude and intention towards online shopping. In the model, attitude, gender, age, income, experience, education level, occupation and marital status are independent variables and intention towards online shopping is a dependent variable.

The multiple regression analysis with the interaction effects is shown as follow.

Model (1)

$$Y_i = \beta_0 + \beta_1 X_{1j} + \beta_2 X_{2j} + \beta_3 X_{3j} + \beta_4 X_{4j} + \beta_5 X_{5j} + \beta_6 X_{6j} + \beta_7 X_{7j} + \beta_8 X_{8j} + \varepsilon_i$$

Model (2)

$$Y_i = \beta_0 + \beta_1 X_{1j} + \beta_2 X_{2j} + \beta_3 X_{3j} + \beta_4 X_{4j} + \beta_5 X_{5j} + \beta_6 X_{6j} + \beta_7 X_{7j} + \beta_8 X_{8j} + \beta_9 X_{1j} * X_{2j} + \beta_{10} X_{1j} * X_{3j} + \beta_{11} X_{1j} * X_{4j} + \beta_{12} X_{1j} * X_{5j} + \beta_{13} X_{1j} * X_{6j} + \beta_{14} X_{1j} * X_{7j} + \beta_{15} X_{1j} * X_{8j} + \varepsilon_i$$

- where,
- Y_i = intention towards online shopping
 - β_0 = intercept term (constant)
 - X_{1j} = attitude towards online shopping
 - X_{2j} = gender
 - X_{3j} = age
 - X_{4j} = income
 - X_{5j} = experience
 - X_{6j} = education level
 - X_{7j} = occupation
 - X_{8j} = marital status
 - $X_{1j} * X_{2j}$ = interaction term of attitude and gender
 - $X_{1j} * X_{3j}$ = interaction term of attitude and age
 - $X_{1j} * X_{4j}$ = interaction term of attitude and income
 - $X_{1j} * X_{5j}$ = interaction term of attitude and experience
 - $X_{1j} * X_{6j}$ = interaction term of attitude and education level
 - $X_{1j} * X_{7j}$ = interaction term of attitude and occupation
 - $X_{1j} * X_{8j}$ = interaction term of attitude and marital status
 - $\beta_1, \dots, \beta_{15}$ = regression coefficients
 - ε_i = residual terms

The findings show the existence of relationships and the interaction effect of variables in Table (4.15).

Table (4.15): Consumers' Attitude and Intention towards Online Shopping through the Interaction Effect of Demographic and Socio-economic Factors

Variable	Model 1			Model 2		
	Coefficient	Std. Error	Prob.	Coefficient	Std. Error	Prob.
Constant	1.413	0.159	0.000	1.391	0.163	0.000
Attitude	0.636***	0.037	0.000	0.643***	0.038	0.000
Gender	0.103**	0.046	0.024	0.094**	0.046	0.041
Age	0.116***	0.031	0.000	0.113***	0.031	0.000
Marital Status	-0.044	0.041	0.289	-0.067	0.045	0.143
Education	-0.034	0.023	0.134	-0.032	0.023	0.165
Occupation	-0.015	0.020	0.438	-0.003	0.021	0.893
Income	-0.052**	0.025	0.043	-0.044*	0.025	0.081
Experience	0.050***	0.019	0.008	0.050***	0.019	0.010
Gender* Attitude				-0.016	0.023	0.481
Age* Attitude				0.012	0.028	0.672
Marital Status*Attitude				0.033	0.021	0.113
Education* Attitude				0.053*	0.029	0.068
Occupation* Attitude				-0.020	0.027	0.453
Income* Attitude				-0.002	0.034	0.960
Experience* Attitude				-0.043*	0.023	0.063
R-squared	0.471			0.487		
Adjusted R-squared	0.460			0.468		
F-statistic	45.160			25.270		
Prob(F-statistic)	0.000***			0.000***		
R-squared change				0.016		

***Significant at 1% level, **5% level and *10% level

Source: Survey Data (2022)

Table (4.15) shows that the value of correlation coefficient is 0.47 indicate that there is fairly positive relationship between intention towards online shopping and eight independent variables. The value of adjusted correlation coefficient is 0.46 indicate that 46% of variation in intention towards online shopping is explicated by eight independent variables. Statistically, F-statistic value is 45.16 and the entire

model is highly significant at 1% level. Hence, all independent (exogenous) variables in the model are influenced by the dependent (endogenous) variable as intention towards online shopping.

According to demographic factors, gender is direct relationship and statistically significant with intention towards online shopping at 5% level. Age is direct relationship and highly significant with intention towards online shopping at 1% level. Marital status is indirect relationship and statistically not significant with intention towards online shopping. According to socio-economic factors, education level is indirect relationship and statistically not significant with intention towards online shopping. Occupation is indirect relationship and statistically not significant with intention towards online shopping. Income is direct relationship and statistically significant with intention towards online shopping at 5% level. Experience is direct relationship and highly significant with intention towards online shopping at 1% level.

