THE OPPORTUNITIES OF E-COMMERCE IN HARGEISA SOMALILAND

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Master Science of Management Information System

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APPROVAL

This Thesis/Project titled "**THE OPPORTUNITIES OF E-COMMERCE IN HARGEISA SOMALILAND**", submitted by **Abokor Mohamoud Ismail, ID: 213-17-500** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of MS in Management Information System and approved as to its style and contents. The presentation has been held on 24 January 2023.

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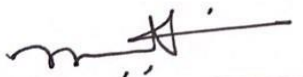Daffodil International University

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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Professor Dr. Md. Fokhray Hossain, Professor, Department of CSE, Daffodil International University**. I also declare that neither this thesis nor any part of this thesis has been submitted elsewhere for award of any degree or master.

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ABSTRACT

The notion and practice of "electronic," which has become a prevalent occurrence in today's society, were birthed as a result of the Internet's quick spread. The ease with which businesses and people may buy goods and services from other countries has given rise to internet-based economic structures and information networks, which constitute the new corporate reality. But owing to a number of problems that prevent ecommerce from thriving, the majority of developing nations are still a long way from experiencing this reality.

With regard to the obstacles that might prevent a country from utilizing an e-commerce system and the anticipated advantages obtained by implementing the system, this thesis seeks to explore opportunities in Hargeisa. The study will be guided by a research framework built on the technology organization environment framework and the technology acceptability model.

The study's findings showed that the biggest obstacles to Hargeisa's e-commerce industry's adoption of electronic commerce include security risks, a lack of consumer trust, a lack of legal and regulatory framework, a lack of ICT infrastructure, and a lack of market competitiveness. Perceived utility and convenience of use were also noted in the study as factors in the adoption of E-commerce systems.

The research makes a number of recommendations for actions that the government and the corporate sector might take to solve the numerous issues raised in the thesis. These actions consist of: the e-commerce industry needs to be supported by investments in ICT infrastructure that are focused on technological innovation competition rather than the traditional bases of retail commerce competition. This requires the establishment of a clear set of legal frameworks for the use of technology in e-commerce.

THE OPPORTUNITIES OF E-COMMERCE IN HARGEISA SOMALILAND.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the thesis

The technology is changing quickly, goods, and processes, as well as intense competition and globalization trends, require firms to do business in novel approaches to help one live and prosper. Entrepreneurial activity such as e-commerce, is one of these new developments.

The Internet has changed the way businesses work. There has been an advancement in technology. mostly used to give value to customers as a means of increasing key capabilities The world is witnessing a transformation in the manner in which commerce is done, and the undiscovered territories are being explored. The field of e-commerce offers opportunities to a freshly developing globe. As the primary booster of business and trade, e-commerce is an unavoidable fact. become one of the most important elements Electronic commerce looms huge on the horizons of future, promising to change In some aspects, trade and industry that have yet to be envisioned or realized. For numerous nations, it remains a two-sided blessing, one encouraging, and the other potentially hazardous. companies are adopting e-commerce as a method of gaining access to or growing into international marketplaces.

markets enhancing the level of client service, lowering expenses, and increasing productivity and effectiveness. Additionally, advantages, the breadth of advantages provided by Businesses that engage in transactional e-commerce have also raised important challenges, particularly concerning user privacy and security. Online information These difficulties arose as a result of the widespread accessibility, transparency, and The Internet's inherent interconnectedness E-commerce may be seen from a variety of angles. According to Turban et al. (2008), Ecommerce may be described from a variety of viewpoints, including although not exclusively: derived from a communication standpoint, E-Commerce is defined as the distribution of a combination of information, goods and services, and/or income over various communication lines, Telephones, computer networks, and other electronic conduits are examples. From a business standpoint, E-Commerce is defined as the use of technical solutions to automate commercial transactions and work flow. From a service standpoint, E-Commerce is viewed as a means that allows customers and business owners to minimize service expenses in order to increase product quality and service delivery timeliness. Ecommerce creates an enabling environment online.

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1.2 Problem Statement

More than 70% of the city of Hargeisa are small businesses, and they use traditional methods that are not compatible with modern technology. It can reach more customers in less time by using and benefiting from modern 4G and 5G internet. The subject investigated in this study is to explore the role of e-commerce in the growth of Hargeisa to know its capabilities, expectations and opportunities. It has already entered a hearing of the IT business sector to strive to be successful and endure in e-commerce and it is E-commerce to use tactics that will assist you accomplish your aim. Big or small, almost All Somaliland businesses are facing competition and need to find ways to succeed in the conditions their clients. One of the greatest breakthroughs of Throughout our time can present a chance Somaliland business to achieve their intended objectives utilizing e-commerce platforms Compared to industrialized nations, the difficulty, study related to expansion and adaptation Ecommerce is not done much in developed countries. Specifically, using appropriate research methods along with relevant theories Models, while this research was carried out a survey in addition to research questions to obtain information about Businesses and service companies in Hargeisa to: Explain how they welcome use E-commerce; Check how they are making good use of technology and the opportunities it presents; Do where they challenge their level of e-commerce utilization; Look at the roles, Does e-commerce provide their growth and what are the benefits obtained; explain What do potential customers want and anticipate from e-commerce?

1.3 Aim of the thesis

1.3.1 General Aim:

• The major goal of this study is to evaluate the opportunities of Ecommerce in Hargeisa Somaliland.

1.3.2 Specific Aims:

• To change the old business model and replace it with modern technology.

• to ascertain the driving forces behind e-commerce development in Hargeisa.

• Reducing costs and staff and renting a room to sell products.

• How small businesses can grow and reach more customers.

• to make recommendations for effective steps to enhance Internet shopping in Hargeisa.

• To learn more about the development of E-commerce in Hargeisa.

1.4 Significance of the study

The purpose of this study is to analyze present conditions as well as existing challenges and to propose

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plausible, attainable, and appropriate remedies. In general, the thesis will be significant in the coming ways.

The identification of opportunity can have a favorable influence on the performance of enterprises in Hargeisa who want to use as well as using e-commerce software. The discovery gives a foundation for businesses to plan their future courses and change their aims and objectives in response to real-world opportunities. Furthermore, it allows the government, organizations, and trade associations to create firm e-commerce that is geared to meet the concerns revealed by this research.

Give someone a chance to organizational in order to implement the necessary corrective actions in the sector or as a way to increase beneficial elements (if there are any) for incorporating and promoting e-commerce activities, decision-makers and managers should take into account and analyze the potential seen in existing practices. The research provides as an extra source of reference, as well as a jumping off point for other scholars and IT organizations interested in conducting in-depth research on this topic. Therefore, in addition to offering a valuable insight, is highly anticipated to motivate other researchers to carry out an insightful inquiry by broadening the focus of the problem.

1.5 Research Methodology

The following are the definitions of research designs, which are dependent on the study's goals: "a set of advance decisions that makes up the master plan specifying the methods and procedures for collecting and analyzing the needed information" (Burns & Bush, 2002, p.120). The kind of data, data collecting method, sampling strategy, and finance are all determined by an adequate study design, which is crucial (Hair et. al., 2003In an effort to evaluate e-commerce potential and practices in Hargeisa, the researcher utilized a descriptive study approach. Describe the nature, condition, and level of detail of the current situation as best you can in descriptive research, a sort of research that focuses primarily on that. The descriptive technique of research, according to Creswell (1994), is used to obtain data on the current or existing condition. Primary Data Numerous methods may be used to seek and gather original or primary data. These may include of listening in on conversations and discussions related to a particular research project, conducting interviews and surveys, and observation. The ability to concentrate on the precise needs of the research allows for a significant benefit of collecting primary data. The chosen sample of respondents should respond to questions, for instance, by providing specific replies to questions requesting opinions and attitudes or by describing observed activities. secondary information Secondary data are facts that have already been obtained for a reason other from the present study effort. Few researchers take into account the prospect of doing a secondary analysis on data that have previously been

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obtained for another reason, according to Saunders et al. He clarified that raw data and unpublished summaries are both considered to be secondary data. Governmental agencies conduct surveys and release official data on social, demographic, and economic issues, for instance.

1.6 Conclusion

This study aims to examine the major opportunities for e-commerce in Hargeisa Somaliland. ICT access has improved in underdeveloped nations during the past ten years hampered by a number of different factors. According to international studies published by the United Nations, Hargeisa or Somaliland in general is one of the nations with the cheapest internet in Africa. Which is the technology dependent services they provide such as e-commerce, developed Changes in technology, policies, and markets. Access extensions are revealed the ability to change e-commerce, affecting the way public and governmental, and dynamic companies. Changes in that interface, and ecommerce itself, promise to boost it Economic opportunities to promote the provision of business community services, promotion the efficiency and effectiveness of government, and the acceleration of social change. On the Opportunities for ecommerce questions combined questions are going to be identified Respondents' bias and cross-objective checking's the true response respondents' meaning towards the perception of e-commerce in general.

