Website usability and its effect on online purchase intention: The case of Ethiopian Airlines

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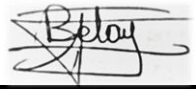
Belaynesh Tefera (Ph.D.)		**June 29, 2020**
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DECLARATION

I, Brook Eshetu, hereby declare that this thesis entitled “Website usability and its effect on online purchase intention: The case of Ethiopian Airlines” is my original work prepared under the guidance of my advisor, Hailemariam Kebede (Ph.D).

This research is presented as a partial requirement for the Master of Arts Degree Award in Marketing Management and it has not been previously submitted to any diploma or degree in any college or university.

I would like also to confirm that all the sources of materials used in this study are properly acknowledged.

_____

Brook Eshetu

June, 2020

STATEMENT OF CERTIFICATION

This is to certify that Brook Eshetu has carried out her research work on the topic entitled “Website usability and its effect on online purchase intention: The case of Ethiopian Airlines” is his original work and is suitable for submission for the award of Master’s Degree in Marketing Management.

_____

Advisor: Hailemariam Kebede (PhD)

June, 2020

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ACRONYMS

Ethiopian:	Ethiopian Airlines
eCommerce:	Electronic Commerce
ICT:	Information and Communication Technology
TPB:	Theory of Planned Behavior
THY:	Turkish Airlines
RACR:	Retain, Convert, Attract and Reach
GUI:	Graphical user interface
WEBUSE:	Website Usability Evaluation Tool
VIF:	Variance Inflation Factor
OPI:	Online Purchase Intention
COR:	Content, organization & readability
NL:	Navigation & Links
UID:	User interface design
PE:	Performance and effectiveness

ABSTRACT

This research thoroughly studied the effect of website usability on online purchase intention and the official website of Ethiopian airlines. www.ethopianairliens.com, was selected to analyze this relationship. The principal aim is to identify major variables which significantly affect purchase intention. For this ambition, various literatures were used to discuss the relation between the dependent and the independent variable. The study used WEBUSE development model (Content, organization and readability, Navigation & Links, User interface design and Performance and effectiveness) in order to measure website usability. The model was also used for the development of the conceptual framework and hypothesis construction. To investigate online purchase intention, technology oriented and social oriented perspectives are used. Using explanatory research design, a questionnaire was shared in travel and tourist guide groups found in different social medias with the intention of tracing online customers of Ethiopian airlines. A total of 385 clean data records were analyzed using descriptive and inferential statistical analysis via SPSS Version 20. Based on the analyzed data it is observed that "Content, organization & readability" and "Navigation & Links has week relation with online purchase intention. In contrast, "User interface design" and "Performance and effectiveness" showed strong relation with online purchase intention. From this the researcher suggested that the company should give great emphasis on improving the two aspects of website usability that have significant relationship with the purchase intention of online customers which will in turn affect the sales volume of the company.

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Keywords: *Consumer's online purchase intention, Website usability, Content, User interface design, website performance and effectiveness*

CHAPTER 1

INTRODUCTION

1.1. Background of the Study

In any business environment, websites are one of the main gateways to access information, products and services of an organization. Purchasing via internet using organization's websites is a very convenient way to acquire a product or service. A simple web design permits customers to be goal-driven and help them to accomplish their task as quickly and painlessly as possible. Accordingly, customers want websites to be easier so that it can enable them to get what they want. This efficiency of use will lead to web user's satisfaction. No matter what business or profession someone is working on, a website can certainly generate business and promote goodwill among customers in spite of the size of the business.

Purchase intention is referred as the consumers' willingness to procure a product or a service from a specific website (Athapaththu, and D. Kulathunga, 2018). To make buying decisions, customers collect information using their knowledge, options and external environments so as to assess alternatives. As per Raza, Ahad, and Shafqat (2014), purchase intention plays an essential role in consumer's behavior. The view of the product or service creates a positive purchase intention as a result of shoppers' desire to find a specific presented benefit (Kelliwe, 2001). Marketing managers also use consumers purchase intentions as an input to forecast future sales (Jamieson and Bass, 1989).

Majority of businesses websites in Ethiopia are used for information providing and/or advertisement rather than purchase-oriented goals. Even if the growth of eCommerce platform in Ethiopia is at its premature stage, some companies adopted international payment getaways so as to enable online transactions on their website.

Ethiopian Airlines (Ethiopian) is the fastest growing Airline in Africa. In its seventy plus years of operation, Ethiopian has become one of the continent's leading carriers, unrivalled in

efficiency and operational success and its majority of income comes from international sales collected through its official website.

Ethiopian airlines also command the lion's share of the Pan-African passenger and cargo network operating the youngest and most modern fleet to more than 120 international passenger and cargo destinations across five continents.

Ethiopian airlines aim to become the most competitive and leading aviation group in Africa by 2025. Joining Star Alliance Network, an international airline network, gives it accesses to more routes with partner airlines.

Using the official website, *ethiopianairlines.com,* the airline performs various marketing activities and international promotions. Through the famous logo "Go online… Benefit More", the airline promotes and reward online sales for both local and international customers. The online customer service correspondingly comprises ShebaMiles Frequent Flyer Program Web Page, Platinum Tier level loyalty program, Google "Seat View" and E-Visa.

Ethiopian Airlines also has a policy that is committed to making *ethiopianairlines.com* accessible to all people. With this regard, they have adopted WCAG 2.0 level AA technical standard. This standard covers a wide range of recommendations for making web content more accessible.

Since many variables determine and influence online purchase intention, different measurement aspects of website usability are discussed in this research as an independent variable so as to investigate the effect of these independent variables towards online purchase intension.

1.2. Statement of the Problem

In eCommerce platforms, the website is the interface for the customer and its usability is crucial to the success of the venture. Likewise, one of the important management issues should be, understanding, measuring, and tracking the different factors that influence the effectiveness of a website.

According to Calisir, Basak & Barkana (2014), usability refers to the extent to which a website facilitates users to utilize its functions easily and appropriately. The more usable a website is the more utilized it gets.

Acharya, Kagan, Lingam and Gray (2008) also stated that for firms that rely on online transactions, usability is critical because customers cannot execute a purchase unless they find the product they are looking for. They also stated that the internet experience is an empowering event where a customer can make a purchase or leave the site for a competitor with just a click.

Considering the aforementioned influence of usability, companies having eCommerce platforms require a full understanding of this variable. In contrast, Athapaththu, and D. Kulathunga (2018) observed that the direct relationship between perceived ease of use and purchase intention is not significant but it may act indirectly through website usefulness. They also concluded that businesses should focus on usefulness instead of ease of use. In addition, Sam & Tahir (2009) situate ease of use and enjoyment as a secondary determinant of purchase intention even if they indicate that usability of online website is positively associated with consumers' online purchase intention.

Another research made by Jum and Jaafar (2011), showed that usability of online websites does not influence consumers' attitude. They claimed that, even if online consumers were satisfied with the usability of online shopping websites it cannot become a factor that influences the consumers' attitude.

Even if there is a gap to fully contemplate the relationship between online website usability and purchase intention, previous literatures in the field of purchase intention has studied the concept of usability in a manner presented above. In addition, they studied usability as a component of quality of service, which shows that the integration of usability and purchase intention is still an outstanding issue.

This research allows us to understand the relevance of usability on purchase intention through different usability measurement aspects. Besides, there is a lack of such studies done in the Ethiopian company context, and therefore, with the rise of internet penetration, it is important to identify the role of usability and its effect in influencing online purchase intention.

Thus, this research will assess customers experience with related to websites usability. Customers of Ethiopian airlines will be inspected to comprehend the efficiency and satisfaction achieved through websites with respect to its effect on customers purchase intention.

1.3. Research Questions

The data collected from online customers of Ethiopian airlines were used to analyze and organize response for the following questions.

1. What is the effect of websites' "content, organization and reliability" on online purchase intention of Ethiopian airlines customers'?
2. What is the effect of websites' "navigation and links" on online purchase intention of Ethiopian airlines customers'?
3. What is the effect of websites' "user interface design" on online purchase intention of Ethiopian airlines customers'?
4. What is the effect of websites' "performance and effectiveness" on online purchase intention of Ethiopian airlines customers'?

1.4. Research Objectives

1.4.1. General Objective

The research's overall purpose deals with assessing the effect of website usability on customers' online purchase intention.

1.4.2. Specific Objective

- Assess the effect of websites' "content, organization and reliability" on online purchase intention of Ethiopian airlines customers'?
- Assess the effect of websites' "navigation and links" on online purchase intention of Ethiopian airlines customers'?
- Assess the effect of websites' "user interface design" on online purchase intention of Ethiopian airlines customers'?

- Assess the effect of websites' "performance and effectiveness" on online purchase intention of Ethiopian Airlines customers'?

1.5. Significance of the Study

This study greatly contributes to the academic literatures through assessing the relationship between website usability and consumers online purchase intention. This study contributes to the existing growing body of knowledge on online purchase intention by evaluating the effects of website usability aspects, by empirically investigating the case of online customers of Ethiopian airlines.

In the international business, intention to use the website and purchasing a product is the final stage of any online transaction (Pavlou, 2003). The result of the study has immense benefit to businesses as it will provide the cause and effect relation between dependent and independent variables. Understanding website usability aspects has a significant effect on online consumers' intention to purchase online. This research can empower the airlines to understand customers view and comprehend how usable the official website is with in the eyes of the customer.

This study permits the airlines to construct farther adjustments to different website usability aspects mentioned in this research in order to facilitate customer's intention to complete a transaction that yields direct effect on the success of the airline.

1.6. Scope of the Study

This research delimits itself in understanding the effect of website usability towards customers' online purchase intentions in the case of Ethiopian airlines. Website usability and some of its independent valuables are used. An empirical evidence is used to identify the relationship between the dependent and independent variables.

Customers' who purchase products or services without using the website are not included in this research. Only online users of the Ethiopian Airlines official website are used in the sample size where ever they are located in the world.

1.7. Limitation of the Study

Website usability is not the only variable affecting purchase intention, there are also other controllable and uncontrollable variables that are not addressed in this research.