In model (2), the value of correlation coefficient is 0.49 indicating that there is fairly positive relationship between intention towards online shopping and its independent variables. The value of adjusted correlation coefficient is 0.47 indicating that 47% of variation in intention towards online shopping is explicated by its independent variables. Statistically, F-statistic value is 25.27 and the entire model is highly significant at 1% level. Therefore, all independent (exogenous) variables in the model are influenced by the dependent (endogenous) variable as intention towards online shopping.

According to demographic factors, gender is direct relationship and statistically significant with intention towards online shopping at 5% level. The interaction effects of gender with attitude towards online shopping are indirect relationship with intention towards online shopping. P-value for interaction term of gender and attitude is 0.48 indicates that there is not statistically significant with intention towards online shopping. Hence, gender has no interaction effect on the relationship between attitude and intention towards online shopping.

Age is direct relationship and highly significant with intention towards online shopping at 1% level. The interaction effects of age with attitude towards online shopping are indirect relationship with intention towards online shopping. P-value for interaction term of age and attitude is 0.67 indicates that there is not statistically significant with intention towards online shopping. Hence, age has no interaction effect on the relationship between attitude and intention towards online shopping.

Marital status is indirect relationship and statistically not significant with intention towards online shopping. The interaction effects of marital status with attitude towards online shopping are indirect relationship with intention towards online shopping. P-value for interaction term of marital status and attitude is 0.11 indicates that there is not statistically significant with intention towards online shopping. Hence, marital status has no interaction effect on the relationship between attitude and intention towards online shopping.

According to socio-economic factors, education level is indirect relationship and statistically not significant with intention towards online shopping. The interaction effects of education level with attitude towards online shopping are direct relationship with intention towards online shopping. P-value for interaction term of education level and attitude is 0.07 indicates that there is statistically significant with intention towards online shopping at 10% level. Hence, education level has the interaction effect on the relationship between attitude and intention towards online shopping.

Occupation is indirect relationship and statistically not significant with intention towards online shopping. The interaction effects of occupation with attitude towards online shopping are indirect relationship with intention towards online shopping. P-value for interaction term of occupation and attitude is 0.45 indicates that there is not statistically significant with intention towards online shopping. Hence, occupation has no interaction effect on the relationship between attitude and intention towards online shopping.

Income is direct relationship and statistically significant with intention towards online shopping at 10% level. The interaction effects of income with attitude towards online shopping are indirect relationship with intention towards online shopping. P-value for interaction term of income and attitude is 0.96 indicates that there is not statistically significant with intention towards online shopping. Hence, income has no interaction effect on the relationship between attitude and intention towards online shopping.

Experience is direct relationship and highly significant with intention towards online shopping at 1% level. The interaction effects of experience with attitude towards online shopping are indirect relationship with intention towards online shopping. P-value for interaction term of experience and attitude is 0.06 indicates that there is statistically significant with intention towards online shopping at 10% level.

Hence, experience has the interaction effect on the relationship between attitude and intention towards online shopping.

By comparing the model (1) and (2), gender, age, income and experience are significant with intention towards online shopping in both model (1) and (2). Marital status, education level and occupation are not significant with intention towards online shopping in both model (1) and (2). The value of correlation coefficient and adjusted correlation coefficient are improved in model (2) because of applying the hierarchical regression analysis. It can be seen that the changed value of correlation coefficient is 0.02 due to the interaction effect of education level and experience in model (2). Moreover, F-statistic in model (2) is decreased nearly by half because of adding the interaction terms. The entire model (2) is also highly significant at 1% level. This means that model (2) is more suitable.

4.9 Analysis on the Relationship between Consumers' Attitude and Intention towards Online Shopping

In this section, intention towards online shopping is considered as the dependent (endogenous) variable and attitude towards online shopping is considered as the independent (exogenous) variable.

The simple linear regression equation is

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$

where, Y_i = intention towards online shopping
 β_0 = intercept term (constant)
 X_i = attitude towards online shopping
 β_1 = regression coefficient of X
 ε_i = residual terms

The findings show the relationship between consumers' attitude and intention towards online shopping in Table (4.16).

Table (4.16): Analysis on the Relationship between Consumers' Attitude and Intention towards Online Shopping

Variable	Coefficient	Std. Error	t-test	Prob.
C	1.440	0.147	9.827	0.000
Attitude	0.663***	0.037	17.766	0.000
R-squared			0.433	
Adjusted R-squared			0.432	
F-statistic			315.64	
Prob(F-statistic)			0.000***	

***Significant at 1% level, **5% level and *10% level

Source: Survey Data (2022)

The estimated simple linear regression equation is

$$\hat{Y}_i = 1.44 + 0.66 X_i$$

The value of the correlation coefficient is 0.43 indicate that there is fairly positive relationship between attitude towards online shopping and intention towards online shopping. The value of the adjusted correlation coefficient is 0.43 indicate that 43% of variation in intention towards online shopping is explicated by attitude towards online shopping. Therefore, the independent (exogenous) variable as attitude towards online shopping in the model is influenced by the dependent (endogenous) variable as intention towards online shopping.