CHAPTER TWO
LITERATURE REVIEW

2.1 **Introduction**

E-commerce has grown dramatically in recent years, with most industrialized nations experiencing double-digit growth rates. Cities are greatly impacted by last-mile logistics for e-commerce. Most wealthy nations have experienced steady growth in e-commerce over the past few years, a tendency that has only been accelerated by the COVID-19 epidemic.

Depending on the point of view of the participants—individual members of the public, businesses, or governmental administrations—these phenomena is viewed to have different effects. Considering the problem from various angles, the purpose of this essay is to examine the different effects that this occurrence has had and will continue to have. We base their categorization on the so-called triple bottom line (TBL) of sustainability, which includes people, planet, and profit; this is supplemented by the effect classification used by the European Science Foundation's impact assessment working group. All of this will amplify the externalities associated with traffic congestion, pollution, and noise in metropolitan areas where pressure is already growing due to urbanization. Cities currently house more than half of the world's population. This, along with the fact that public policy on this topic is still in its early stages, may cause problems in many areas, particularly those with the most crowded transportation networks. This surge in e-commerce may also present firms with a larger consumer base and new opportunity to expand their market owing to the resulting economies of scale, making addressing this issue even more critical. The flow of products circulating within a metropolis comprises urban freight logistics. In general, an urban transportation system is the collection of public and private transportation aspects that facilitate the movement of people and commodities within a metropolitan region, including infrastructure, administration, modes of transportation, entities, service providers, and customers. The purpose of urban freight distribution is to deliver particular products on time and in the correct manner while maintaining low costs and providing excellent customer service. The recent explosion in e-commerce has resulted in a significant increase in home delivery packages, as well as a significant increase in the number of orders delivered and hence in urban freight traffic.

2.2 Literature Review

According to the International Organization for Standardization's ISO/IEC 15944-7:2009, e-business is described as a "commercial transaction comprising the making of commitments, in a specified cooperation area, among individuals using a computer. "their information technology solutions in accordance with Open-ended standards" (Kunesova and Micik, 2015).

Depending on the customer and supplier, these commercial transactions are classified as business-to-business (B2B), business-to-consumer (B2C), consumer-to-business (C2B), and consumer-to-consumer (C2C). Between 2000 and 2015, the importance of e-commerce grew substantially, resulting in remarkable expansion and acceptance globally.

In terms of value contribution and growth patterns, the total global value of B2B and B2C e-commerce in 2013 topped USD 13 trillion and USD 1.2 trillion, respectively, with the United States, the United Kingdom, Japan, Germany, and China accounting for the lion's share (Table 1). For example, in the United States, the share of e-commerce to manufacturing revenue has risen from 19% in 2002 to more than 50% in 2012. (UNCTAD, 2015).

Globally, the Asia-Pacific area has emerged as the key growing market for B2C e-commerce transactions, followed by Europe, North America, Latin America, and the Middle East. 57% of worldwide B2C e-commerce sales in 2013 were made in the USA, UK, and China. Asia-Pacific (USD 567.3 billion), Europe (USD 482.3 billion), and North America made up the B2C e-commerce value distribution, per the PWC Report (2015). (USD 452.4 billion).

But there is a significant difference and contrast between India and China, the two most populous and rapidly expanding nations, in terms of e-commerce growth and acceptance.

3.3% of China's B2C e-commerce sales ($328.4) were made by India ($10.7 billion), which made up the rest. In 2014, China had 641 million internet users compared to India's 243 million users, a significant disparity in internet penetration that is thought to be the cause of this imbalance (PWC Report, 2015). Furthermore, in the age of e-commerce, every home becomes a possible delivery location, resulting in faster delivery growth and novel scenarios that worsen the impact of urban freight distribution.

E-commerce expansion has transformed the physical distribution of commodities in our cities. We may say that Internet purchases and customized delivery are the developments having the biggest influence on urban freight transport networks if we define e-commerce as Internet-based business-to-customer (B2C) transactions. Changes in urban freight flow patterns are being caused by the diversity of delivery routes and the expanding range of services offered by merchants and logistics companies. More commodities must be transported, more destinations must be reached, more vehicles must be moved, and the system's complexity grows by the day. All of this implies that freight distribution and transportation businesses

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have witnessed a significant boost in activity. However, they have encountered a significant impediment along the way: the "last mile," which is defined as "the final leg of a business-to-consumer (B2C) package delivery service." It occurs between the order penetration point and the chosen destination position of the ultimate consignee." The largest operational expenditures and the most organizational difficulties arise in the last stretch of the delivery process.

City logistics exposes the competing interests of the various stakeholders involved. Private enterprise (haulage and shipping companies, small retailers, major retailers, and logistics operators), public administrations, and members of the general public are the three groups of stakeholders. Although the interests of private industry are evident, this is less so for governmental administrations (with their sometimes ring-fenced, political-sphere-specific objectives) and the general public, whose diverse functions frequently result in conflicting interests. A number of writers have demonstrated how the implementation of some urban freight transportation regulations has failed owing to a lack of participation on the part of various stakeholders, but more study is needed to identify the ramifications of such occurrences.

The topic of the circumstances required for an economy's e-commerce sector to thrive is one that is extremely pertinent to the debate at hand. Researchers Travica et al. (2007) and Sridhar and Sridhar (2006) identified a few crucial elements that are common to e-commerce success.

According to these experts, the first and most important requirement for the success of e-commerce activities is the customer's readiness or predisposition for it. This is referred to as the "cultural layer" by Travica et al. (2007) and is defined as the level of preparedness that consumers may or may not show for e-commerce adoption, which in turn results from their historical association—or lack thereof—with it. He draws a comparison between the US and Latin America, where the latter has historically felt at ease with catalog-based shopping while the former views it as a social activity requiring connection. As was previously mentioned, trust is a key component of this layer. Despite the fact that customers in the US, where Amazon and eBay earned more than 4 billion USD and 15.7 billion USD, respectively, in just the first quarter of 2008, and are accustomed to online shopping, there are still issues with trust (Elbeltagi 2007; Feigenbaum, Parkes, and Pennock 2009). Because e-commerce is still a relatively new idea, developing nations discover that it has a low propensity to take off, which has a negative impact on adoption rates. Legislation as well as administrative and technological know-how are other prerequisites. While technological knowledge may be growing, there aren't enough managers ready to support e-commerce initiatives, according to Travica et al. (2007). As Kariyawasam (2008) pointed out in his assessment of Asian nations' efforts to offer improved legal assistance, including Sri Lanka, which was

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just about to enact an electronic signature law, the regulatory environment is progressively becoming more favorable to e-commerce operations.

A nation that wants to advance economically through e-commerce needs software services, e-payment systems, and financial infrastructure. Another frontier that may be viewed as being under development is the use of local software support and the installation of electronic payment systems by banks in developing nations. Even while Internet access is increasing, developing nations continue to report relatively low user account ratios per 100 inhabitants, indicating a critical lack of telecommunications infrastructure in these regions.

In addition to being a necessary prerequisite for the expansion of e-commerce, logistical networks, which include both delivery services and traffic infrastructure, are also an issue for developing nations (Wresch and Fraser 2011). International shippers are unwilling to conduct business with these nations due to unreliable delivery services, obsolete technology (in comparison to the US), and onerous customs procedures, whereas their earnings in European nations are rising by billions of dollars every year (Cooke 2007). Customs holdups, obscene customs fees, protracted shipping holdups to consumers, and unexpected spikes in transportation prices for raw materials and completed goods are a few examples of difficulties with the traffic infrastructure. The latter frequently find themselves unable to pay the necessary national contributions, hence these issues are far more prevalent in emerging nations than in developed one's investments made in the aforementioned fields.

2.3 Conclusion

Training and education are, nevertheless, two of the most important and crucial success aspects for e-commerce. The digital gap is largely a problem for developing nations because they lack the necessary intellectual human capital. E-commerce is a fruitless endeavor due to widespread illiteracy and a lack of proficiency in the English language. In light of this, developing one's e-commerce abilities is the most crucial action to be performed. Utilizing the internet itself, training and education may be delivered through a variety of channels, including remote learning and specialized connections with institutions. In order to combat illiteracy and take advantage of e-commerce prospects, India has successfully implemented the idea of the Open University (Rouibah et al. 2008).