This study also covers a smaller sample size due to resource and time constraints which is a limiting factor to exactly indicate the relationship between website usability and online purchase intention.

Furthermore, the time deadline to complete the research is another strain to undertake wider survey. This held up the chance to include other organizational marketing practices and macro variables on the relationship between website usability and online purchase intention.

1.8. Definition of Terms

Usability - is defined as the extent to which a system facilitates users to utilize its functions easily and appropriately (Calisir, Basak & Barkana, 2009).

E-commerce: It consists of the buying and trading of products or services over electronic systems such as the Internet and other computer networks.

Website Usability – Web usability can be defined as making the design simple enough so that customers, who by nature tend to be goal-driven, can accomplish their task as quickly and painlessly as possible (www.webcredible. com).

Online Purchase Intention – is a situation where the customer is prepared to make a deal with seller (Raza et al., 2014). Purchase intention is one of the primary inputs that marketing managers use to forecast future sales and to determine how the actions they take will impact consumers' purchasing behavior. (Morwitz, 2012)

1.9. Organization of the Study

The study is structured in to five chapters. Chapter one focus on overall introduction of the research that comprises back ground of the research, problem statement, research questions, significance of the study, objective of the study, scope and limitations of the study.

Chapter two encompasses the review of related literatures. In this chapter, the theoretical and empirical literature review are presented. It also demonstrates how the proposed research conforms to the previous literatures gathered from reputable journals.

The third chapter focuses on the methodology that will be used in the research. This section gives details on the research approach, research design, sample size, data collection procedures, interpretation and discussion of results.

Chapter four, discusses the findings, interpretation, illustrates the statistical tastes used and show statistical results of each hypothesis.

Chapter five, which is the last chapter, contains the summery of findings, conclusion and recommendations sections. It also encompasses the limitations faced while conducting the research and highlights areas of research worth considering for future studies.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter deals with theoretical review concerning with understanding website usability, usability measurement and online purchase intention. It also presents the developed theoretical framework after the empirical reviews. Different empirical researches are reviewed on how to measure website usability and factors of online purchase intention emphasizing on relevant findings that can provide greater sustenance for this research.

2.1. Theoretical Literature Review

With the development of Information and Communication Technology (ICT), the Internet has become part and parcel of everyday life of human beings and many traditional offline activities have transferred to online environments. Thus online shopping has become very common, famous and also an important part of consumers' life (Athapaththu, and D. Kulathunga, 2018).

With increasing rate of use, while internet has an impact on the fate of organizations, it also provides facilities for the consumers. Especially it has become one of the most important tools for the airline companies where severe competition exists to reach the consumers in airlines companies (Aktas and Mutlu, 2015). Online environment cue such as website quality, trust and empathy are found to be the critical cue that effect customer purchase intention (Sam & Tahir, 2009).

Now that it is easily accessed through mobile phones, internet may also affect buying behaviors of the consumers. It has become the most important element for the consumers who can realize buying behavior in any time and conditions (Aktas and Mutlu, 2015). eCommerce force changes in the shopping habit of customers. Customer no longer relies solely on physical cue for their purchase decision (Sam & Tahir, 2009).

Travel is the most widely explored subject in the internet. Tourists use internet intensively for many purposes from obtaining information and buying products to making comparisons. It can

be said that airline companies are the pioneers in utilization of information and communication technologies as part of travel industry (Aktas and Mutlu, 2015).

E-commerce is ubiquitous today–it's impossible to sit in front of a computer without seeing advertisements and links to sites of all descriptions that would like to separate the user from some of his/her money. Some people may not realize that airlines were among the earliest users of this new sales channel. They can access information via internet regarding about fare, schedule, see advertising and doing a transaction without wasting their time to go to the traditional airlines reservation agent. In doing so, people let technology affect into many aspects in airlines industries and opened the gate to different ways of trading that connected company and customer by using internet facilities. (UK Essays, 2018).

Sam & Tahir (2009), also explained that, in order to strengthen competitiveness, service provider should pay more attention on website quality in the form of improving the website usability, design and information quality.

2.1.1. eCommerce in airline industry

Airlines have been heavily invested in technology for years. In 1962, the introduction of computerized reservation system enabled airlines to access real time data for the number of seats in a specified flight. American Airline's SABRE was first, with full implementation by 1964; competitors released their systems over the next few years. Revenue of the company was also tracked using the information stored in the computerized system. Airlines started online sales channels starting from 1990s. Having the infrastructure of mainframes and knowledge on data collection at hand, the transition to online service was very easy for them. No longer would flight information and pricing be available only in a travel agent's office or via the airline's ticket counter or phone line. Growth in online sales has been substantial at many airlines. For example, American Delta Air Lines began online ticket sales in 1996, achieving less than one percent of sales; online sales had reached more than eight percent of all tickets sold by 2001 (UK Essays, 2018).

The level of services customers gets while purchasing online should be the same as that they get from a travel agent. Customers buying airline tickets via website need recognition of frequent

flier privileges. In a globalized world, online customers expect similar experience in their palm devices and mobile phones. And in the future eCoommerce weireless portals will have big role in connecting consumers to online travel agents, direct sales channels and even allow customer to customize their own bundle of travel choice.

As per the arguments of Gasson (2003), three major trends are expected in the airline industry which are affecting the way that airlines do business. Since the decrease of protectionist measures in the airline industry, the market has turned into a highly competitive environment in which many airlines struggle to survive and which new airlines emerge on a yearly basis. The growth in trend in the direction of association in terms of mergers, acquisitions and alliance creation is the result of the emerging new competitors and struggle for survival. This is also a an alternative way that will increase revenue and empower airlines to become independent from travel agencies and discovered the e-commerce channel as a powerful tool to increase sales with a reasonable ROI.

UK Essays (2018) similarly added that eCommerce has an important role in the businesses, where it can help reduce the supply chain from airline's company, and also can change future trends in the airlines businesses in overall. For any successful e-commerce business, it is always required to get traffic to business portal, lure customers to best products (highly profitable) and boost up the sales. But to get customers to buy your choice of product is what is not in the hands of the business owners. Here are some to-do tasks that can help a lot in attracting customers to e-commerce based website and drive up sales to increase profitability in developing societies. However, the author give recommendation regarding development e-commerce in developing countries as build infrastructure for e-commerce and giving knowledge about the importance role of e-commerce in the businesses.

2.1.2. Online Purchase Intention

As explained by the Theory of Planned Behavior (TPB), intention to perform a certain behavior is determined by an individual's performance of that behavior (Sam & Tahir, 2009). Intention is informed by attitudes, subjective norms, and perceptions about whether the individual will be able to successfully engage in the target behavior (George, 2004).

Consumers' stated purchase intentions are one of the primary inputs that marketing manager's use to forecast future sales and to determine how the actions they take will impact consumers' purchasing behavior (Morwitz, 2012).

As explained by Raza et al. (2004), for marketers purchase intention is of huge significance as their predicted consumer behavior is highly reliant on this purchase intention of the customers. Forecasting consumer behavior is one of the most boring tasks for any business as it keeps on changing under the influences of unidentified and unsure factors; consequently leading to a purchase intention which is not easy to calculate under different situations.

Athapaththu, and D. Kulathunga (2018), investigated major aspects affecting online purchase intention using two different perspectives: technology oriented and social oriented perspective. In the context of their study, the technology oriented perspective focuses on the technology requirements for conducting a transaction online, while the social perspective focuses on the information obtained from the community and perceived usefulness, trust, website content and perceived ease of use showed a strong relationship.

In some cases, new product demands for new products using concept and product tests are tested using purchase intentions. These studies are typically conducted to assess whether enough consumers will buy a new product to validate its inauguration, and how to best use the elements of the marketing mix to maximize sales. Marketing managers also use purchase intentions as a leading indicator of future demand for their products, and to assess how their marketing actions will impact those future sales (Morwitz, 2012). Purchase intention specifies that buyers will maintain their knowledge, first alternative and external surroundings to collect information, and make buying choice by assessing alternative (Raza et al., 2014).

The study conducted by Aktas and Mutlu (2015), web sites of Anadolu Jet, Atlas Jet, Bora Jet, Onur Air, Pegasus Airlines, SunExpress and Turkish Airlines (THY) are analyzed. As per the analysis performed, the effectiveness of the website usability in terms of its contribution to marketing communication studies is based on the functions and delivery features of the websites of Turkey airline companies. The findings on functions and delivery dimensions of the websites are as the following.

Given purchase intentions are correlated with but are imperfect measures of consumers' subsequent purchase behavior, marketing managers need to know when best to rely on them and how best to use them (Morwitz, 2012).

This shows that consumers will always visit very user friendly websites that demonstrate approachable appearance. The website will the pop-up when the customer thinks about the product or get reminded by his or her environment. In the contrary, if customers recognize that a website is hard to use, or the display of the website is complicated and ambiguous, they will show a lower online purchase intention.

Easily intractable eCommerce website will be highly considerable when it comes to searching product information and/or to pay online.

2.2. Empirical Literature Review

2.2.1. Understanding Website Usability

Internet is the base for online shopping and the website is the basic platform of online transaction. Accordingly, website usability has a significant influence on online customers' intention and transaction success. Different researchers tried to summarize several factors as a benchmark to understand how usable a website is. Some of this factors are ease of use, response time, navigation, interaction, design, convenience, learnability, efficiency, site find-ability and accessibility. This researches under this section will focus on website usability assessment with respect to different independent variables.

Calisir, Basak & Barkana (2014), conducted a research that examine the surgeons' evaluations of the relative importance of the usability and the functionality factors in the computer-assisted navigated system designed for cryoablation of kidney tumors. To gather data survey is used as a methodology and surgeons returned 12 questionnaires.

The results of their analysis imply that response time, efficiency and ease of use are found to be the most important factors among usability factors, whereas interaction, navigation and memorability are the least important factors.

Achievability and accessibility, auto-run and data security are found to be the most important factors among functionality factors, whereas ability to interact with external systems, customizability, and validation are found to be the least important factors.