Statistically, the value of F-statistic is 315.64 and the entire model is highly significant at 1% level. Therefore, the independent (exogenous) variable as attitude towards online shopping is influenced by the dependent (endogenous) variable as intention towards online shopping.

Attitude towards online shopping has direct relationship with intention towards online shopping. Statistically, it is highly significant at 1% level. If attitude towards online shopping increases by one unit, intention towards online shopping will increase by 0.66 units.

4.9 Summary of Results

Regression analysis was used to investigate the relationship between consumers' attitude and intention towards online shopping in Yangon. To reach the objectives of the study, three relationships of the variables were investigated. Firstly, the multiple regression analysis was used to analyze the relationship between the factors of consumers' purchasing decision and attitude towards online shopping. Secondly, the simple regression analysis was applied to explore the factors affecting consumers' attitude and intention towards online shopping. Thirdly, hierarchical regression analysis was conducted to analyse the interaction effects of demographic and socio-economic factors on the relationship between attitude and intention towards online shopping. The summary results of conceptual framework are presented in Figure (4.1).

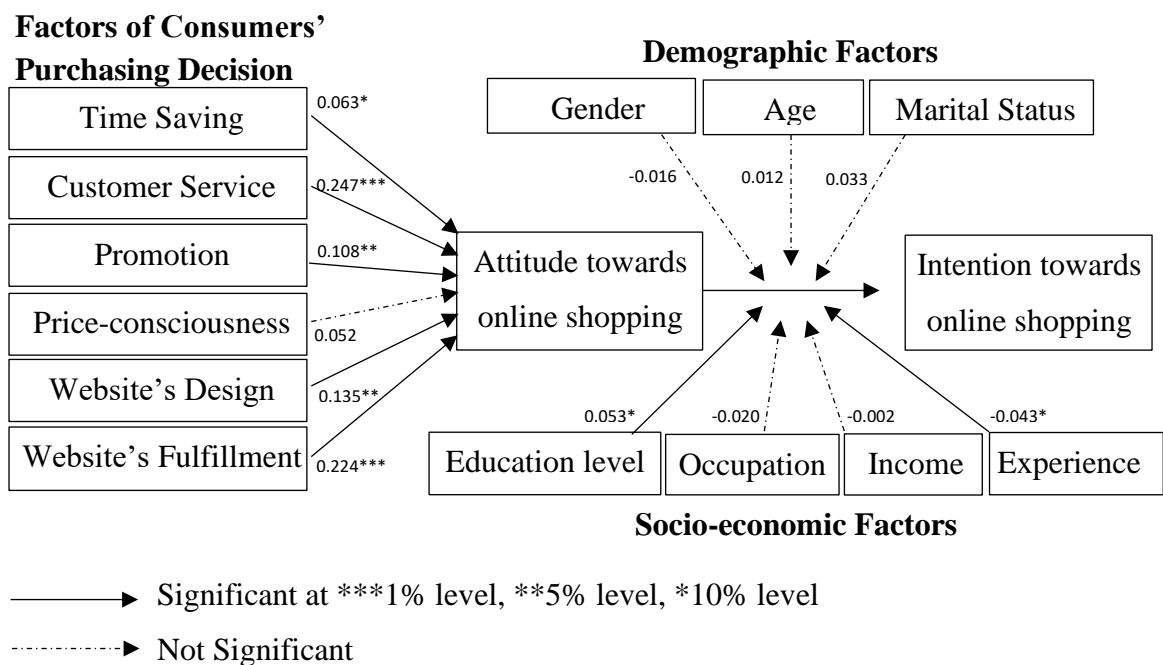


Figure (4.1): Summary of Conceptual Framework

Source: Survey Data (2022)

According to the finding results, time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment has direct relationship with attitude towards online shopping. Time saving, customer service, promotion, website's design and website's fulfillment has significant with attitude towards online shopping. And, attitude towards online shopping has direct relationship and

significant with intention towards online shopping. The interaction terms of education level and attitude has direct relationship and significant with intention towards online shopping. The interaction terms of experience and attitude has indirect relationship and significant with intention towards online shopping.

CHAPTER V

CONCLUSION

This chapter describes the finding for this study. It discusses the important facts, implications and suggestions. The implication of findings and future aims for further research are put forward.

5.1 Findings and Discussions

The aim of this study is to describe the demographic and socio-economic characteristics on consumers' attitude towards online shopping, to explore the factors influencing the consumers' attitude towards online shopping, to analyze the interaction effects of demographic and socio-economic factors on the relationship between the consumers' attitude and intention towards online shopping, and to investigate the relationship between the consumers' attitude and intention towards online shopping in Yangon. This study was collected the data from 415 respondents who are actual users in online shopping by using the self-structured questionnaire in Yangon, Myanmar.

Firstly, the demographic and socio-economic characteristics are studied. The most respondents are single and female group in the 25-30 age-group. Their monthly income has fewer than 400,000 Kyats and their purchased experience in shopping online is 1-5 times mostly. Usually, their education level is bachelor degree and diploma holder and their occupation is the government employee. Their mostly purchased things are fashion and one time purchased amount is below 50,000 Kyats.