For all users of the e-services, the e-commerce experiences must be improved. The platform will grow more appealing as more stakeholders have positive experiences with it, particularly in the tumultuous times that Covid19 is presenting.

Due to the perception that customers are ready to obtain more authentic and high-quality products at very reasonable prices, additional product categories might still be purchased online. To expand their

operations, service providers must diversify both the products and services they may provide in the online marketplaces. An effective e-commerce platform must pay particular attention to the delivery procedures. The turnaround time between placing an order and getting the desired items is strongly correlated with consumer confidence.

Contracts between delivery services and online retailers must be carefully drafted to ensure customer happiness. The public face of e-commerce platforms is the delivery personnel. The platforms must spend money on training to hone their customer service abilities.

The platforms should promote this kind of trading when a certain good can be obtained domestically and at a reasonable price. Consumers should be given the option to decide whether to make purchases domestically or overseas using platforms that are designed to provide them that option. The platforms should promote this kind of trading when a certain good can be obtained domestically and at a reasonable price. Consumers should be given the option to decide whether to make purchases domestically or overseas using platforms that are designed to provide them that option. A favorable climate for e-commerce might be ensured by implementing more flexible cancellation, return, and refund or repurchase policies.

Careful thought should be given to the lack of a transparent, economical dispute management procedure. The methods for reimbursing those who have lost money while making purchases of goods or services through an e-commerce platform are necessary. There should be a quick search for an alternate online dispute resolution method.

When referring to "differences across groups and societies in the adoption and spread of electronic information and communications technologies (ICTs) and E-business practice," the phrase "digital divide" is frequently used (Genus and Noor 2005, 82). The difference between developed and developing nations is steadily closing due to the acceptance and expansion of e-commerce.

State policy, particularly law, has a considerable impact on e-commerce acceptance and growth, therefore the government has a very important role to play. The creation of a positive regulatory and legal environment is one of the most crucial steps that can be made to combat the numerous impediments that stand in the way of ecommerce growth. Only when customers and companies are confident in the idea and its premise as well as in its security and dependability will e-commerce tactics be effective (Zaied 2008). A strong regulatory framework that covers e-business enabler legislation, consumer protection laws, e-transaction rules, cybercrime laws, and properly thought-out procedures for recourse in the case of abuse is necessary for people to feel secure. According to figures from UNCTAD (2015), developing nations take a while to enact these laws. In particular, those in Eastern and Middle Africa have not done

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so or have just created draft legislation. These regulations are essential for conducting business online since the Internet exposes clients to the possibility of deceit and fraud by its very nature.

For online payment and credit facilities, financial systems in underdeveloped nations must be rebuilt. Except for those with governments that actively encourage e-commerce and are reaping the rewards of doing so, like Korea, developing nations often lag behind in this area. In contrast to developed countries, poorer countries actually have a greater impact from regulatory assistance for e-commerce (Zhu et al. 2004). A key barrier to e-commerce in poor nations is a lack of infrastructure. As the foundation of any e-commerce program, the government should invest in these four types of infrastructure: legal, financial, logistical, and communications.

In order to ease the development of long-term e-commerce capacity and guarantee that a suitable infrastructure is created to enable e-commerce across national boundaries, regional integration communities and developed nations must collaborate with developing countries.

CHAPTER THREE
DRIVERS OF E-COMMERCE

3.1 Introduction

E-commerce is a part of a larger social transformation process that is characterized by the expansion of global markets, the transition to a knowledge-based economy, and the increasing influence of technology in day-to-day living.

Electronic commerce is known as e-commerce. Dealing in products and services using the web and electronic media. Greater consumer awareness is fueling e-rapid commerce's rise. The vendor or business who uses the internet to provide customers with more options and greater ease uses a shopping basket system to offer goods or services directly to customers via the site. allows for payment Payments can be made with a debit card, credit card, or an e-funds transfer. In the current context, the online retail industry and its space are highly prized, as is an amazing display or selection of a specific sort of service. All business areas, including customer service and new product development, currently employ e-commerce., and design. Ecommerce is thriving due to a diverse choice of products at low prices, as well as a diverse number of suppliers and customers via the internet.

This chapter analyzes the factors that drive e-commerce and the opportunities it presents using extracts from the literature study, which includes books, older journal articles, earlier theses, and some papers from national and international agencies relevant to these topics.

3.2 Concepts and definition

Electronic commerce, sometimes known as e-commerce, covers a broad spectrum of online business ventures involving goods and services. Additionally, it applies to "any type of economic transaction in which the participants communicate electronically as opposed to through direct physical contact or exchanges." A more thorough explanation is: E-commerce, or the use of electronic communications and digital information processing technologies in economic transactions, is the process of developing, altering, and redefining connections with the aim of generating value between or among businesses as well as between organizations and people.

3.3 Different Types of E commerce

The major different types of e-commerce are:

1. business-to-business (B2B);
2. business to- consumer (B2C);
3. business-to-government (B2G);
4. consumer-to-consumer (C2C);
5. mobile commerce (m-commerce).

Types of E-Commerce

➢ Collaboration in business (e-commerce), Business partners collaborate online in this form of EC. Along the supply chain, this kind of cooperation regularly takes place between and among corporate partners.

➢ Business-to-consumer (B2C) transactions include businesses selling to individuals as consumers.

➢ Customers to companies (C2B), In this scenario, consumers express a specific demand for a good or service, and businesses fight to meet that need for customers. (Priceline.com is one example where the buyer sets the price and providers strive to meet it.)

➢ Consumer-to-consumer (C2C) is a business model where one person sells goods or services to another person.

➢ Intra-business (intra organizational) commerce, in this case an organization uses EC internally to improve its operations. A special case of this is known as B2E (business to its employees) EC.

➢ In this scenario, the government uses EC technology to deliver services to its citizens through government-to-citizens (G2C) and to others.

➢ Governments can do business both with other governments and with companies (G2G) (G2B).

➢ When e-commerce is carried out wirelessly, such when using a cell phone to access the Internet, it is referred to as mobile commerce (m-commerce). As described in the definition of (Turban et.al 2008).

3.4 Opportunity of ecommerce

E-commerce is quickly growing and has decreased the cost of outsourcing and cooperation with, which enabled adjustments outside parties. E-commerce has aided in dismantling the monopolistic nature of for instance, telecommunications services. E-commerce is a critical tool for accelerating process of invention,

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shortening spans of time, increasing economic networking, and allowing for faster circulation of information and notions.

According to New Economy (2002), e-commerce has a significant impact on increasing the effectiveness of research and tying it more closely to business. The Internet is an extremely significant tool for businesses involved in international trade since it can be used to cut communication expenses and shorten time-to-market for exports of products and services.

E-commerce offers enormous economies that businesses may transfer to customers in the shape of lower pricing because It may broadcast information of practically any type in electronic form at a cheap price. It can also save expenses related to marketing, shipping, and distribution while managing supply networks for commodities and services in international trade. In construction, the Internet eliminates the need for blueprints and enables smooth communication between contractors. In agriculture, the Internet is improving market price information and has encouraged the establishment of new online commodity marketplaces, such as the commodities exchange in Somaliland. It is creating improved efficiency in production by lowering purchasing expenses and enhancing managing the supply chain. Its function in the services industry is connected to product quality features like simplicity and personalization, which lower costs and delays and boost dependability. Applications for online shopping are being positively touted in emerging nations as being reasonably affordable to start up, manage, and customize because the technology that powers the Internet is essentially open standards-based, universal, and reachable standards. The "optimists" contend that the effects of lowering coordination Prices will have a substantial impact on international trade relations and motivate businesses to select the finest producers wherever they may be.

It might be argued that the factors influencing e-commerce differ from nation to nation. Many developing countries do not yet exhibit some drivers that are present in some developed nations, and in some circumstances, the drivers present in one developed nation may act as obstacles in another. In this study, some new additional drivers, to the best of the researcher's knowledge, were discovered. E-commerce adoption is hampered by a number of issues, including security, pricing, taxation, and in certain cases, too much business for a company to handle.

The comparatively high-end phone fees the fees must be paid and connection costs for Internet access are further traditional impediments to the expansion of ecommerce that are identified by numerous businesses.

3.5 Payment Systems

Another important aspect for the acceptance of e-commerce and the growth of the economy is payment systems. Payment methods, together with other elements, may operate as either drivers or barriers. People will be more motivated if there is a remuneration mechanism to conduct business globally, accelerate trades, and facilitate further pursuits.

creating new potential for businesses to offer online services, as well as banking activities. According to Djankov et al. (2003), payment systems are an integral aspect of an economy's and financial markets' fundamental framework.