In terms of response time, the ease of use and efficiency are the most important factors (Calisir, Basak & Barkana, 2014). This implies that respondents give higher emphasis on the usability related factors. Thus, the findings of this study may make a contribution to the early design stages of CAN system for cryoablation of kidney tumors and provide a better understanding of the expectations and perceptions of surgeons (Calisir, Basak & Barkana, 2014).

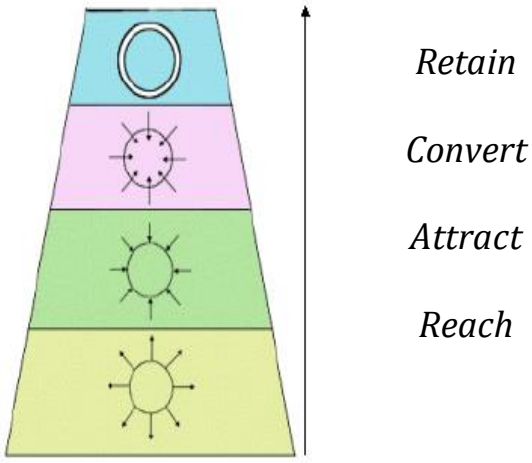
Madan and Dubey (2012) explained that different attributes have been built for a clear view of usability and its aspects. To define the success of a system, usability has been decomposed into several sub attributes which are hypothetical constructs. Their paper has surveyed research papers, published articles and views of usability experts to describe usability models, usability evaluation methods and has determined the sub attributes of usability which form the basis for the usability evaluation of the software system.

They also acknowledged that there is still a dilemma about appropriate selection of measurement technique for usability evaluation of a software system but they agreed that user involvement plays key role in determining the software usability after it has been developed.

In some contexts, the importance of website usability comes down to its efficiency for e-commerce websites in triggering sales and/or performing other business-like transactions. According to RACR theory the goal of implementing web usability in the case of e-commerce websites is to do the following steps as well as possible (Jamshidi, 2008).

- Reach: Reach maximum user base
- Attract: Attract maximum user you reach
- Retain: and retain maximum users you convert
- Convert: Convert maximum users you attract

Figure 1: The stapes of RACR theory



Source: Jamshidi (2008)

Even if there are efforts in web design research, enormous amounts of websites are still difficult to be used. As per Jamshidi (2008), e-commerce sites users successfully performed only 56 percent of their intended tasks. Forrester Research also has reported that 65 percent of all online shopping tips end in failure and that 40 percent of all visitors choose not to return to site because of design problems. Clearly, usability can make or break a web site.

2.2.2. Purchase Intention Verses Website Usability

In the previous sections, we discussed that willingness to buy a product and a service is directly influenced by customers' attitude. As per the study conducted by Sam & Tahir (2009), usability operationalized as websites' ease of learn, ease to navigation, ease to use, instructiveness, clarity and understandability. In the Technology Acceptance Model (TAM) uses the perception of usefulness and ease of use determine user's attitude towards a specified website. In their analysis on the relationship of website quality and consumer online purchase intention of air ticket, it is found that usability of the online website is positively associated with consumers' online purchase intention at alpha level of 0.10.

In contrast, as per jun & Jaafar (2011), a study conducted in three cities with higher internet penetration in china, Shanghai, Bejing and Fuzhou, it was observed that usability of online

shopping websites does not influence customers' attitude. This is observed due to the fact that 79.2% of online customers were already satisfied with online website usability which indicates that consumers' attitude cannot be influenced by this variable anymore.

Moreover, Athapaththu, and D. Kulathunga (2018), also analyzed factors affecting online purchase intention focusing on effects of technology and social Commerce. Consequently, it is observed that there is no significant relationship between perceived ease-of-use and purchase intention (β=0.11, $p > 0.05$) but ease of use may act indirectly to use through usefulness. They specified that the importance of usefulness over usefulness has important implication for website designers and that they have to focus more on the usefulness of the website than its ease of use.

2.2.3. Usability Measurement Tools

Usability evaluation can be performed using various types of techniques considering different variables, features and characteristics of a system. Mack and Nielsen (1994), categorized usability evaluation methods in four categories as Automated, Empirical, Formal and Informal evaluation method.

Automated evaluation method is computes usability measures by running user requirements through evaluation software. While empirical methods test the interface with real users. The third methods, Formal methods, use exact models and formulas to calculate usability measures whereas Informal methods of measurements are done based on rules of thumb and the general knowledge, skill and experience of the assessors.

Benbunan-Fich (2001), on the other hand, categorized usability evaluation methods into four categories as Objective performance, subjective user preferences, Experimental and Direct observation.

Objective performance focuses on the time taken to complete a particular needed activity in the system which can help to measure the capability of the website user. If the assessor or evaluator user a questionnaire or ask users to elicit their opinions about the system, this is called Subjective user presence method. It also possible to use experimental usability evaluation methods which

highly depends on controlled experiments so as to test hypotheses about the design and its effect on user performance and preferences.

Each method has its strengths and weaknesses. Website developers and designers must use and consider certain factors, principles and standards while selecting convenient evaluation methods. Chiew & Salim (2003), identified some factors including stage of design, novelty of project, number of expected users, criticality of the interface, cost of product and finances allocated for testing, time available, and experience of the evaluation team.

Consequently, Chiew & Salim (2003) evaluated four evaluation tools (WAMMI, WebSAT, Bobby, protocol analysis) with eleven (11) interdependent and interrelated usability aspects. These aspects are: User satisfaction Emotional effect, Learnability/ Ease of use, Efficiency, User control, Accessibility, Navigational aids, Content and organization, User interface attractiveness, Performance and Readability. After an extensive study on related resources, they identified the following website usability evaluation criteria's based on the eleven usability aspects.

Limited website frames. The display space of website should not be divided into many small segments since it highly disrupts the comfort of the reader restricting relaxed reading experience. Thus, the number of frames used in the websites should be as minimal as possible.

Limited scrolling. Websites with a lot of left and right scrolling causes difficulty in reading. Customers will not easily truck the content of the website while being distracted by recurrent scrolls. It's very recommended to have a limited left and right scrolling with the aim of gaining the focus of the reader.

Enhanced accessibility. Websites ought to be accessible to customers with different technological capabilities. Proper system testing is mandatory before hosting the website in to the larger market segment.

Less distraction. Some websites have hordes of scrolling texts, animations and marquees that constantly run on the page. These components are very destructive for the user and minimize the chance of website reusability.

Should contain no orphan page. An orphan page is a fragment of a webpage which have unknown parent page. For this case a site map or menu should be used so as to indicate the current page location. Moreover, the page should contain a redirecting link to the home page.

Constant look. Persistent appearance of the webpage facilitates recall. Users can easily recognize the site map or the menu and can identify the targeted link effortlessly.

Easily searchable. In the case of complex and large websites, effective search option should be provided for the user so that they will be capable to access the needed information quicker.

Differentiated links. Link colors are very beneficial to identify visited links from non-visited links. Standard link for visited links is red and blue is for not visited links. Thus, users will only focus on unvisited link unless they acquire the information they required.

Updated page. Websites should contain up-to-date contents all day every day. Outdated pages should be tracked frequently and get replaced the soonest possible.

Short download time. Despite the size of the file and a page, download time should not exceed 15 seconds. Users do not want to wait excessively long minutes to see a single page.

Back button. Using the back button accounts for 30-37% of the navigational experience. Therefore, every page in the website should allow the users to go to the previous page effortlessly.

Too many new browser windows. Opening a new browser window for all links in the website highly hinder the users to trace present site location and restrict them to go to the previous page simply.

Respond appropriately. GUI development have international standards that focus on user expectations. These GUI widgets that are incorporated on the websites should respond as expected.

Limited advertisements. Elements of a webpage that look like advertisements highly annoy web users.

Information presentation. Standard conventions should be followed with the aim of presenting an information in a natural and logical manner.

Describe destination page. This will save extra time spent by going to unnecessary page. Describe the destination page using expressive words.

Standard look and feel. Placement of page components, web design, page layout, colors used should be combined in a manner that can offer decent look and fell.

Good contrast and page elements. Using contrasted colors and page layouts that appeal to the main information of the page will attract users'.

Organize texts. Use headlines, sub-headlines, bulleted list, highlighted keywords abd short paragraphs as an alternative to unformatted blocks of text. Highlight content of a section using a headline so that the users will have an idea before going in to details.

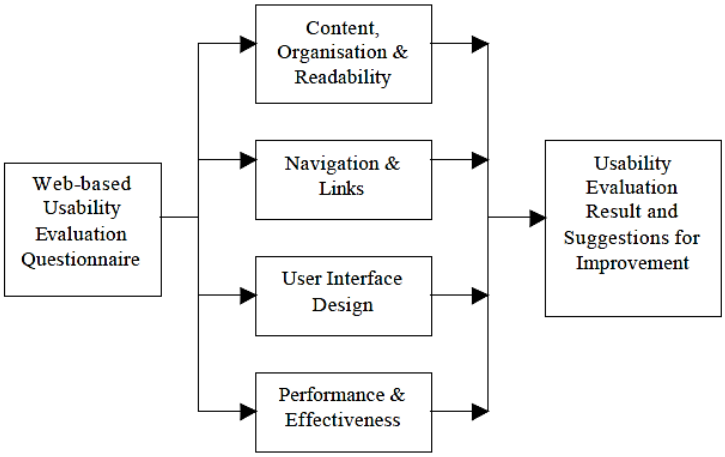
Use navigational aids. Provide links and other aids to help users navigate the webpage modestly. Links at the bottom or top of the webpage will play a role with this regard.

The above 20 usability criteria's' are shown as an important aspects of website usability. These criteria's are then classified into 4 categories. The categories are:

- Content, organization, and readability,
- Navigation and links,
- User interface design, and
- Performance and effectiveness.

Using the above categories Chiew & Salim (2003) developed evaluation tool whcih is called WEBUSE (Website Usability Evaluation Tool) based on the model below.