Secondly, six factors of consumers' purchasing decision such as time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment are investigated for customers' attitude towards online shopping. In this study, independent variables such as time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment are direct relationship and statistically significant to customers' attitude towards online shopping. Similarly, Morganosky and Cude (2000) has concluded that time saving factor was significant

the online grocery buying. The finding of Hasim, Ishak and Affendy (2019) demonstrated that sale promotion and website quality have a positive significant influence on online impulse buying. Yasim and Nik (2010) demonstrated that there is a significant relationship between online shopping activity and website features. Based on the finding results, the multiple linear regression model showed that customers' attitude towards online shopping which is most influencing the customer service factor. Similarly, Li Na and Zang Ping (2002) founded that vender/ service/ product characteristics and website quality significant affect online shopping attitude and intention. Wolfenbarger and Gilly (2002) revealed that website design, reliability/ fulfillment and customer service are strongly predictive of customers' attitudes towards the website.

Thirdly, the relationship between demographic and socio-economic factors and consumers' attitude towards online shopping is analyzed the hypotheses testing and Pearson correlation coefficient. According to the finding results, gender, age, education level, occupation and marital status are statistically significant with consumers' attitude towards online shopping. In the same way, Hernandez et al. (2011) revealed that gender and age have significantly affected the online shopping behavior. Bauerová (2018) revealed that education has a significant impact on online shopping. Nguyen and Homolka (2021) found that the significant difference in the satisfaction of online purchasing between three groups of marital status: single, married and divorced/ separated. Based on the results by Pearson correlation coefficient, there is a relationship between attitude and intention towards online shopping. Similarly, Mengli (2005) revealed that there is a relationship between attitude and intention towards online shopping.

Fourthly, the statistical analyses for the interaction effects of demographic and socio-economic factors on the relationship between the consumers' attitude and intention towards online shopping are calculated. According to the results of demographic factors, gender has direct relationship and statistically significant with intention towards online shopping. Similarly, Seock and Bailey (2008) showed that gender is relationship with intention towards online shopping and females tend to enjoy shopping more than male counterparts. Sethi and Sethi (2017) emerged that gender has a significant effect on online purchase intention. Age has direct relationship and statistically significant with intention towards online shopping. In the

same way, Donthu and Garcia (1999) revealed that age has the relationship with intention towards online shopping and the purchasers in online were older.

According to the results of socio-economic factors, income has direct relationship and statistically significant with intention towards online shopping. Similarly, Donthu and Garcia (1999) revealed that age and income have the relationship with intention towards online shopping and the purchasers in online were older and had higher incomes. Experience has direct relationship and statistically significant with intention towards online shopping. In the same way, Bellman, Loshe and Johnson (1999) showed that experience has the significant impact on consumers' purchasing intention and found out that the most important factor determining whether an individual would make an online purchase on the website was previous experience such as earlier online purchases. Moreover, experience and education level have the interaction effect on consumers' attitude and intention towards online shopping. Similarly, Ansari (2017) revealed that experience is the moderator on online shopping intention. Pappas et al. (2014) showed that experience has moderating effects on the relationships between satisfaction and intention to repurchase.

Finally, this study is analyzed the relationship between consumers' attitude towards online shopping and online shopping intention. Based on the finding result, the simple linear regression model showed that consumers' attitude towards online shopping has direct relationship and statistically significant with consumers' intention towards online shopping. Similarly, Mengli (2005) revealed that customers' attitude towards online shopping has strong positive relationship with online shopping intention. Delafrooz, Paim and Khatibi (2010) showed that positive attitude towards online shopping possess a high level of online purchase intention.

5.2 Suggestions

Based on the finding results, this reveals that the selected six factors of consumers' purchasing decision such as time saving, customer service, promotion, price-consciousness, website's design and website's fulfillment should be considered as the important factors to improve the consumers' attitude towards online shopping. The suggestions could be drawn from the finding results of this study as follows:

- (i) Online shops in Myanmar should emphasis the new technology in the website-based applications familiarity.

- (ii) Online shoppers should regularize by time, product quality and good customer service.
- (iii) To promote the online shopping, there have the fast and quick internet line and low fees for internet package.
- (iv) Many shoppers in the market should take the online shopping to be more supply and demand because many buyers prefer the fact that shopping in online save their energy for going to the market and handling the products.
- (v) Nowadays, the use of internet increase daily and the use of online shopping also increase. Therefore, e-commerce in Myanmar should systematically make the action of online shopping.
- (vi) Finally, the commendation for online shopping should emphasis the quality of products.

5.3 Further Research

This study focused to investigate the consumers' attitude and intention towards online shopping in Yangon. The sample size used in this research is 415 respondents in Yangon due to time limited. To expand the study of the online markets' improvement, need to collect more consumers by allocating each township in Yangon. Furthermore, it is necessary to study the online sellers, online buyers and delivery services concern with e-markets. Due to the e-commerce (online shopping) offer many job opportunities, research should do about the benefits of online shopping. In this study, fashion, food and beauty and health care are more purchasing items. Hence, the further research should be recommended to investigate the specializing these items in online shopping. And, the further research by using the path analysis and above identified factors should be recommended to study the factors affecting consumers' attitude and intention towards online shopping. Moreover, the further research by using the Hayes' process-macro for SPSS and SAS and above identified factors should be recommended to investigate the interaction effect of demographic and socio-economic factors on consumers' attitude and intention towards online shopping. The further research by using the above factors should also be recommended continue to study the factors affecting customer satisfaction for online shopping.