Electronic payment systems must be installed and available for use before e-commerce can be successfully employed in a nation. It expedites transactions, expedites transfers, and enhances the caliber of transfer of payments (Lipis et al., 1985). It provides organizations with better and other avenues for delivering banking services and products to customers. The new technologies offer significant scale economies and rationalization benefits over conventional payment transmission techniques (Llewellyn, 1999). They are making it easier to plan for and keep track of bank liquidity (Djankov , et al., 2003).

3.6 Infrastructure

Infrastructure related to ICT, postal services, and other things required in a nation to facilitate e-commerce are all examples of infrastructure. The likelihood of seeing an increase in the adoption of e-commerce is very low if the infrastructure is in poor shape. The fact that monopolies or big companies control networks in many developing nations further limits the potential for e-commerce (Thorbjornsen & Decamps, 1997). These monopoly firms prevent cheaper prices and increased service quality, hence limiting competition. A nation's infrastructure might be a key factor in luring multinational corporations and foreign direct investors to conduct business there.

However, because infrastructure expenditures are high and require new planning, administration, and strategies, many developing countries will turn to richer countries for FDI and other forms of aid. FDI will result in the transfer of infrastructure regulation and control from the government to foreign investors.

3.7 Economic Activities

According to Gurstein (2000), the expense of implementing e-commerce technology and a free market could cause e-economic development to be delayed. He also suggested that the adoption of ecommerce technologies would cause economic activity to migrate from marginal or underdeveloped locations to advantageous regions. E-success commerce's may come at the expense of regional businesses that

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compete directly with foreign vendors.

Additionally, there are a lot of products available on the Internet that no one provider, let alone smaller local suppliers, can compete with, which puts these local businesses at a serious disadvantage in some industries. In addition, Kenny (2002) suggests that due to two unfavorable externalities associated with e-commerce websites, government returns (such as taxation) may be even lower than company-level returns. Initially, the Internet enables online firms to attract new clients from offline ones. Second, and arguably more importantly, to businesses in underdeveloped nations with less access to new technology, market share defense is a necessary component of Internet investment, resulting in lower social returns instead of personal returns.

As a result, a government should promote the use of its resources to offer goods and services at lower costs compared to other places in the globe. adoption of online shopping, on the other hand, will lead to a major reduction in costs and the availability of a wide range of goods from around the globe. E-commerce could boost economic activity in nations where imports outpace exports and allow users to enjoy cost savings that could be spent back into the economy to support growth.

3.8 Developing countries e-commerce experiences

3.8.1 E-commerce in Egypt

The main contributing factors to the lack of e-commerce adoption, according to a study conducted in Egypt (El-Nawawy and Ismail, 1999), are e-commerce infrastructure, telecommunications infrastructure, financial infrastructure, the legal framework, as well as social and psychological issues are all taken into consideration. There are several obstacles to the expansion of e-commerce in Egypt, according to Sherif and Maha (2001). According to them, from both the client and the business sides, awareness is a major obstacle to the deployment of ecommerce in Egypt. In addition, the infrastructure for e-commerce is still in need of completion. A barrier to the sector is the lack of a suitable and secure e-commerce enabled environment. Even while the telecommunications infrastructure is expanding, it is still not yet ready to support the Internet's infrastructural needs.

Sherif and Maha (2002) attribute Egypt's e-commerce difficulties to a range of social, technical, economical, and legal issues in their later investigations. 26 The social problems include a lack of knowledge, inadequate training, a not having faith, opposition to change, and the language difficulty. The issue of comparatively insufficient resources in terms of the telecommunications infrastructure is one of the technological obstacles. This includes bandwidth costs, which are over 2.5 times as expensive as the

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international price with a very low capacity level, resulting in lengthy access and download wait times. The absence of electronic payment methods is one of the difficulties with regard to finances. E-commerce needs electronic payment systems to be successful.

inadequate lack of corporate customer awareness knowledge of the potential benefits of e-commerce for business, the absence of a suitable and secure environment for e-commerce, short Infrastructure and financial services, The absence of current SET compliance mechanisms for financial Internet transactions in the nation. The price of international bandwidth is high, and the pricing in Egypt even now quite high. language difficulty: Since most websites are in English, native Arabic speakers who can only read and write Arabic face a significant challenge. Lack of certificate authority: Egypt does not have a certificate authority (CA), which is a barrier to national acceptance of e-commerce and, more crucially, international adoption.

3.8.2 E-commerce in China

The findings of Xiong's (2010) study indicate the following: issues with China's e-commerce expansion. Chinese businesses use computers and the internet at relatively low rates. Less than 10% of Chinese businesses engage in e-commerce, making it a much less common method of conducting business than it is in industrialized nations like the US.

technical difficulties Like many other emerging nations, China struggles with its native IT businesses' low market share and low technical expertise. Major e-Commerce applications and engineering projects rely on crucial hardware and software from foreign firms.

System integration and information service level might use a lot of improvement, and standardizing IT applications and e-commerce will take a lot of work. Wide band connectivity and speedy online response have thus far been extras. Technical impediments, however, are not just limited to the IT side. Chinese businesses have encountered three issues in adopting and using e-Commerce:

1. Incomplete nationwide credit rating system for both businesses and people.
2. Online electronic payments do not meet security expectations.
3. To complete the demand and supply chain, a logistically underdeveloped distribution and delivery infrastructure is required.

difficulties with people resources an example of unresolved challenges is that Chinese businesses have little access to staff who are knowledgeable in both IT technology and the industry in which they operate. The issue is that the educational system is still not meeting market need, and there aren't enough financial incentives to train and prepare this kind of engineer. Senior management and other personnel have not received sufficient training regarding applications. The importance of e-commerce, which could be one

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of the reasons why many Chinese enterprises lack enthusiasm for doing business online.

CHAPTER FOUR
RESEACH METHODOLOGY

4.1 Introduction

In regard to the justification of the research design, questionnaire design, sample procedure, data collecting, administration, and anticipated analysis strategy, this section outlines the technique used. The goal of this thesis is to determine the opportunity of using e-commerce to advance the economies of emerging nations like Somaliland Especially Hargeisa. Research surveys must be appropriately focused, that is, they must be aimed towards people or companies who can supply the data required to understand the phenomenon.

4.2 Research Design

A research design is described as "a set of advance decisions that make up the master plan describing the methods and processes for gathering and analyzing the needed information" as a function of the study objectives (Burns & Bush, 2002, p.120). A suitable study design is It is critical since it determines the type of data, data gathering process, sample methodology, and so on. The budget (Hair et. al., 2003). The researcher applied a descriptive style of study strategy in an effort to evaluate Hargeisa's e-commerce practices and potential. Describe the nature, condition, and level of detail of the current situation as best you can in descriptive research, a sort of research that focuses primarily on that. The descriptive technique of research, according to Creswell (1994), is used to obtain data on the current or existing condition.

4.3 Sampling technique and size determination

We tried to include participants from various areas of the sample location and organization, therefore we set a sample size of 150. Technique analysis: As it is mentioned in the methodology section of this study, the data were gathered using several approaches and were then analyzed using the triangulation method. 150 questionnaires in all were given to the government-owned Bank of Somaliland and private banks, Telecom, and Private Owned Companies. SPSS, or the Statistical Package for the Social Sciences, is used to examine the research findings. The general rule for sample size is to select a sample that accurately reflects the greater community while attempting to collect as many varied responses as possible. The

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sample size will be determined in an effort to include participants from various neighborhoods within the sample area. The primary target population will mostly be those who are actively utilizing online shopping platforms at the time of the study.

Because companies vary greatly in terms of size, age, sector, motivation, method of organization, location, knowledge base, and other factors, it is difficult to generalize about how much e-commerce is used by different sorts of enterprises (Taylor and Murphy 2004, p. 281). In addition to the aforementioned considerations and the extent to which end customers utilize e-commerce, varying levels of enterprise e-commerce usage are determined by the amount of financial or human capital the organization has available. A sufficient fraction of the population must be chosen for the sample size in order to generalize the results. In order to effectively manipulate a huge number and lower the cost of preparing a questionnaire for the entire community, sampling methods are used. This research uses the formula for estimating the sample size provided by Yaro Yamane (1969) which was cited in Obasi and Ekwueme (2011).