Figure 2: WEBUSE development model



Source: Chiew & Salim (2003)

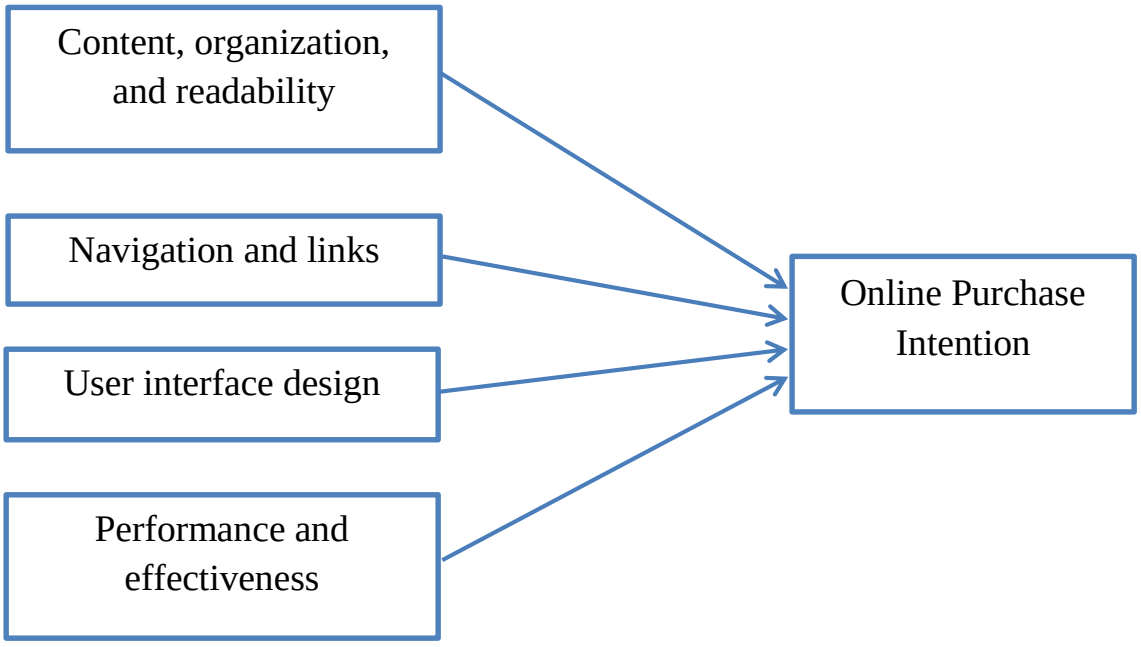
Tullis and Stetson (2004) also did a comparison on five (5) web usability assessment questioners. The questionnaires studied were SUS, QUIS, CSUQ, a variant of Microsoft's Product Reaction Cards, and one that they have used in their Usability Lab for several years. Finally, this paper has only addressed the question of whether a given questionnaire was able to reliably distinguish between the ratings of one site vs. the other. In many usability tests, you have only one design that you are evaluating, not two or more that you are comparing. When evaluating only one design, possibly the most important information is related to the diagnostic value of the data you get from the questionnaire. In other words, how well does it help guide improvements to the design? That has not been analyzed in this study.

2.3. Conceptual Framework and Hypothesis

The conceptual framework of this study is developed by combining Chiew & Salim (2003) WEBUSE model and the works of Morwitz, (2012) that explained the relationship between web usability and purchase intention.

The four main categories of website usability are used as usability aspect antecedents. So by taking this works as a base, to test the relationship between web usability and purchase intention, the researcher developed the following conceptual framework.

Figure 3: Conceptual framework of the Study



In this model, the independent variables are shown at the left side of the model directing to the dependent variable on the right.

2.4. Research Hypothesis

The hypotheses of this study was established subsequently to a careful empirical review and constructed based on the proposed conceptual framework.

H1: Content, organization and reliability of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.

H2: Navigation and links of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.

H3: User interface design of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.

H4: Performance and effectiveness of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter describes the methods and techniques selected to obtain information in order to conduct the study using reliable and valid data. This comprises of the research approach, research design, population and sample size, data collection procedures, ethical considerations and data analysis.

3.1. Description of the Study Area

Airlines are organizations within travel industry and this research chosen the best airline in Africa, which is Ethiopian airlines. This research is a case study that is conducted on the customers of Ethiopian airlines. The Information Communication Technology and Marketing Management departments of the Airline are the responsible divisions to collaborate efforts to enhance international market results.

3.2. Research Approach

As classified by Mack and Nielsen (1997), there are four categories of evaluation methods that can be used to examine usability-related aspects of a system. The selected approach to conduct this research is a quantitative research approach. The purpose of quantitative research is to describe actual condition and determine the quantity or extent of same phenomenon in the form of numbers that can be analyzed statistically.

Considering the nature of the research problem, purpose of the research and research objectives, empirical approach is used to understand real customers' reactions with regards to Ethiopian airlines official websites' usability.

Following to relevant data collection using quantitative data collection method, it is quantified in numbers and analyzed using statistical models as mean, standard deviation, ANOVA, correlation and regression analysis.

3.3. Research Design

Subsequent to the variables identification and theoretical framework, the next phase is designing the research in a fashion that can provide seamless insights from the gathered data.

The research design employed in this study is explanatory research. This study focuses on cause-effect relationships, explaining what causes produced what effects. This research seeks to discover cause & effect relationship between website usability aspects and online purchase intention through ground experimentations.

3.4. Population and Sample

A population is a total sets of respondents in which a sample can be taken and a sample is a part of a populations selected to signify the total population entirely. The selected sample should have all the features and characteristics of the total population. In such a manner the researcher can use the sample data to draw conclusions about the total population. It is also important to understand and describe the research population which in turn have implications on the finding of the research.

The population of this study is the total collection of online customers of Ethiopian Airlines above the age of 18 years old. From non-probability sampling technique, convenience sampling technique is selected so that the subjects are selected for the reason that they are conveniently accessible as a customer of the airline. From customers of Ethiopian airlines that are available on different social media groups, research respondents are selected based on their prior website usage experience.

This research also aims to determine a sample size to make sure that the population is adequately represented since it is impossible to take the entire population because of time and financial factors.

Thus Cochran formula is used as below:

$$n = \frac{Z\_score^2 * p * (1 - P)}{e^{\,2}}$$

n = Sample size

Z = The value on the Z table at 95% confidence level =1.96

e = Sampling error at 5%

p = maximum variability of the population at 50%. i.e. (0.5)

Thus the sample size for this study is;

$$n = \frac{1.96^2 * 0.5 * (1 - 0.5)}{0.05^2}$$

$$n = \frac{3.8416 * 0.25}{0.0025}$$

n = 384.16

3.5. Data Collection Procedures

Chiew & Salim (2003) designed a website usability evaluation questioner after analyzing different tools and methods of usability evaluation. The questioner they developed (called WEBUSE) is designed using a set of 24 usability guidelines unlike any another tools of methods. Thus, WEBUSE is be used in this research. To collect data about online purchase intention, a question developed by Athapaththu, and D. Kulathunga (2018) is used.

In this research primary data is collected using a rating scale that asks respondents to indicate the extent to which they agree or disagree with a series of mental belief of the statements. Likert Scales are used because they minimize subjectivity and make it possible to carry out quantitative analysis (Oppenheim, 2001).

The questioner was sent to online customers of Ethiopian airlines and they are asked screening question to check if they previously used the Website for purchasing flight tickets.

3.6. Data Analysis

The data analysis techniques that is used in this research is Statistical Package for Social Sciences (SPSS). This tool was used to analyze and summarize the collected data in a manner that is easy to understand, and comprehend.

SPSS is useful to measure of central tendency (mean), measure of dispersion (standard deviation), frequency distributions, calculating percentage, ANOVA and tabulating them appropriately. Moreover, inferential statistics was used for calculating correlation and regression between dependent and independent variables.

Correlation helps to determine the strength of relationship between variables and regression was performed to determine the level of significance of independent variables. To end with, the results of the data analysis is presented in form of discussions, tables and percentages.

3.7. Validity and Reliability Analysis

3.7.1. Validity

Siddiqi (2010), defined validity as the criteria for how effective a design is in empowering the data collection methods of measurement. To have validity, items of assessment instrument should be appropriate to the target construct and objectives.

This study adopted questionnaires from previous research works that are related to this research and these related literatures ensure the validity of the questionnaire as clearly indicated in the works of Chiew & Salim (2003).

3.7.2. Reliability test of variables

In this study, reliability is measured and it is accepted as an essential indicator of a studies quality. Thus, the researcher used Cronbach‟s Alpha to assess the internal consistency or the reliability of the research instrument. As per Cronbach 1952, a benchmark Alpha of 0.7 is suggested to be an acceptable measure of reliability. Based on the following result, the data instrument of this research is reliable.

Table 1: Reliability statistics

	Cronbach's Alpha
Content, organization and readability	.846
Navigation & Links	.836
User interface design	.860
Performance and effectiveness	.847
Purchase Intention	.880

Source: (Survey data: 2020)

3.8. Ethical Consideration

The researcher is definite that the right of the respondents is not violated throughout the overall data collection scenario without compromising the result of the research. The participants were also notified about the intention of the research prior to filling the questioner.

Moreover, the researcher protected the data collected from the respondents as the property of the airline which cannot be transferred to other competitors of any kind and only be used for academic purpose. Both confidentiality and informed consent rights are protected throughout the life span of the research.

Confidentiality - Preserving the privacy and anonymity of the respondents is one of the prime responsibilities of the research professional (Coldwell & Herbst, 2004).

Informed consent – Participants must be informed about objectives of the research including the end results if a need arises (Long & Johnson, 2007).

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND INTERPRITATION

This chapter presents the data collected, analysis using descriptive statistics (frequencies, percentages, and cross tabs) and inferential statistics mainly Pearson correlation and multiple regression with their interpretation, all the data presentations are supported by tables, charts.

The analysis of the results is generated from the 385 responses that are obtained from 424 respondents through google form questionnaires, in which 5 of the respondents are under aged and 34 responses were rejected due to inadequate response. Data extracted from completed questionnaires were coded to SPSS version 20.0.

This section also discusses the demographic characteristics of the respondents briefly and the findings are then discussed and analyzed according to research objectives.

4.1. Descriptive Statistics of the respondents' background

The following summary of descriptive statistics of all dependent and independent variables gives the general composition of the data set to examine website usability.