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<http://g.co/kgs/eSS7vA>/Pearson correlation coefficient

http://en.m.wikipedia.org/wiki/Regression_analysis

<http://www.statology.org/multiple-linear-regression-assumptions>

APPENDIX

APPENDIX (A)

Questionnaire for Consumers' Attitude Towards Online Shopping

My name is Cherry Soe. I study the Master Degree of Statistics at Yangon University of Economics. The questionnaire will make in article study to get data information. I would like to answer you in this questionnaire. Data will be protected the anonymity of participants.

Please tick the appropriate answer.

Part – I (Demographic and Socio-economic Information)

- | | | | | | | |
|-----|---------------------------|---|---------------------------------------|-----|-----------------------------|---|
| 1.1 | Gender | <input type="checkbox"/> Male | <input type="checkbox"/> Female | 1.6 | Income (Earning) | <input type="checkbox"/> Under 200,000 Ks |
| 1.2 | Age Group | <input type="checkbox"/> Under 20 | <input type="checkbox"/> 20-25 | | | <input type="checkbox"/> 200,000-400,000 Ks |
| | | <input type="checkbox"/> 25-30 | <input type="checkbox"/> 30-35 | | | <input type="checkbox"/> 400,000-600,000 Ks |
| | | <input type="checkbox"/> 35-40 | <input type="checkbox"/> 40-45 | | | <input type="checkbox"/> 600,000-800,000 Ks |
| | | <input type="checkbox"/> 45-50 | <input type="checkbox"/> 50 and above | | | <input type="checkbox"/> 800,000- 1,000,000 Ks |
| 1.3 | Highest Educational level | <input type="checkbox"/> Middle/ High School | | | | <input type="checkbox"/> 1,000,000 Ks and above |
| | | <input type="checkbox"/> Bachelor/ Diploma | | 1.7 | Marital Status | <input type="checkbox"/> Single |
| | | <input type="checkbox"/> Master | | | | <input type="checkbox"/> Married |
| | | <input type="checkbox"/> Doctor | | | | <input type="checkbox"/> Divorced |
| | | <input type="checkbox"/> Other_____ | | | | <input type="checkbox"/> Widower/ Widow |
| 1.4 | Occupation | <input type="checkbox"/> Student | | | | <input type="checkbox"/> Separated |
| | | <input type="checkbox"/> Government | | | | <input type="checkbox"/> Other_____ |
| | | <input type="checkbox"/> Private/ Company | | 1.8 | Online Purchased Experience | <input type="checkbox"/> 1-5 times |
| | | <input type="checkbox"/> Self-Owned | | | | <input type="checkbox"/> 6-10 times |
| | | <input type="checkbox"/> NGOs/ CSOs | | | | <input type="checkbox"/> 11-15 times |
| | | <input type="checkbox"/> Other_____ | | | | <input type="checkbox"/> 15 times over |
| 1.5 | Position | <input type="checkbox"/> Dependence | | 1.9 | Mostly Purchased Things | <input type="checkbox"/> Books & Musis |
| | | <input type="checkbox"/> Officer | | | | <input type="checkbox"/> Beauty/ Health Care |
| | | <input type="checkbox"/> Manager | | | | <input type="checkbox"/> Foods & Beverages |
| | | <input type="checkbox"/> Administer/ Supervisor | | | | <input type="checkbox"/> Electronics |
| | | <input type="checkbox"/> Functionary | | | | <input type="checkbox"/> Fashion |
| | | <input type="checkbox"/> Personnel/ Staff | | | | <input type="checkbox"/> Furniture |
| | | <input type="checkbox"/> Other_____ | | | | <input type="checkbox"/> Jewellery |
| | | <input type="checkbox"/> | | | | <input type="checkbox"/> Other_____ |

1.11	One Time Purchased Amount	1.12	Use of Internet (hours per day)	
	Under 50,000 Ks		Less than 2	2-5
	50000-100,000 Ks		5-8	More than 8
	100,000-150,000 Ks	1.13	Consumers' Location	
	150,000-200,000 Ks		Yangon	Mandalay
	200,000-250,000 Ks		Nay Pyi Daw	Other
	250,000 Ks and above			

Part – II (Factors Affecting Customers' Attitude and Intention towards Online Shopping)

1 – Strongly Agree

2 – Agree

3 – Neutral

4 – Disagree

5 – Strongly Disagree

Please select the following statements that you are feeling.						
No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Time Saving						
1	Online shopping doesn't waste time for going to the market yourself.					
2	Online shopping takes to reduce time for choosing the product in many markets.					
3	Online shopping reduces the queuing time to check out in counter.					
4	Online shopping takes less time in evaluating the cost of product while shopping online.					
5	Online shopping is useful in time saving.					