Where n = sample size N= population 1 = constant e = error estimate (0.05%) at 95% interval of assurance Drawing people or entities from a demographic or entity sample and then asking them questions regarding e-commerce phenomena is known as sampling. The selection of a sample frame that is representative of the population and entity from which it is derived is the sampling process's most important consideration. Sampling is frequently employed when a population is too huge or when a researcher lacks the resources—time, money, or people—to fully examine the population or other item they have chosen. Sampling is also sometimes used when a population is too small to be representative of the entire population.

4.4 Data type and source

Primarily primary data on a variety of businesses interested in increasing e-commerce in general was collected in order to perform this study. The surveys were used to provide a broad view of the potential and practices in e-commerce. The questionnaires were issued to chosen entities and top level management of the different firms that are included in the sample in order to acquire relevant information on e-commerce potential in Hargeisa. In order to accomplish the goal of the study, fifteen questions were created and distributed to corporate management in three stages. In the first section of the questionnaire, demographic information including gender, age, education level, and work experience are gathered. The second section of the questionnaire, which was created to gather information regarding e-commerce trends, possibilities, and difficulties in Hargeisa, and the third section, which was created for IT industry participants. These questions include both open-ended and closed-ended statements, some of which are

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rated on a 1–5 Likert scale, to ensure that the data is thorough. When answering a closed question, you must choose from a predetermined list of possibilities, such as "yes" or "no," "agree" or "disagree," or you can tick the preferred replies. There are questions in the questionnaire's open-ended section where In order to guarantee that all relevant data is collected, these questions contain both open-ended and closed-ended statements, some of which are scored on a 1–5 Likert scale. When responding to a closed question, you must select an option from a pre-selected list, such as "yes" or "no," "agree" or "disagree," or you can check the appropriate responses. The open-ended portion of the questionnaire consists of questions that invite respondents to provide further justification and comments regarding their answers in the relevant sections.

4.4.1 Secondary data

Information that has already been obtained for a reason other than the present research effort is referred to as secondary data, according to Saunders et al., (2003). Few researchers take into account the prospect of re-analyzing data that have already been acquired for another reason, according to Saunders et al. (2003). He clarified that secondary data included both unpublished summaries and raw data. For instance, government agencies conduct surveys and release official data pertaining to social, demographic, and economic issues.

4.4.2 Primary Data

 Original or primary data can be gathered in a number of methods, according to Collis and Hussey (2003). One or more of these might include talk and discourse pertaining to a particular research project, as well as observation, interviews, and questionnaires. A major benefit of gathering primary data, according to Ghauri and Gronhaug (2002), is that it makes it possible to concentrate on the particular requirements of the research. The chosen sample of people should respond to inquiries, for instance, through questions demanding specific replies, such as opinions and attitudes, or observed actions.

4.5 Data collection technique

Paper forms with areas for respondents to fill in are used to produce questionnaires, which are then distributed in this manner. Because of the distinctive nature of the questions, statistics software and descriptive analysis and straightforward relative percentages were also utilized to provide an appropriate interpretation of the results. Limitation of Methodology: - The busy and raucous character of our sample

contributed significantly to the difficulties encountered in administering the surveys; it is quite challenging to get people to complete our questions since they are busy conducting various enterprises. Our goal is to gather a wide range of viewpoints from the chosen consumers in order to be able to gather as many and different perspectives as we can. This is why we chose Broad Street since it serves as a gathering place for individuals from many backgrounds and walks of life. The surveys were created after reading several books thoroughly. While some of them have been modified to fit the Hargeisa environment and the research's goal, others have been taken directly from earlier studies and question sets. By calculating the weighted mean from the total replies of all respondents to a similar scaled survey question, the following values are allocated to each scale to facilitate understanding:

1=strongly disagree, 2=disagree, 3= Neutral,4=agree, 5=strongly agree (Level of agreement).

4.6 Data analyzing technique

Designing and distributing the questionnaire. The primary problems were then determined by a study of the interview data and observational problems. These were evaluated in comparison to the problems covered in the literature review. These concerns were looked into and researched by the researcher, and a questionnaire was created. Given the unique nature of this thesis project, the questions were carefully chosen and created to gauge the level of customer usage of various services and E-Commerce platforms that revealed the current trend and potential, assessed the issue, and identified the growth determinants in Hargeisa. In order to prevent complications and guarantee thoroughness in this study, I chose to develop the questionnaire and analyze the data by the following criteria: Gender, which allowed us to determine which gender actually utilizes the E-Commerce platform more; When data is grouped this way, it is possible to have a clearer understanding of the types of number of transactions and utilized platforms to make them by which gender and age group. Age group provided me with information about which specific age group uses E-Commerce platforms why, more often? moreover, the connection that exists between such teams. E-commerce platforms, educational background, and experience and lack of knowledge with the research topic, as well as system developers or owners are also taken into account and challenges in terms of advantages/ problems, safety/trust, and more importantly, what has been possible for e-commerce alter the volume financial exchanges between the respondents in a growing market, if any, that is obviously demonstrates the current trends of e-commerce in Hargeisa.

CHAPTER FIVE

THE IMPORTANCE OF E-COMMERCE IN HARGEISA SOMALILAND

5.1 Concepts and definition

Electronic commerce, sometimes known as e-commerce, refers to a variety of online economic activities for goods and services. It also covers "any type of economic transaction in which the participants communicate electronically rather than through physical exchanges or direct physical contact." A more The full definition is: The use of electronic communications and digital technology in commerce is known as e-commerce. In commercial transactions, information processing technology is used to create, alter, and redefine partnerships for the production of value between or among organizations, as well as between organizations and individuals.

5.2 The advantages of ecommerce to business and consumers

5.2.1 **Advantages of ecommerce to consumers**

- **Lower Prices**

    Consumers benefit from cost reductions as a result of the lower operating expenses of an online business compared to a physical one. One of the most significant benefits of e-commerce is this. Online pricing is frequently less expensive than those found in brick and mortar stores, and e-commerce websites can provide additional discounts and promotions that are simpler to redeem.

- **Convenient and save**

In this COVID world we now live in, shopping whenever and wherever you want is far better (and much safer) than going outside. Aside from the potential for coronavirus infection, there are benefits to shopping from the comfort of your home rather than having to leave the house, stand in line, deal with bad weather, or deal with any of the other hassles associated with consumerism.

- **Wide product Variety**

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Consumers can buy electronics from China, books from England, clothes from Paris, and good old US products all from the comfort of their own homes in the global marketplace that is the internet. The breadth and depth of products available online are unparalleled.

- **More Informed Decision Making**

You may get a lot of information while purchasing online, including:

a) Customer reviews, which are probably the most useful.

b) Product details

c) Useful videos

d) Product manuals

f) Obtaining social acceptance

The capacity to quickly compare items, brands, and websites—possibly even side-by-side comparisons—is one of the key advantages of e-commerce for customers. Numerous comparison shopping websites exist primarily to enable buyers to compare items side by side based on price and discount variables.

- **Saves Time**

In an age when time is a precious commodity, shopping online saves the consumer a significant amount of time. Given that 63% of consumers begin their purchasing journey online, it makes sense to be able to purchase where you are already (Thinkwithgoogle, 2018).

There's no need to go out, shop in-store, wait in line, and then return home when you can get a wider range of products at a lower price from the convenience of your own home.

5.2.2 Advantages of ecommerce to Business

- **Lower Cost**

Going online eliminates the requirement for a physical storefront, which results in cheaper fixed expenditures for the company. Furthermore, because much e-commerce is automated, fewer employees are necessary. Using Google Adwords to promote an e-commerce store Facebook advertising and social media marketing, for example, are far more cost-effective than traditional offline marketing. These cost reductions equate to lower customer costs and increased sales for the company. This is one of the most important advantages of e-commerce for businesses.

- **Customer Data**

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Online sales give a merchant access to a wealth of customer information that is simply not available through traditional brick-and-mortar retailing.

Online shoppers typically give their name, email address, and phone number when making purchases or signing up for services, but they also provide a wealth of demographic and consumer behavior data that is accessible through Google Analytics and can be used by online retailers to improve the customer journey and execute more precise and effective marketing campaigns.

Based on the stage of their customer journey, e-tailers can also carefully nurture and retarget customers. An online merchant, for instance, may utilize data insights to email potential customers who have abandoned their shopping carts to encourage and remind them to complete their purchase. They may also employ retargeting advertising to cultivate prospects.

- **Wider Customer base**

Going online with e-commerce sites renders geographical boundaries irrelevant. You may sell your wares to online buyers all throughout the country, or possibly the world. You are not restricted to customers in your actual location.

The internet also allows you to reach out to distinct niche audiences that you would not have otherwise. You may reach clients from all angles by going where they already are, such as social media, forums, and Google search, by utilizing numerous internet touchpoints.