4.1.1. Response rate

The Google form link of the questionnaire were posted on different social media groups. This groups are popular and used by international travelers and tourists so as to share travel information across the globe. These groups that are found in Facebook, telegram and LinkedIn are used by the researcher so as to reach customers of Ethiopian Airlines who previously used the official website of Ethiopian airlines at least onc e.

Out of the total 424 respondents, 34 questioners were rejected because it was not filled by the right respondents who previously have experience using the website and 5 were rejected because they were filled by under aged respondents.

Table 2: Rate of Accepted Responses

Questionnaire responses	Accepted responses	Percentage
424	385	90.8%

Source: (Survey data: 2020)

4.1.2. Profile of respondents

Under this section socio demographic characteristic of respondents was presented. The socio demographic characteristics of respondents include in this study were age groups and nationality in order to make the study more understandable and clear.

4.1.2.1. Respondents age composition

The demographic feature of the survey explains that Out of the collected 424 questionnaires 419 (98.8%) of the respondents are above 18 years of age and the remaining 5 (1.2%) are below the age of 18 years old.

Table 3: Survey respondents age cluster

	Frequency	Percent	Cumulative Percent
Above 18	419	98.8	98.8
Below 18	5	1.2	100.0
Total	424	100.0	

Source: (Survey data: 2020)

As per Asamoah (2012), potential buyers below 18 years are regarded as underage and are deemed incapable of taking good decisions on their own. Consequently, the target group for the study was customers above the age of 18 years old.

Accordingly, 419 of the respondents that are above 18 years old customers were chosen as a target group for farther analysis because they are sensitive to price, strong to be moving around

corners, and willing to try new things. The 5 respondents that are below 18 years of age are consequently assumed to act under the supervision of parents or guardians while making financial decisions and rejected.

4.1.2.2. Determined sample targets

Corresponding with rejecting under aged respondents, the research also removes respondents who replied that they never used the website but filled the questionnaire anyways.

After completing the data clearing stages, 385 (90.8%) of questionnaires are accepted for data analysis since they are returned by individuals who are above 18 years of age and also used the website at least once in their time as a customer of Ethiopian airlines.

Table 4: Previous users of the website

	Frequency	Percent	Cumulative Percent
Below 18 years old and/or Never used the official website	39	9.2	9.2
Above 18 years old and used the official website previously	385	90.8	100.0
Total	424	100.0	

Source: (Survey data: 2020)

4.1.2.3. Nationality of respondents

Ethiopian airlines avail an online booking and e-ticketing services to its customers found throughout the world.

This research also tried to reach respondents from different part of the world. The nationality of the respondent was spanned out of nine countries which are USA, UK, Canada, Germany, Greek, Ethiopia, Norway, Nigeria and Zambia. Because of the medium of questionnaire distribution used, 99.2% of the respondents are Ethiopians.

Table 5: Composition of respondents nationality

Country	Frequency	Percent	Cumulative Percent
USA	16	4.2	4.2
UK	4	1.0	5.2
Canada	5	1.3	6.5
Germany	2	.5	7.0
Greek	1	.3	7.3
Ethiopia	354	91.9	99.2
Norway	1	.3	99.5
Zambia	1	.3	99.7
Nigeria	1	.3	100.0
Total	385	100.0	

Source: (Survey data: 2020)

4.1.2.4. Previous website usage experience of respondents

Going through prior experience of the 385 respondents, majority of the respondents that are 188 (48.8%) have been using the official website for more than a year. This group have a better experience to analyze which occurrences happen frequently that shows the variables which have higher effect on the intention of the customer.

The other 75 (19.5%) respondents have been using the website for the last 12 months. These customers are a very good candidate to analyze recent but repetitive occurrences that the customer faced which in turn affected the purchase intention. The remaining 122 (31.7%) of the respondents were using the website for the last 6 months. This group will not forget the details of the performance faced and can clearly identify facts and properties of variables.

Table 6: Website usage time span of respondents

	Frequency	Percent	Cumulative Percent
Less than 6 months	122	31.7	31.7
6 – 12 months	75	19.5	51.2
More than a year	188	48.8	100.0
Total	385	100.0	

Source: (Survey data: 2020)

In the survey the respondents were also asked if they have ever purchased the services or products of Ethiopian airlines online, 253 (65.7%) of the respondents' state that they experience the total procedures and completed the steps of online product or service sales process.

The remaining 132 (34.3%) respondents claimed that they used the official website but never purchased services or products online. These respondents will be very practical to analyze if usability variables were the reasons for the unconcluded transaction.

Table 7: Respondents purchasing measures

	Frequency	Percent	Cumulative Percent
Purchased products/services online	253	65.7	65.7
Did not purchase products/services online	132	34.3	100.0
Total	385	100.0	

Source: (Survey data: 2020)

4.2. Descriptive Analysis of the study variables

4.2.1. Content, organization and reliability

The mean score value of the overall level of content, organization and reliability is 3.71. The standard deviation of the overall level of consumer's preference is 0.725. Looking at the coefficient of variance value of 0.195 it means that the distribution of the data is low which infers that customers have very close opinion.

Table 8: Descriptive statistics for content or organization and reliability of the website

Content, organization and reliability questions	Mean	Std. Deviation	Variance
1. Ethiopian Airlines website contains most of my interests and topics and it is up-to-date.	3.59	.940	.883
2. I can easily find what I want at the Ethiopian Airlines website.	3.62	1.017	1.034
3. The content of the website is well organized.	3.67	.970	.941

4. Reading content at the website is easy.	3.79	.975	.952
5. I am comfortable with the language used on the Website.	4.12	.967	.936
6. I do not need to scroll left and right when reading at the official website.	3.51	1.111	1.235
Total	**3.71**	**0.725**	**0.527**

Source: (Survey data: 2020)

4.2.2. Navigation and links

Navigation and links have a mean score value of 3.53 with a standard deviation of 0.727. The coefficient of variance for this independent variable is 0.205 which is almost the same as the desperation measurement as content, organization and reliability. This also describes that customers have very close opinion regarding navigation and links.

Table 9: Descriptive statistics for Navigation and links

Navigation and link questions	Mean	Std. Deviation	Variance
1. I can easily know where I am at the website.	3.65	.957	.917
2. The official website also provides useful cues and links for me to get the desired information.	3.45	.984	.967
3. It is easy to move around at the website by using the links or back button of the browser.	3.61	.967	.936
4. The links at the website are well maintained and updated.	3.43	1.008	1.017
5. The website does not open too many new browser windows when I am moving around.	3.43	1.059	1.121
6. Placement of links or menu is standard throughout the website and I can easily recognize them.	3.63	.962	.926
Total	**3.53**	**0.727**	**.529**

Source: (Survey data: 2020)

4.2.3. User interface design

A mean score value of 3.79 with a standard deviation of 0.710 and the coefficient of variance of 0.187, respondent's opinion regarding the user interface design is slightly closer than the above two variables we sow.

Table 10: Descriptive statistics for user interface design

User interface design related questions	Mean	Std. Deviation	Variance
1. This website's interface design is attractive.	3.66	1.061	1.125
2. I am comfortable with the colors used at the website.	4.09	.960	.921
3. The website contains no feature that irritates me such as scrolling or blinking text and looping animations.	3.76	1.021	1.042
4. The website has a consistent feel and look.	3.86	.865	.748
5. The website does not contain too many Web advertisements.	3.65	1.042	1.086
6. The design of the website makes sense and it is easy to learn how to use it.	3.71	.961	.924
Total	**3.79**	**.710**	**.505**

Source: (Survey data: 2020)

4.2.4. Performance and effectiveness

The mean score value of the level of performance and effectiveness is 3.29 with a standard deviation of the level of consumer's preference is 0.835. Referring to the 0.25 coefficient of variance, it means that the distribution of the data is a slightly higher than other variables but still infers that customers have very close opinion.

Table 11: Descriptive statistics for performance and effectiveness

	Mean	Std. Deviation	Variance
1. I did not wait too long to download a file or open a page.	3.22	1.169	1.367
2. I can easily distinguish between visited and not-visited links.	2.97	1.053	1.108

3. I can access the website easily most of the time.	3.46	1.127	1.270
4. The website responds to my actions as expected.	3.35	1.017	1.034
5. It is efficient to use the website.	3.51	.995	.990
6. The website always provides clear and useful messages when I don't know how to proceed.	3.23	1.038	1.078
Total	**3.29**	**.835**	**.698**

Source: (Survey data: 2020)

4.2.5. Online purchase intention

The dependent variable, online purchase intention, have an average mean of 3.55 with a standard deviation of 0.915. Evident to the overall coefficient of variance value of 0.258, customer's response regarding online purchase intention is closely dispersed showing commonality.

Table 12: Descriptive statistics for online purchase intention

	Mean	**Std. Deviation**	**Variance**
1. I will consider the Ethiopian Airlines website first when I want to buy flight services and products.	3.54	1.205	1.453
2. I would be comfortable shopping at the website.	3.34	1.158	1.340
3. I would recommend the website to a friend.	3.70	1.108	1.227
4. I intend to continue using Ethiopian airlines website in the future.	3.91	1.067	1.138
5. I will purchase other products or services at Ethiopian airline's website.	3.28	1.158	1.342
6. I would like to buy new products/services from the website.	3.52	1.106	1.224
Total	**3.55**	**.915**	**.839**

Source: (Survey data: 2020)

4.3. Exploring the Hypothesis

The study employed both correlation and regression analysis to determine whether there is a statistically significant relationship between the independent and dependent variables.

4.3.1. Correlation Analysis

Correlation analysis is one of the most widely used in research, it is often used to determine a relationship between two different variables, and how significant or how strong is the association between variables.

This section discusses correlation analysis results which will assess the relationship between the dependent and the independent variables. Correlation coefficient value ranges from -1 and 1 extending from being negatively correlated (-1) to not-correlated (0) to positively correlated (+1). Pearson Correlation analysis was used to achieve this end at 95% confidence level (α =0.05).

Correlation value less than 0.3 is considered as week correlation, if the value is between 0.3 and 0.7, it is considered as moderate correlation, where values greater than 0.7 are considered to be strong correlations (Field, 2009). Values closer to zero (0) are weaker correlations and values closer to one (1) are strongly correlated.