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Customer Service						
1	The website takes ease of vendor contact and consumer communication channels.					
2	The consumers can take the assessment on sales person.					
3	Inquiries are answered promptly.					
4	When you have a problem, the website shows a sincere interest in solving it.					
5	The website accepts the simple payment methods for consumers. (E.g., Cash on delivery, Wave money, KBZ pay, etc.)					
Promotion						
1	Promotion expiry date influences me in making an order.					
2	The products purchase to reach the fitted promotion item/ amount.					
3	The notifications & promotion of online shopping support for willing to buy the sales promotion.					
4	Terms & conditions of promotion are important to me before shopping online.					
5	Provided discount encourages me to shop online.					
Price-consciousness						
1	If the products same, the cheaper price always choose.					
2	Online shopping gives the points based on the payments and this point can use next time purchases for cut-rating.					

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3	Delivery price of online shopping is reasonable.					
4	Tax price in using online shop is reasonable.					
5	Overall price of online shopping is affordable.					
Website Design/ Features						
1	The website design helps me in searching the products easily.					
2	While shopping online, I prefer to purchase from a website that provides safety and ease of navigation and order.					
3	The website layout helps me in searching and selecting the right product while shopping online.					
4	Familiarity with the website before making actual purchase reduces the risk of shopping online.					
5	Online shopping prefers to buy from website that provides with the quality of information.					
Website Reliability/ Fulfillment						
1	The website gets things what you needed from the website.					
2	The website fulfill easy-to-use for consumers by using the updated technology.					
3	The website directly handles all of the picking, packing and shipping to process your orders.					
4	The website states the order tracing status of the order.					

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5	The website serves center utilize automated barcode scanner when receiving a product to verify the current item has been received.					
Attitude						
1	Online shopping starts by looking through websites or applications.					
2	Online applications know from sharing my friends.					
3	Choosing many products in search engine makes often.					
4	Navigation bar in application is helpful.					
5	Online buying experience shares the friends & family to shop online because there have many benefits.					
Intention						
1	Online application service for 24/7.					
2	Purchasing in online shopping by using the short time.					
3	Online services can easily use that no need to use motor vehicles to shop.					
4	Purchasing in online shopping save the energy for going to market and handling the products.					
5	Purchasing in online shopping accept for the next time because online shopping can easily and quickly make the shopping process.					

APPENDIX (B)

Checking the Assumptions for Multiple Regression Analysis



Figure (1): Scatter Plots (Linear Relationships)