- **Open Always**

When you sell online, your business is open 24 hours a day, 365 days a year. Even if your customer service is sleeping, automation ensures that the remainder of the sales process is always running and that customers can buy on any day and at any time.

- **Easier to Scale up**

More floor space (and the associated cost!), staff, and shelf space are needed to scale up or expand a physical business. In contrast, one of the less obvious advantages of e-commerce for firms is how easy it is to expand an online store.

The only things you actually need are additional product, a few digital adjustments, and perhaps more storage space—which is much less expensive than storefront space. Being online also eliminates the need to establish a new location for a store because you are already accessible to a worldwide market.

5.3 Do you like the internet, the real world, or a combination of both?

What is the future of your company in 2020? It is obvious that online selling is the way of the future given the benefits of e-commerce to both consumers and businesses as well as the e-commerce statistics. However, this does not imply that after Coronavirus, physical stores will disappear.

If you already have a website, you're in a great position to attract the many customers who have shifted their buying habits online during these uncertain times. Just be sure to keep track of your revenue and expenses so you can always maximize your profits.

5.4 Ecommerce security: Attacks and Vulnerabilities.

Businesses that conduct business online should follow the same moral guidelines that apply to their physical operations. They endure the same penalties for failing to uphold the same moral principles. Failure to uphold moral principles may result in a tarnished reputation as well as a sustained erosion of trust.

The security of customer data ought to be a top priority for companies. Some firms might not feel the need to adequately safeguard their e-commerce websites since the costs can seem excessive and the advantages can appear to be little. Consumers should feel generally secure while making transactions online. Although it is impossible to totally safeguard customer information, firms should adopt all reasonable security measures while maintaining usability.

The way society functions and does business has been completely transformed by technology. It is the duty of users and administrators of various technologies to use them in a way that is moral and conforms with all laws and regulations since technology is continuously developing and criminals are constantly coming up with new ways to attack. Businesses must make sure their e-commerce infrastructures are current with the most recent modifications and security requirements.

5.4.1 Threats to Business

Businesses are exposed to the following risks with e-commerce:

- **Attacks and Vulnerabilities.**

Different kinds of technological crimes are done every day, which may lead to a lot of issues for the victims. Technology crimes are more common than other types of crimes, but they are also less obvious and less intimate. The offender is less likely to be apprehended since they are not in danger of being seen

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by a neighbor or having an audible alert go off. Internet anonymity and accessibility have made it simple for criminal hackers to commit crimes without being discovered. Additionally, most of the time, the rewards for technology crimes are higher than those for traditional crimes.

These contemporary thieves have been able to siphon billions from banks and other financial institutions by using sophisticated and creative tactics to utilize thousands of stolen identities. In contrast, a bank theft typically nets the thief roughly $7,200. (Segal, A., & Thorne, J., 2006). Understanding assault strategies is crucial for knowing how to properly defend against them. Attack strategies are continuously evolving, therefore it's critical to remain up to date on the most recent instruments and strategies that hostile hackers are employing in their attempts to breach network defenses, as well as the most recent requirements for security.

- **Web Server Threats**

Web page delivery is accomplished by web server software in response to HTTP requests. Instead than focusing on security, web server software is often developed for usability and simplicity. "The likelihood that a piece of software has coding mistakes or security flaws increases with its complexity" (Schneider, 2009). There is a higher likelihood of mistakes the more lines of code there are. "A typical industry estimate states that there are 5 to 50 problems for every 1,000 lines of code. Therefore, it may be said that Windows 7 contains about 1,200,000 bugs (Eagle, Harper, Harris, Ness, & Williams, 2011).

Having access to a user's user name and password can allow an attacker to compromise web servers. With the user name and password in hand, the attacker may log in and elevate his privileges to acquire unrestricted access to the system. After that, the attacker can install a backdoor to enable future access.

Physical assaults can happen on web servers as well. The server is housed in a room where a human may enter and harm it. Once someone gains physical access to a server, practically anything can be done with it.

- **Database Threats**

Electronic commerce systems access databases linked to a web server to get product information and save user data. Databases also hold significant information that makes them a prime target for an attack. Trojan horses have the ability to modify access privileges or take away access restrictions, granting users unrestricted access.

- **Social Engineering**

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In order to acquire access to a facility or get information, a person may use social engineering, which is a sort of deception. The simplest method of gaining access to a facility, system, or account is by social engineering, which doesn't involve a lot of technical expertise. "Pretending to be a network system administrator or security manager over the phone to unwary employees is a frequent hacker ruse. The hacker can obtain passwords, account names, and other private information if he has sufficient knowledge of the company's network to sound believable (Schneier, B., 2004). A hacker might access an account or a secure location in a building by doing this in person or over the phone.

- **Port Scanning**

After social engineering or other methods have been used to get all the knowledge about the system, port scanning is performed to find out which ports are open on the system. The tens of thousands of ports found in each TCP/IP protocol aid in communicating with the internet. Ports that are open are similar to your home's open doors and windows. With the use of a port scanner, one may examine the system's ports and provide the user with a report on their condition. Each port is requested by the port scanner, which then notifies the computer of its request.

The port then communicates with the port scanner by returning a signal, which the scanner uses to learn about the state of those ports. This is comparable to a burglar going through all the windows or doors leading to your house in search of an unlocked one that will allow them entry.

- **Vulnerability Scanning**

Because it reveals the many flaws of the target system, vulnerability scanning is an essential component of an attack. The following "phase" in carrying out an attack is often to start looking for particular operating system and application vulnerabilities when a list of accessible network "listeners" (ports) for a group of target computers and any related application information has been located (Young, S., 2004). Usability is prioritized over security while creating computer applications, and security is given less consideration. Every software contains a number of flaws that leave it open to attack. Once a vulnerability is identified, a hacker can exploit it and change it, which could harm the system or the software.

- **Ecommerce Server Attacks**

Now that all the data has been gathered, the attack itself may begin. Based on the abilities, resources, and information at hand, the attacker should design his or her assault. Network attacks by hackers can be carried out for a variety of reasons, not all of which are harmful. Some cybercriminals attack a network

in order to find flaws, then they patch such flaws in exchange for payment. While some hackers want to steal information, others target networks to practice their abilities.

- **Physical Attacks**

Physical assaults can be just as harmful as other assaults while requiring less technological expertise. An insider or a social engineer is typically used to get physical access to the network, which is a prerequisite for physical assaults. A person has complete control over a server once they have gained physical access to it. Probably the most crucial—and nearly impossibly difficult—step is to stop someone from physically accessing a server. Malicious hackers may also be workers who harbor animosity toward a firm and wish to harm it; they may even be network or security managers.

- **Malware**

Malicious software, commonly referred to as malware, is created to stealthily infect a target machine when the application is launched. Malware encompasses any computer programs having harmful intentions, such as viruses, Trojan horses, worms, rootkits, and software. Despite being able to pass for normal software, malware programs have the potential to be harmful if installed.

The most typical form of malware is computer viruses and worms. Viruses are programs that attack executable software and propagate to other executable software when the virus-infected program is executed.

"An program that could reproduce itself through a computer network was formerly thought to be a computer worm. Network connection, whether it is dial-up or ongoing. A worm is a software that can sustain itself independently, in contrast to a virus, which implants itself into the file system or hard disk of a computer (Brenton, C., 2003).

Trojan horses and rootkits are pieces of software that isn't damaging but gives hackers remote access and administrative rights. Trojan horses allow a customer to enter a system continuously, nevertheless, they merely make the hacker available user privileges. Using rootkits, a hacker can maintain ongoing access to the target system and gain administrator rights. Trojan horses and rootkits are employed in denial-of-service assaults, data theft, file modification, key logging, and computer surveillance. A computer can also be turned into a zombie and used to attack other computers using these techniques.

- **Denial of Service**

For commercial purposes, many firms run and rely on own networks. Some businesses use their network

to transfer files, while others utilize it to make sales. In a denial of service (DOS) assault, a hacker overwhelms a network with data to bring down the system due to an overload. The objective of a DOS attack, as implied by the name of the assault, is to shut down a company's services.

5.4.2 Protection methods

To avoid being victimized by unscrupulous hackers, con artists, and online predators, it is crucial for organizations, families, and people to maintain computer and information security. Network security should be a top priority for everyone, irrespective of rank, given the variety of crimes that are conceivable. A firm might be out of operation for a considerable amount of time or perhaps indefinitely if information is unintentionally or maliciously destroyed, edited, or stolen.