Table 13: Correlation results

		Content, organization & readability	**Navigation & Links**	**User interface design**	**Performance & effectiveness**	**Purchase Intention**
Content, organization & readability	Pearson Corr.	1				
	Sig. (2-tailed)					
Navigation & Links	Pearson Corr.	0.723**	1			
	Sig. (2-tailed)	0.000				

User interface design	Pearson Corr.	0.637**	0.650**	1		
	Sig. (2-tailed)	0.000	0.000			
Performance & effectiveness	Pearson Corr.	0.642**	0.711**	0.541**	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
Purchase Intention	Pearson Corr.	0.521**	0.550**	0.511**	0.577**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	385	385	385	385	385

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

Source: (Survey data: 2020)

The extent of the relationship in the above table ranged from .511 (between purchase intention and user interface design) to .723 (between Navigation & Links and Content, organization & readability). At the 0.01 level of significance, all values of the correlation analysis between the dependent variable and dependent variables are found to be moderately significant showing reliable relationship.

In addition to "Navigation & Links" and "Content and organization & readability", "Performance & effectiveness" and "Navigation & Links" also have a strong correlation which is above 0.7. The remaining variables strength of the correlation was found to be moderate.

Thus, it is summarized that independent variables are moderately correlated with the dependent variable.

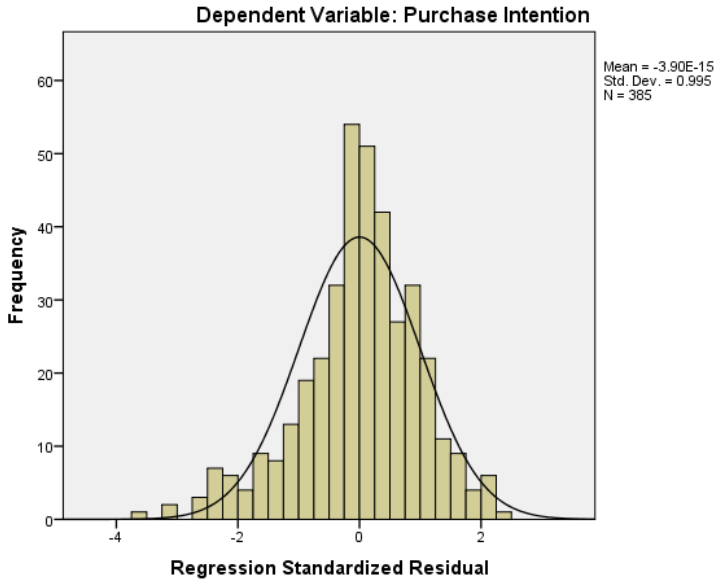
4.3.2. Test of Linear Regression Model Assumptions

4.3.2.1. Normality Assumption Test

Normality tests are used to determine if a data set is well-modeled by a normal distribution. The normality of the population distribution is the basis for making statistical inferences about the sample drawn from the population (Kothari, 2004).

Even though there are many testes for normality all having their advantage and disadvantages, this study implemented graphical methods to test the normality of data. Since the histogram shown below is a bell shaped graph, the residuals are normally distributed which satisfies the normality assumption.

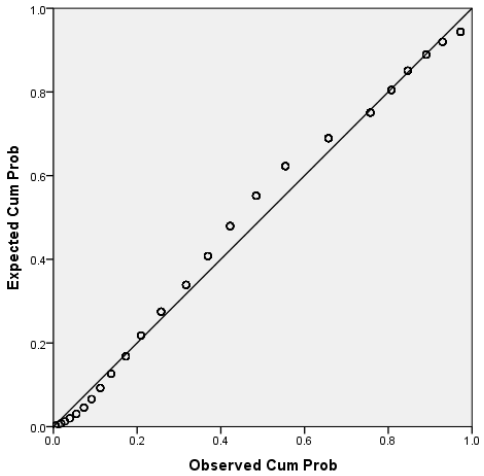
Figure 4: Normal Distribution Histogram



Source: (Survey data: 2020)

Furthermore, the normal probability plots were also used to test the normality assumption as shown by the Normal P P-Plot Figure below. This figure also shows that residuals are normally distributed around its mean of zero which confirms data validity.

Figure 5: Normal P - P plot of Purchase intention



Source: (Survey data: 2020)

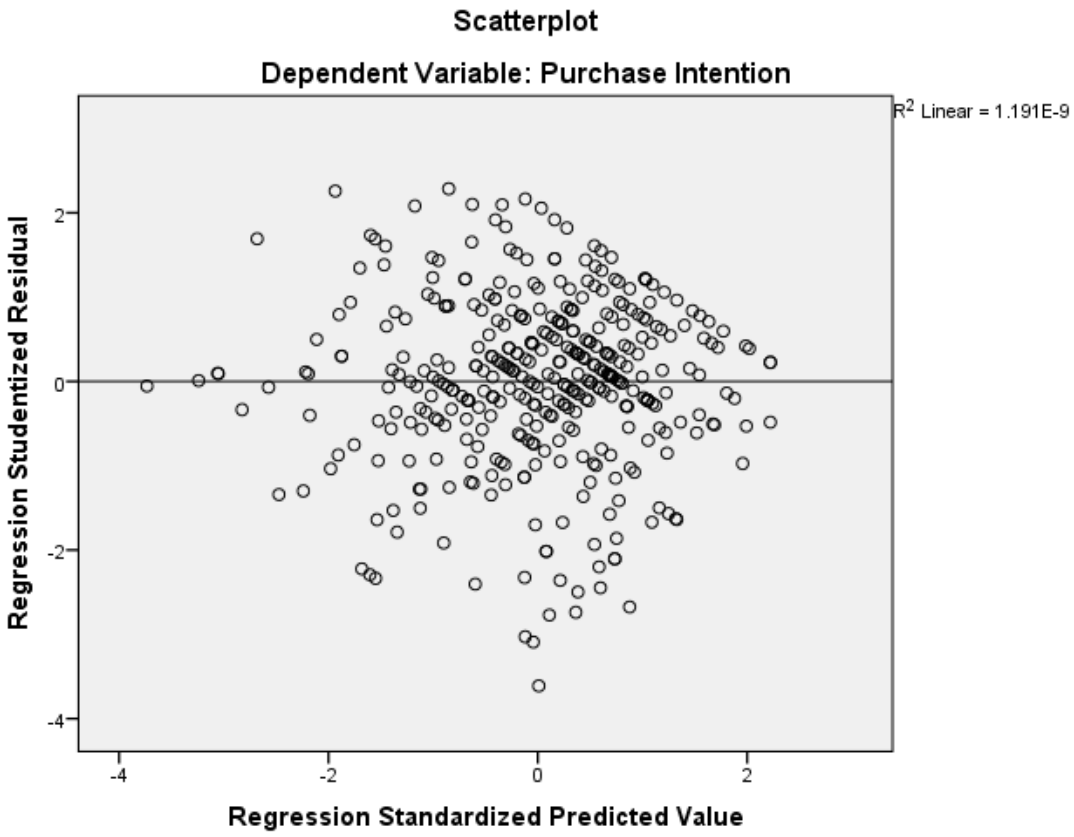
Thus, this infers that the data is normally distributed and the population parameters are valid which in turn satisfies the normal distribution assumption.

4.3.2.2. Homoscedasticity Assumption Test

Homoscedasticity is the assumption that the dependent variable exhibits similar amounts of variance across the range of values for an independent variable. This plot is important to control whether the assumptions of random error and homoscedasticity have been satisfied (Field, 2009).

As per Fields (2009), the regression standardized residual and regression standardized predicted value scatterplot graph should look like an evenly dispersed random array of dots scattered around zero.

Figure 6: Homoscedasticity test result



Source: (Survey data: 2020)

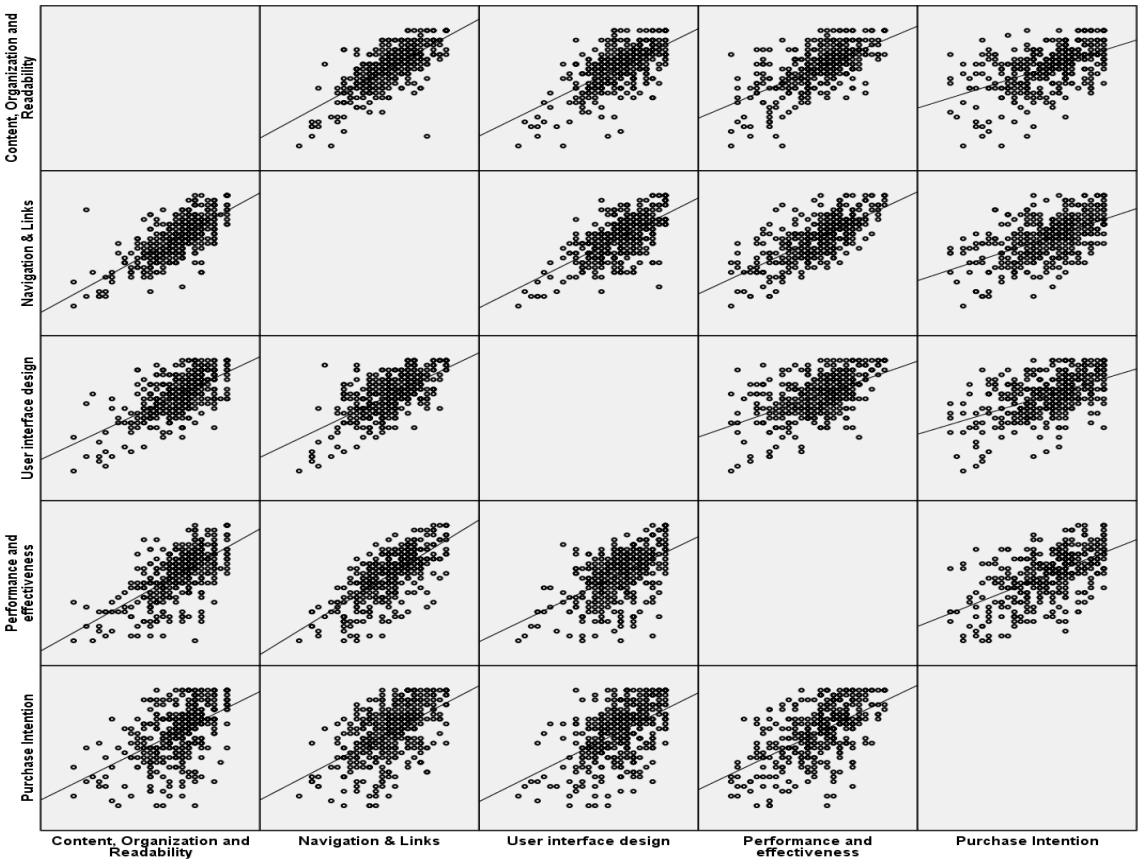
The above figure shows that dependent variables have analogous variance across the range of values for all independent variable which shows that homoscedasticity assumption test have been fulfilled.