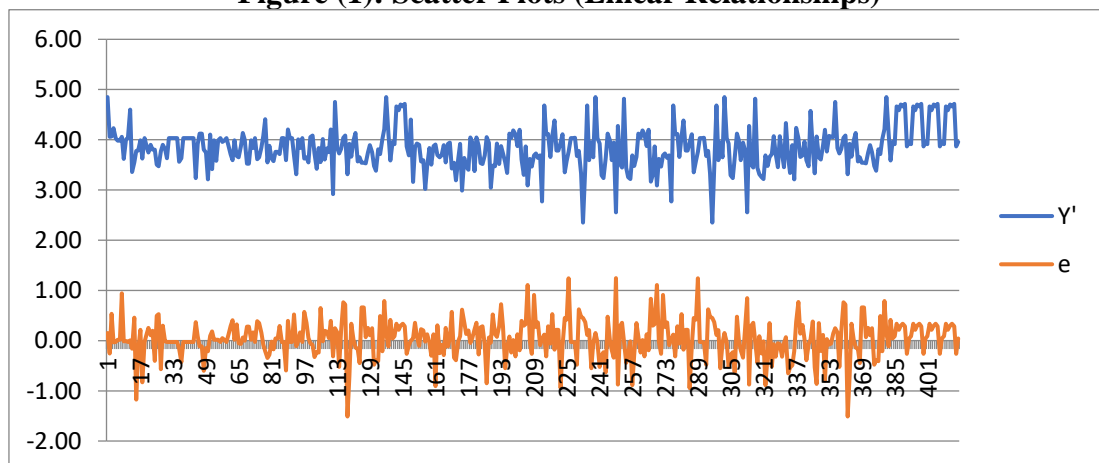


Figure (2): Predicted Value and Residual

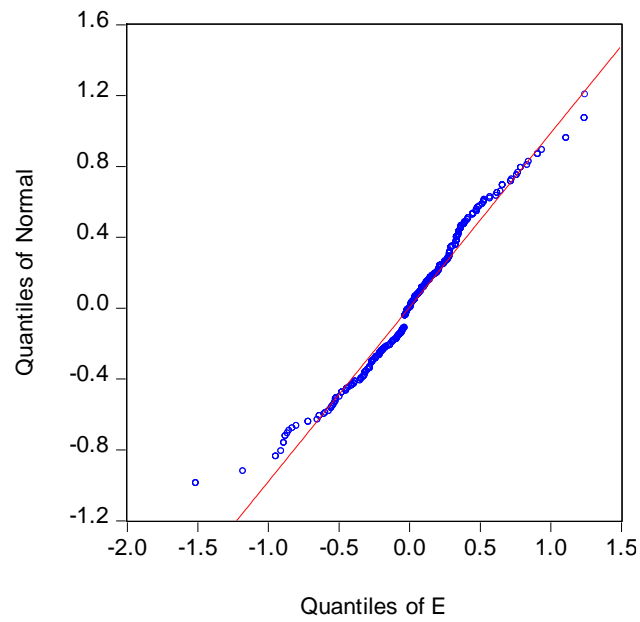


Figure (3): Q-Q plot of Residuals

Table (1): Summary Results for Variance Inflation Factors

Variable	Coefficient Variance	Centered VIF
Constant	0.0267	NA
Time saving	0.0014	1.4382
Customer Service	0.0030	2.5911
Promotion	0.0022	2.4362
Price-consciousness	0.0018	1.7986
Website's design	0.0031	2.7383
Website's fulfillment	0.0023	2.7039

Source: Survey Results

APPENDIX (C)

Summary Results for Multiple Regression Analysis

Dependent Variable: ATTITUDE_FUNCTION

Method: Least Squares

Date: 08/12/22 Time: 23:57

Sample: 1 415

Included observations: 415

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.754949	0.163464	4.618444	0.0000
Time Saving	0.063150	0.036944	1.709326	0.0882
Customer Service	0.247316	0.054946	4.501055	0.0000
Promotion	0.107484	0.046574	2.307788	0.0215
Price-consciousness	0.052388	0.042851	1.222560	0.2222
Website's Design	0.134665	0.055247	2.437501	0.0152
Website's Fulfillment	0.224421	0.047465	4.728139	0.0000

R-squared	0.541037	Mean dependent var	3.886747
Adjusted R-squared	0.534287	S.D. dependent var	0.566021
S.E. of regression	0.386270	Akaike info criterion	0.952165
Sum squared resid	60.87557	Schwarz criterion	1.020112
Log likelihood	-190.5743	Hannan-Quinn criter.	0.979034
F-statistic	80.15999	Durbin-Watson stat	1.915102
Prob(F-statistic)	0.000000		

Summary Results for Simple Linear Regression Analysis

Dependent Variable: INTENTION_FUNCTION

Method: Least Squares

Date: 08/12/22 Time: 23:46

Sample: 1 415

Included observations: 415

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.439897	0.146520	9.827325	0.0000
ATTITUDE_ FUNCTION	0.662767	0.037305	17.76630	0.0000
R-squared	0.433192	Mean dependent var		4.015904
Adjusted R-squared	0.431819	S.D. dependent var		0.569971
S.E. of regression	0.429632	Akaike info criterion		1.153030
Sum squared resid	76.23288	Schwarz criterion		1.172443
Log likelihood	-237.2537	Hannan-Quinn criter.		1.160707
F-statistic	315.6416	Durbin-Watson stat		1.763526
Prob(F-statistic)	0.000000			

Summary Results for Hierarchical Regression Analysis

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	1.413	.159		8.883	.000	1.100	1.726
Att	.636	.037	.631	17.176	.000	.563	.708
Gen	.103	.046	.086	2.265	.024	.014	.193
Age	.116	.031	.180	3.772	.000	.056	.177
Inc	-.052	.025	-.088	-2.028	.043	-.101	-.002
Exp	.050	.019	.101	2.648	.008	.013	.088
Educ	-.034	.023	-.067	-1.501	.134	-.078	.010
Occu	-.015	.020	-.032	-.776	.438	-.055	.024
MS	-.044	.041	-.045	-1.061	.289	-.126	.038
2 (Constant)	1.391	.163		8.537	.000	1.070	1.711
Att	.643	.038	.638	16.943	.000	.568	.717
Gen	.094	.046	.079	2.052	.041	.004	.185
Age	.113	.031	.175	3.633	.000	.052	.175
Inc	-.044	.025	-.076	-1.750	.081	-.094	.005
Exp	.050	.019	.100	2.604	.010	.012	.088
Educ	-.032	.023	-.064	-1.393	.165	-.077	.013
Occu	-.003	.021	-.006	-.135	.893	-.045	.039
MS	-.067	.045	-.068	-1.468	.143	-.156	.023
Int1	-.016	.023	-.028	-.705	.481	-.062	.029
Int2	.012	.028	.020	.424	.672	-.043	.066
Int3	-.002	.034	-.002	-.050	.960	-.069	.066
Int4	-.043	.023	-.074	-1.864	.063	-.089	.002
Int5	.053	.029	.095	1.831	.068	-.004	.110
Int6	-.020	.027	-.036	-.750	.453	-.072	.032
Int7	.033	.021	.071	1.588	.113	-.008	.073

a. Dependent Variable: Intent

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.686 ^a	.471	.460	.419	.471	45.160	8	406	.000
2	.698 ^b	.487	.468	.416	.016	1.814	7	399	.083

a. Predictors: (Constant), MS, Exp, Att, Gen, Occu, Inc, Educ, Age

b. Predictors: (Constant), MS, Exp, Att, Gen, Occu, Inc, Educ, Age, Int1, Int4, Int2, Int6, Int7, Int3, Int5