The primary objectives of network security are to maintain confidentiality, integrity, and availability (CIA). To fulfill the mission of the CIA and offer a comprehensive security system, many forms of security are required. Depending on the danger of an assault, some techniques could be expensive yet worthwhile. Applying the most recent updates and installing patches is still important to make it more difficult for hackers to carry out an attack, even if it is impossible to produce patches for 100% software security.

- **E-Commerce Security Standards**

Both small and large businesses must abide by certain laws and rules that pertain to their operations. Standards and laws to protect important data have been developed as a result of security concerns.

- **ISO 17799**

ISO accepted British Standard Institute (BSI) standards that were first released (BSI). In 1998, the BSI released BS7799, which was subsequently accepted as 17799 by the ISO. Regarding the following, ISO 17799 makes suggestions:

- Asset classification and control - All information assets should be identified, classified according to their level of security, and controlled to show which are most important to safeguard.
- Security of personnel: Personnel should get sufficient security training and be informed of the processes for reporting incidents.
- Environmental and Physical Security
- Network Security
- Access Control

- **Security Policies**

A security strategy ought to be in place for any firm worried about safeguarding its electronic commerce assets. The assets that need to be protected, why they should be protected, who is in charge of protecting them, and what is and is not acceptable should all be specified in the security rules. For workers to know what to do before, during, and after an incident, security regulations serve as a guide. Testing may be done to make sure the personnel are competent, and they should all be aware of the regulations. Written, oral, and scenario-based examinations are just a few of the several test formats that are available. Employees should be able to respond confidently to a range of scenarios and feel at ease with the information in the policies thanks to the way the exams should be written.

- **Physical Security**

Physical security need to be the first kind of security put in place. It makes no sense to lock up your computer while leaving the rest of your home unlocked or to lock the doors to your house while leaving the windows open. Access control systems and video surveillance systems are further examples of physical security. Despite the fact that there is no way to be entirely safe, it is better to reduce the likelihood of being a victim.

- **Access Control**

An essential component of security is regulating access to a facility or specific areas inside it. Roving patrols and employee ID checks should be handled by security personnel. Security guards provide a challenge since social engineering may be utilized to influence them because they are fallible human beings.
Due to the dangers of social engineering, locks, biometric scanners, and passwords should also be taken into account for access control.

- **Monitoring**

Monitoring is crucial because a hacker may infiltrate a system undetected and do a lot of harm to a business. To stop a hacker from getting past security measures and causing irreparable harm, the building and the network must be closely watched. Constant observation will enable security to spot an assault and neutralize it before any harm is done. It is preferable to take precautions than to attempt to fix the harm after it has already occurred. It's possible that some items are irreparably broken and that vital information will never be recovered.

- **Authentication**

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Different agencies employ various verification techniques to block unauthorized individuals from using their systems, facilities, and services.

- **Biometrics**

The body of the user is used for access verification in biometrics. For access control, identification verification is done using body scanners such as retinal scans, finger and palm print readers, and others. Because it makes use of the bodily components that are particular to each person, biometrics is a smart idea. When someone injures the area of their body that is utilized for verification, it creates a challenge for biometrics. The administrator will have to take extra steps and use a different method to provide access if someone destroys the bodily part used for verification.

- **Usernames and Passwords**

User-chosen credentials, such as usernames and passwords, typically have specifications established by administrators but may also be user-generated. People will use passwords that are widely used, and hackers can crack them, thus requirements must be enforced. "Passwords that are at least 8 characters long, a combination of upper- and lowercase letters, symbols, and digits, are the most secure. The strength of the password increases with both the length and the randomness of the character and number combinations (Failor, D., 2009). The issue with passwords and usernames is that users frequently either forget them or write them down and store them in a location where others might easily locate them.

- **Smartcards**

To limit who has access to a certain location, system, or service, many institutions employ smartcards. The use of smartcards eliminates the need for password memory. Many smartcards have the drawback of being easily lost, which leaves them vulnerable to unauthorized usage.

- **Wireless Security**

Nowadays, organizations utilize wireless connections to send, receive, and access information instead of using cables to link machines. When information is transmitted and received wirelessly, it can be intercepted. A wireless router that is connected to a modem that is connected to the Internet allows systems to send and receive data. The wireless router receives packets from the PCs and transmits them to the modem and over the Internet.

- **802.1X Standard**

For wired networks, 802.11 offers wireless access. The port-based authentication system, sometimes known as 802.1X, is the general framework for providing access control for networks (Geier, 2008). The suggested wireless standard is 802.1x due to its improved security. IEEE 802.1x authentication, the most secure wireless authentication method currently in use, offers the most reliable authentication for a WPA2 Enterprise model WLAN (Ciampa, 2009). MAC Address filtering, a WPA2 access encryption key, and the option to disable SSID broadcasting are just a few of the access control capabilities offered by 802.1x. The issue with 802.1x is its high implementation and maintenance costs, even though it is the preferred wireless standard for security reasons.

- **Cryptography**

In cipher text, a sophisticated mathematical method that is unintelligible to anybody without the key to understand it, plaintext is transformed via cryptography into a format known as cipher text. Data is given a password once it has been encrypted and is required to decode the data in order to restore it to plaintext once it has been converted to cipher text. As long as the recipient possesses the password to decrypt the data, the information can be communicated to another individual. The strength of the encryption is dependent on the type of method used, which can also affect how challenging it is to decrypt data without the right key.

Document signatures, which aid in establishing the authenticity of a document, are also created using cryptography.

- **Hashing**

To demonstrate that a document is the original, a hashing technique can be used to provide a distinctive signature. The purpose of doing this is to prevent document duplication. The same hash from the original document will not appear on a duplicate if the document is copied. In order to verify that the document is the original, hashing is employed to compare to it. The Secure Hash Algorithm (SHA), which employs a 160-bit encryption, is the hash algorithm that is the most secure.

- **Symmetric**

With symmetric encryption, which substitutes each letter and number in the document with another one in a random order, it is nearly hard to decipher the data without the secret. Symmetric encryption employs a single key to encrypt and decrypt data. The most modern and safest symmetric encryption currently available is called the Advanced Encryption Standard (AES). An algorithm known as Rinjdael, more commonly known as AES, was selected as the winner after a drawn-out procedure that involved the participation of the US government, business, and higher education (Ciampa, M., 2009). Five candidates

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were initially considered. Symmetric encryption has a drawback since it relies on a single key that must be kept secret and is thus shared around.

- **Asymmetric**

Asymmetric cryptography is far more secure than symmetric encryption, despite the fact that both are still in use today. In terms of mathematics, asymmetric ciphers are substantially more difficult than symmetric ciphers (Dent, A., Mitchell, C., 2005). Asymmetric cryptography, as contrast to symmetric cryptography, uses two keys: a public key and a private key. Although having many keys is excellent for security, choosing which one to use can be challenging.

- **EAP-TLS (Transport Layer Security)**

The strongest currently available and most expensive to implement is EAP-TLS. Using the established TLS protocol, it allows mutual certificate authentication between the client and the server (a descendant of the SSL protocol used to secure most Web transactions). It consists of the same two layers and protocols as SSL and is a client/server protocol that is placed on top of a trustworthy transport layer protocol, such TCP in the case of TCP/IP (Oppliger, R., 2009). The server uses TLS to show that it is in possession of a digital certificate and asks the client to do the same. The client exchanges keying material while demonstrating its identity using its certificate. Once authentication is done, the TLS tunnel closes. Data can be encrypted using the Advanced Encryption Standard (AES), Temporal Key Integration Protocol (TKIP), or Wired Equivalent Privacy using the keys provided by EAP-TLS (WEP). WLANs where clients already own digital certificates or where high security requirements justify investment in a public key infrastructure to maintain such certificates are suitable candidates for EAP-TLS.

- **EAP-TTLS (Tunneled TLS)**

By substituting outdated password authentication techniques like PAP, CHAP, and MSCHAPv2 for client-side certificates, this EAP type strikes a balance between security and implementation costs. With EAP-TTLS, the server must construct a TLS tunnel, authenticate themselves using certificates, then challenge the client across that tunnel. Inner authentication techniques that are less secure are protected by the TLS tunnel.

The TLS tunnel hides the client's answer even if a clear-text password is returned. EAP-TTLS should be set up to send a "anonymous" identity when 802.1X starts, followed by the true identity across the TLS tunnel, to prevent the client's name from being revealed. When keys are given and authentication is finished, the tunnel comes to an end. "EAP-TTLS has been widely implemented, and it is probable that it will be found in many business WLANs. EAP-TTLS is essentially identical to EAP-PEAP, but because

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Windows operating systems are not natively supported, it has a substantially smaller market share (Wescott, D., 2010).