4.3.2.3. Linear Relationship Assumption Test

The degree to which the change in the dependent variable is associated with the independent variable is signified by linearity relationship assumption test. Linear relationship between every independent variables and the dependent variable is expected in which the scatter plot scores should be a straight line to signify linearity.

The below scatter plot demonstrates linear relationship between dependent and independent variables.

Figure 7: Linear relationship test result



Source: (Survey data: 2020)

4.3.2.4. Multicollinearity Assumption Test

Multicollinearity is another test for determining existence of multicollinearity among independent variables tolerance value and variance inflation factor (VIF). Multicollinearity happens when two or more predictors contain much of the same information.

The tolerance value shall be greater than 0.2 and the VIF should be less than 10. If the requirement is not satisfied it leads to wrong outcomes. The below table shows that tolerance of all variables is greater than 0.2 and the VIF of all variables were less than 10, there is no multicollinearity effect.

Table 14: Multicollinearity statistics

Independent variables	Tolerance	VIF
Content, organization and readability	.406	2.463
Navigation & Links	.342	2.925
User interface design	.517	1.936
Performance and effectiveness	.458	2.185

Source: (Survey data: 2020)

4.3.3. Regression Analysis

Regression analysis is used to show the relevance and effect of the four independent variables on online purchase intention.

Subsequent to the testing of linear regression model assumptions, online purchase intention was used as a dependent variable and multiple regression analysis were conducted.

Table 15: ANOVA statistics

	Sum of Squares	df	Mean Square	F	Sig.
Regression result	130.300	4	32.575	64.534	.000[b]
Residual result	191.815	380	.505		
Total	322.115	384			

a. Dependent Variable: Purchase Intention

b. Predictors: (Constant), Performance and effectiveness, User interface design, Content, organization and readability, Navigation & Links

Source: (Survey data: 2020)

The ANOVA statistics presented in the above table is used to present the regression model significance. If the number (or numbers) found in Sig. column is less than the critical value of alpha (a), then the effect is said to be significant. Since this value is set at .05, any value less than this will result in significant effects.

An F-significance value of at df (4, 380) P< 0.05 was established showing that there is a probability of less than 0.05 of the regression model. Thus, the model is significant.

Table 16: Multiple regression analysis results

	Unstandardized Coefficient result		Standardized Coefficient result	t	Sig.
	B	Std. Error	Beta		
Constant	.421	.215		1.961	.051
Content, organization & readability	.133	.078	.105	1.697	.090
Navigation & Links	.154	.085	.122	1.808	.071
User interface design	.247	.071	.192	3.485	.001
Performance and effectiveness	.349	.064	.319	5.448	.000

Dependent variable: Purchase intention

Source: (Survey data: 2020)

In multiple regressions we use an equation of

$$Y = Bo + B1X1 + B2X2 + \ldots + BnXn + \varepsilon$$

Where: - Y = the Predicted Dependent Variable
B_o = Constant
B_1, B_2 and B_n = unstandardized regression coefficients
X_1, X_2 and X_n = the independent variables, *and*
the error term ε *(the Greek letter epsilon) is* a random variable.

Thus, the model for the relationship between dependent and independent variables of the research is represented as using the below equation.

$$OPI = 0.133\ (COR) + 0.154\ (NL) + 0.247\ (UID) + 0.349\ (PE) + 0.421$$

Where: - OPI = Online Purchase Intention
COR = Content, organization & readability
NL = Navigation & Links
UID = User interface design
PE = Performance and effectiveness

Table 17: Model summery

Model	R result	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.636[a]	0.405	0.398	0.71048

a. Predictors: Performance and effectiveness, User interface design, Content, organization and readability, Navigation & Links

Source: (Survey data: 2020)

The above table demonstrates that only 40.5% of online purchase intention can be explained by this model. The remaining 59.5% of buying intention is affected by other factors.

Standardized Beta coefficient is also used to investigate the strength of the effect of independent variables towards dependent variables. Larger value of beta coefficient an independent variable has the more important determinant the variable becomes in predicting the dependent variable.

According to the prior researches there was a significant relationship between price discount and buying behavior.

As shown in multiple regression analysis results, all of the independent variables "Content, organization & readability", "Navigation & Links", "User interface design" and "Performance and effectiveness" have a standardized coefficients value of 0.105, 0.122, 0.192 and 0.319 with a significant level of 0.090, 0.071, 0.001 and 0.000 respectively.

Table 18: Multiple regression analysis results summery

Independent variables	Dependent variables		
	Pearson correlation	Sign (2 tailed)	Results
Content, organization & readability	.521	.090	Positive but insignificant relation
Navigation & Links	.550	.071	Positive but insignificant relation
User interface design	.511	.001	Positive and significant relation
Performance and effectiveness	.577	.000	Positive and significant relation

Source: (Survey data: 2020)

As summarized in the above table, for significant levels that are less than 0.05, which is for "User interface design" and "Performance and effectiveness", indicates that they have a significant relationship with online purchase intention at less than five percent. For significant levels that is greater than 0.05, which is for "Content, organization & readability" and "Navigation & Links", the related hypothesis will be rejected due to insignificant relationship.

The below table demonstrates research hypothesis results.

Table 19: Hypothesis result

Hypothesis	**β**	**t**	**Sig.**	**Result**
H1: Content, organization and reliability of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.	**0.105**	**1.697**	**0.090**	**Rejected**

H2: Navigation and links of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.	**0.122**	**1.808**	**0.071**	**Rejected**
H3: User interface design of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.	**0.192**	**3.485**	**0.001**	**Accepted**
H4: Performance and effectiveness of websites have a significant and positive effect on the purchase intention of Ethiopian airlines online customers.	**0.319**	**5.448**	**0.000**	**Accepted**

Source: (Survey data: 2020)

Based on the above results, Ethiopian airlines should understand that website "user interface design" and "performance and effectiveness" have significantly positive effect on purchase intention. Whereas, "Content, organization and reliability" and "Navigation and links" have positive effect on purchase intention.

CHAPTER 5

SUMMERY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1. Summary of the Findings

Main finding of the study are summarized in this section based on the analysis results discussed in chapter four. The study assesses the effect of the "Content, organization & readability", "Navigation & Links", "User interface design" and "Performance and effectiveness" on purchase intention in the case of Ethiopian airlines online customers.

- From the collected sample size of 385 respondents, it was found that 48.8% of the respondents used the official website of Ethiopian airlines for more than one year. Other 19.5% respondents have been using the website for 6 – 12 months and the remaining 31.7 respondents used the website for less than 6 months.
- The majority of the respondents (65.7%) previously purchased products or services online from the official website. The remaining 34.3% of the respondents previously used the website but did not purchase and product/service online form the official website of the airline.
- The descriptive statistics analysis of the independent variables shows that the mean value and standard deviation of "Content, organization & readability" (3.71, 0.725), "Navigation & Links" (3.53, 0.727), "User interface design" (3.79, 0.710) and "Performance and effectiveness" (3.29, 0.835) respectively.
- Correlation analysis indicated that independent variables such as "Content, organization & readability", "Navigation & Links", "User interface design" and "Performance and effectiveness" are moderately correlated with the dependent variable that is online purchase intention.

- The ANOVA statistics presented the regression model significance. An F-significance value of at df (4, 380) P< 0.05 was established showing that there is a probability of less than 0.05 of the regression model. Thus, the model is significant.
- From multiple regression result, the estimate of the regression weight shows that only two of the independent variables, that are “User interface design” (β=.192) and “Performance and effectiveness” (β =.319) significantly affect customers online purchase intention. On the other hand, "Content, organization & readability” (β =.105) and “Navigation & Links” (β =.122) are statistically insignificant towards online purchase intention.
- The R value represents the multiple correlations and is 0.636, which indicated a moderate degree of correlation between the independent variables and online purchase intention. The R^2 value indicated that only 40.5% (0.405) of the dependent variable is being explained by independent variables. This depicts that the model accounts for only 40.5 % of the variations in influencing online purchasing while the remaining 59.5% remains unexplained by the regression model. Adjusted R square is 0.398, measures the number of independent variables.
- Thus, the result of the quantitative analysis has shown that "Content, organization & readability” and “Navigation & Links has the smallest significance magnitude with online purchase intention but “User interface design” and “Performance and effectiveness” showed strong relation with online purchase intention.

5.2. Conclusion

The study assesses the effect of website usability on customers’ online purchase intention using four aspects usability that are "Content, organization & readability”, “Navigation & Links, “User interface design” and “Performance and effectiveness”. The research questions and the hypothesis are also used to examine the effect of usability. The official website of Ethiopian airlines was used as a case study.

The statistical analysis and summary of the findings are used to exhibit the below conclusions: -

- The descriptive statistics analysis proved that most of the respondents were moderately satisfied with the website usability aspects of Ethiopian airlines official website. Hence, it is concluded that usability of the website was not successful to fully satisfy the customers.
- Similar to that of Sam & Tahir (2009), the results of the correlation analysis discovered that website usability is moderately correlated with online purchase intention in the case of Ethiopian airlines online customers.
- In this study two of the website usability aspects, that are "User interface design" and "Performance and effectiveness" are an important factor for positive online purchase intention. Ethiopian airlines should also enhance this aspects going through the official website once again.