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.328	8	7.916	45.160	.000 ^b
	Residual	71.167	406	.175		
	Total	134.495	414			
2	Regression	65.523	15	4.368	25.270	.000 ^c
	Residual	68.972	399	.173		
	Total	134.495	414			

a. Dependent Variable: Intent

b. Predictors: (Constant), MS, Exp, Att, Gen, Occu, Inc, Educ, Age

c. Predictors: (Constant), MS, Exp, Att, Gen, Occu, Inc, Educ, Age, Int1, Int4, Int2, Int6, Int7, Int3, Int5

Independent t test for Gender

Test for Equality of Means of ATTITUDE

Categorized by values of GENDER

Date: 08/19/22 Time: 16:02

Sample: 1 415

Included observations: 415

Method	df	Value	Probability
t-test	413	-2.373897	0.0181
Satterthwaite-Welch t-test*	325.7999	-2.459676	0.0144
Anova F-test	(1, 413)	5.635387	0.0181
Welch F-test*	(1, 325.8)	6.050007	0.0144

*Test allows for unequal cell variances

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	1	1.785471	1.785471
Within	413	130.8516	0.316832
Total	414	132.6371	0.320379

ANOVA Table for Age

Test for Equality of Means of ATTITUDE

Categorized by values of AGE

Date: 08/19/22 Time: 15:45

Sample: 1 415

Included observations: 415

Method	Value	Probability
Anova F-test	1.940603	0.0620
Welch F-test*	2.137863	0.0487

*Test allows for unequal cell variances

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	7	4.283974	0.611996
Within	407	128.3531	0.315364
Total	414	132.6371	0.320379

ANOVA Table for Income

Test for Equality of Means of ATTITUDE

Categorized by values of INCOME

Date: 08/19/22 Time: 16:10

Sample: 1 415

Included observations: 415

Method	Value	Probability
Anova F-test	0.609074	0.6930
Welch F-test*	1.318559	0.2946

*Test allows for unequal cell variances

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	5	0.980302	0.196060
Within	409	131.6568	0.321899
Total	414	132.6371	0.320379

ANOVA Table for Experience

Test for Equality of Means of ATTITUDE

Categorized by values of EXPERIENCE

Date: 08/19/22 Time: 16:12

Sample: 1 415

Included observations: 415

Method	Value	Probability
Anova F-test	1.582190	0.1931
Welch F-test*	1.920406	0.1326

*Test allows for unequal cell variances

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	3	1.514315	0.504772
Within	411	131.1228	0.319034
Total	414	132.6371	0.320379

ANOVA Table for Education Level

Test for Equality of Means of ATTITUDE

Categorized by values of EDUC

Date: 08/19/22 Time: 16:14

Sample: 1 415

Included observations: 415

Method	Value	Probability
Anova F-test	5.230613	0.0004
Welch F-test*	6.325830	0.0001

*Test allows for unequal cell variances

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	4	6.439890	1.609973
Within	410	126.1972	0.307798
Total	414	132.6371	0.320379

ANOVA Table for Occupation

Test for Equality of Means of ATTITUDE

Categorized by values of OCCUPATION

Date: 08/19/22 Time: 16:24

Sample: 1 415

Included observations: 415

Method	Value	Probability
Anova F-test	4.930505	0.0002

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	5	7.540230	1.508046
Within	409	125.0969	0.305860
Total	414	132.6371	0.320379

ANOVA Table for Marital Status

Test for Equality of Means of ATTITUDE

Categorized by values of MARITAL_STATUS

Date: 08/19/22 Time: 16:29

Sample: 1 415

Included observations: 415

Method	Value	Probability
Anova F-test	2.477638	0.0436

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	4	3.130445	0.782611
Within	410	129.5067	0.315870
Total	414	132.6371	0.320379

Correlation between Factors of Consumers' Purchasing Decision and Attitude towards Online Shopping

Correlations

		Att	TS	CS	Pro	Price	WD	WF
Att	Pearson Correlation	1	.390**	.656**	.593**	.491**	.621**	.660**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	415	415	415	415	415	415	415
TS	Pearson Correlation	.390**	1	.408**	.387**	.317**	.538**	.328**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	415	415	415	415	415	415	415
CS	Pearson Correlation	.656**	.408**	1	.622**	.509**	.695**	.721**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	415	415	415	415	415	415	415
Pro	Pearson Correlation	.593**	.387**	.622**	1	.635**	.643**	.660**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	415	415	415	415	415	415	415
Price	Pearson Correlation	.491**	.317**	.509**	.635**	1	.498**	.562**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	415	415	415	415	415	415	415
WD	Pearson Correlation	.621**	.538**	.695**	.643**	.498**	1	.671**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	415	415	415	415	415	415	415
WF	Pearson Correlation	.660**	.328**	.721**	.660**	.562**	.671**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	415	415	415	415	415	415	415

** . Correlation is significant at the 0.01 level (2-tailed).