5.3. Recommendations

Referring to the findings and conclusion statements, the following recommendations are presented: -

- As rivalry in the airline industry intensifies, the need for improving website usability will be necessary. Airlines should evaluate their websites from customers' perspective and follow a standardized design guideline for improving website usability and access.
- A website should be able to serve any customer who has basic computing skills. Effectiveness, performance and user interface design should enable customers get what they want very easily. Thus, usability has the potential to act as a great equalizer of competition putting Ethiopian Airlines on an equal footing with larger airlines in attracting more customers and retaining existing customers.
- Since website usability moderately correlated with online purchase intention, all businesses who are trying to reach online customers should invest more time and

resources on performing usability test surveys and improve website usability aspects that were used in this research.

- So as to improve online purchase intentions, cultivating the areas of websites performance and effectiveness features and user interface design is highly advocated. This will lead to a positive outcome.

5.4. Limitations and Directions for Future research

For the reason that Ethiopian airline did not disclose customers contact address and the inconvenience to reach customers at the airlines ticket offices due to COVID-19, the researcher used social media and even if screening questions were used the larger public was addressed as a research population. The researcher therefore believes that this research indicated a minor portion of the available knowledge. Addressing the right customer population and going through and detailed investigation with more resource both in terms of time and money will lead to improved end result. It's is also possible to see the effect of website usability on customer satisfaction, service quality and/or other business outcomes.

Moreover, the study was limited to identifying the effect of website usability on online purchase intention Ethiopian airlines. Therefore, the study was limited to a particular study context, which is Ethiopian. Hence, future researchers could use this model to re-examine the effect of website usability on online purchase intention in different study contexts, especially across eCommerce platforms, in order to enrich the body of knowledge in this study area.

Websites are undeveloped tools of business in our country. eCommerce and eMarketing platforms are in infant stages beside minimal attempts by some international business providers like that of Ethiopian airlines. Researches have to play a crucial role so as to align websites with the cultures and norms of the society and intern bring large target customers.

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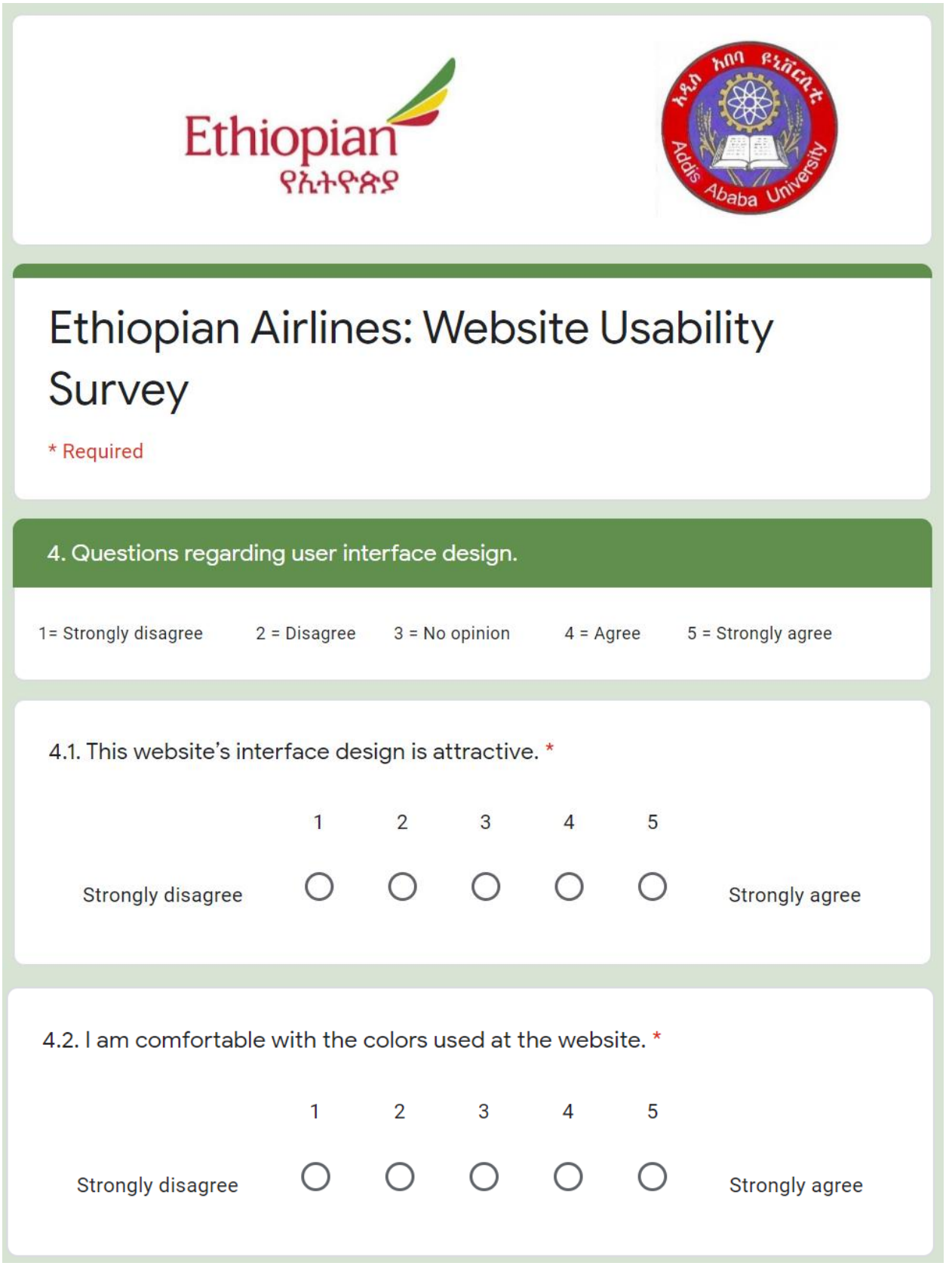
APPENDIX I: Data Collection instrument



Ethiopian
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Addis Ababa University

Ethiopian Airlines: Website Usability Survey

* Required

4. Questions regarding user interface design.

1= Strongly disagree 2 = Disagree 3 = No opinion 4 = Agree 5 = Strongly agree

4.1. This website's interface design is attractive. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

4.2. I am comfortable with the colors used at the website. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

4.3. The website contains no feature that irritates me such as scrolling or blinking text and looping animations. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

4.4. The website has a consistent feel and look. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

4.5. The website does not contain too many Web advertisements. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

4.6. The design of the website makes sense and it is easy to learn how to use it. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

5. Questions regarding performance and effectiveness.

1= Strongly disagree 2 = Disagree 3 = No opinion 4 = Agree 5 = Strongly agree

5.1. I did not wait too long to download a file or open a page. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

5.2. I can easily distinguish between visited and not-visited links. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

5.3. I can access the website easily most of the time. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

5.4. The website responds to my actions as expected. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

5.5. It is efficient to use the website. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

5.6. The website always provides clear and useful messages when I don't know how to proceed. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

6. Questions regarding purchase intention.

1= Strongly disagree 2 = Disagree 3 = No opinion 4 = Agree 5 = Strongly agree

6.1. I will consider the Ethiopian Airlines website first when I want to buy flight services and products. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

6.5. I will purchase other products or services at the website. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

6.6. I would like to buy new products/services from the website. *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

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APPENDIX II: Frequency Tables

Content, organization and readability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.0	1.0	1.0
	Disagree	15	3.9	3.9	4.9
	No opinion	91	23.6	23.6	28.6
	Agree	223	57.9	57.9	86.5
	Strongly agree	52	13.5	13.5	100.0
	Total	385	100.0	100.0	

Navigation & Links

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	.3	.3	.3
	Disagree	28	7.3	7.3	7.5
	No opinion	125	32.5	32.5	40.0
	Agree	193	50.1	50.1	90.1
	Strongly agree	38	9.9	9.9	100.0
	Total	385	100.0	100.0	

User interface design

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.5	.5	.5
	Disagree	12	3.1	3.1	3.6
	No opinion	96	24.9	24.9	28.6
	Agree	203	52.7	52.7	81.3
	Strongly agree	72	18.7	18.7	100.0
	Total	385	100.0	100.0	

Performance and effectiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	10	2.6	2.6	2.6
	Disagree	52	13.5	13.5	16.1
	No opinion	125	32.5	32.5	48.6
	Agree	175	45.5	45.5	94.0
	Strongly agree	23	6.0	6.0	100.0
	Total	385	100.0	100.0	

Purchase Intention

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	2.3	2.3	2.3
	Disagree	39	10.1	10.1	12.5
	No opinion	104	27.0	27.0	39.5
	Agree	166	43.1	43.1	82.6
	Strongly agree	67	17.4	17.4	100.0
	Total	385	100.0	100.0	

Correlations

		Performance and effectiveness	User interface design	Navigation & Links	Content, organization and readability
Performance and effectiveness	Pearson Correlation	1	.541**	.711**	.642**
	Sig. (2-tailed)		.000	.000	.000
	N	385	385	385	385
User interface design	Pearson Correlation	.541**	1	.650**	.637**
	Sig. (2-tailed)	.000		.000	.000
	N	385	385	385	385
Navigation & Links	Pearson Correlation	.711**	.650**	1	.723**
	Sig. (2-tailed)	.000	.000		.000
	N	385	385	385	385
Content, organization and readability	Pearson Correlation	.642**	.637**	.723**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	385	385	385	385

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

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130.300	4	32.575	64.534	.000[b]
	Residual	191.815	380	.505		
	Total	322.115	384			

a. Dependent Variable: Purchase Intention

b. Predictors: (Constant), Performance and effectiveness, User interface design, Content, organization and readability, Navigation & Links

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.421	.215		1.961	.051		
	Content, organization and readability	.133	.078	.105	1.697	.090	.406	2.463
	Navigation & Links	.154	.085	.122	1.808	.071	.342	2.925
	User interface design	.247	.071	.192	3.485	.001	.517	1.936
	Performance and effectiveness	.349	.064	.319	5.448	.000	.458	2.185

a. Dependent Variable: Purchase Intention