- **PEAP (Protected EAP)**

While PEAP and EAP-TTLS are fairly similar, they employ various client authentication mechanisms. PEAP creates a TLS tunnel using server-side certificates, just like EAPTTLS. A PEAP authentication server must be able to interpret both EAP and the included traditional authentication protocols, even if the same user credentials can be used with EAP-TTLS. Because PEAP is thought to be extremely secure, it is being supported more widely than EAP-TTLS. The type of clients utilized in your WLAN and your budget will determine the optimum option for your network.

- **WPA2 AES Passphrase**

An 802.1x authentication server is not necessary when using pre-shared Key mode (PSK).
The network communication is encrypted using a 256-bit key by each wireless network device. This key can be entered either as a passphrase of 8 to 63 ASCII characters or as a string of 64 hex numbers. "The US government has embraced the symmetric-key encryption standard known as the Advanced Encryption Standard (AES) in cryptography. AES-128, AES-192, and AES-256, three block ciphers that were initially released as part of the Rijndael collection, are included in the standard. These ciphers have key sizes of 128, 192, and 256 bits, with 128-bit block sizes for each of them (Mcbrewster, Miller, & Vandome, 2009). Like its predecessor, the Data Encryption Standard, the AES ciphers have undergone thorough analysis and are now utilized on a global scale (DES).

- **Digital Certificates**

The digital certificate attests that the certificate's listed subject actually owns a public key. The private key that corresponds to the certified public key may then be used to sign documents or make claims that others can trust. The subject (owner) of the certificate and the party relying on the certificate both have faith in a CA under this paradigm of trust relationships (IBM, n.d.). Secure Internet communication methods like HTTPS are used in conjunction with the digital certificates.

- **Firewalls**

A firewall can be set up using hardware or software. Firewalls' main function is to regulate the flow of internal network traffic both in and out. It is meant to authorize or prohibit access to a private network. The system can be restricted from just offering a limited number of services by using firewalls.
There are three types of firewalls:

- Firewalls that filter packets based on their source and destination addresses are known as packet-filtering firewalls. They make sure that any packets they receive from the outside are in response to any that have been transmitted.

- Firewalls with proxy gateways These serve as a gateway for external users connecting to the network. Before being able to join to the network, visitors must first establish a connection with the gateway firewall.

- Firewalls with application proxy- these check a user's request to connect to the application server. They make sure the request made by the user complies with the protocol of the program.

An e-commerce system's components should be set up to let internal network servers or other systems to launch connections with the network. The firewalls can be used to prevent network servers or other systems from establishing connections to internal networks.

- **Computer Intrusion Detection and Prevention Systems**

A motion detector on the building and locks on the doors and windows are comparable to computer intrusion detection and prevention systems. The purpose of the Computer Intrusion Detection (IDS) System, like the motion detector, is to identify prospective intruders and notify someone to take action. Similar to the locks on the doors and windows, the Intrusion Prevention System (IPS) is designed to deter attackers from entering. The two systems have names that encapsulate their intended uses well. Both protection systems—one for detecting and the other for preventing hostile activity—must be in place for a security program to be effective. These days, many systems are classified as intrusion detection and prevention systems since they combine detection and prevention functions into a single system (IDPS).

- **Intrusion Detection Systems**

IDSs keep an eye out on a network for any potential harmful behavior and then alert the administrator so that action may be taken against the danger. IDSs come in a variety of shapes and sizes, and they may detect threats via a variety of protocols, including network-based, wireless, behavior-based, and host-based systems. The administrator must determine what to deal with potential threats because certain threats detected by the IDS may not truly be harmful. E-commerce systems should ideally employ both network-based and host-based IDSs, however the price may be prohibitive for some small enterprises.

- **Host-Based IDS.**

In terms of capability, host-based IDSs are comparable to virus scanning tools. The program is automatic

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and monitors any suspicious activity on the host machine in the background. When a problem is found, it may be set to execute particular actions. It might be set up, for instance, to immediately quarantine any questionable activity or only alert the administrator.

- **Network-Based IDS.**

The nature and content of network packets are examined by network-based IDSs. While less costly than host-based IDSs, network IDSs are unable to monitor actions on specific host systems. It can safeguard the entire network but not specific systems. The IDS that is selected must work with the currently installed firewall. The network-based IDS should be set up between the firewall and the incoming connections. Additionally, it has to be set up under two network interfaces, one for information reporting to the IDS console and the other for analysis.

- **Intrusion Prevention System**

In order to stop threats from harming the system, IPSs follow a certain protocol to recognize risks and bar them from a network. IPSs keep an eye out for suspicious behavior in the network traffic, log it, try to stop it from connecting to the network, and then notify the administrator so they may take appropriate action. The administrator will have to make a decision on what to do if the IPS detects behavior that is not harmful, much like the IDS.

- **Operating System Hardening**

By lowering or removing as many vulnerabilities as possible in e-commerce systems, it is crucial to lower the likelihood of attacks. Incorporating IDSs, setting up anti-virus applications, uninstalling any unused software, shutting down all ports, and configuring it to block unwanted access are all steps used to achieve this. Because there are so many open ports and services functioning, an operating system frequently acts as a doorway into a computer system. These routes provide a possible point of attack for Web commerce systems (Nahari, & Krutz, 2011).

- **Automating Security**

Most small firms lack the personnel necessary to run an e-commerce system efficiently. The operation of their e-commerce platforms is frequently contracted out or outsourced by small business owners. Small company owners have access to e-commerce hosting services from a variety of providers, but for some entrepreneurs, having everything in-house is crucial. Setting up security that is controlled mostly by software is crucial for small business owners who wish to own and operate their own servers and e-

commerce systems. Many different security software programs may be set up to automatically identify and respond to suspicious occurrences. Software with low false-positive rates should be sought out since it might possibly cost company if it prevents transactions from happening rather than only thwarting attempted assaults. Additionally, it's critical to choose software that gives regular upgrades and has a competent staff. Since dangers are ever-evolving, it is critical for software firms to keep up with the most recent risks to their products. It will be crucial to regularly check for updates and patches so that software flaws are repaired before an attack takes place.

5.5 The future ecommerce in Hargeisa Somaliland

The rapid proliferation of the Internet gave rise to the concept and practice of electronic commerce (e-commerce, from here onwards), which has become a common phenomenon in the world today. Internet-based economic structures and information groups are the new business reality, as organizations and individuals revel in the ease of purchasing commodities and services from foreign shores. Most developing countries, however, are far from experiencing this reality due to many factors which act as obstacles for e-commerce to flourish. If these crucial elements are accomplished through the establishment of cyberspace and have their advantages as desired by people, then e-commerce in Hargeisa will have a bright future in the years to come. The government's responsibility is to establish a legal framework for online trade so that, while domestic and intellectual trade are permitted to grow, fraud prevention, consumer safety, etc. E-commerce is growing in popularity, as is its percentage.

A market with significant e-commerce potential is represented by developing nations. The majority of academic research discusses e-commerce as a sensible approach and a great chance for these nations to profit from emerging economic opportunities. According to the UNDP (2005), developing nations should embrace e-commerce unreservedly since it would advance their economic and social development, increase commercial productivity, reduce corporate running expenses, and heighten the degree of domestic integration with global markets.

Although basic Internet usage has typically been low in these nations, it has been growing quickly. According to UNCTAD (2005), these nations saw an increase in the number of Internet users from about 250 million in 2000 to 400 million in 2005, a growth rate of 300%, and a rise in their international share of all Web users from 25% to 40%. Since these countries' increases in bandwidth were twice as much as those of developed nations, the trend in internet capacity is comparable. Although extrapolating these figures to a commensurate rise in e-commerce adoption in developing nations is possible, there are other local factors that function as barriers for these nations in their pursuit of economic development through e-commerce (Molla and Heeks 2007).

5.6 Success factors in mobile commerce

A remarkable marketspace has been developed on the Internet. In addition to the Internet, mobile communications are a technological stream that is becoming more and more significant in both business and society. In terms of customer adoption, network implementation, and mobile device capabilities, wireless and mobile networks have grown exponentially. This is expected to open up new options for users, companies, and service providers.

Although e-commerce has not yet reached the astronomical growth rates, which were mid-1990s, researchers and experts frequently projected representatives from the sector are currently focusing on paying attention to mobile commerce (mcommerce) and anticipating that this sector would have the fastest development in e-commerce. From 1999 to 2002, there was a mobile craze that resulted in m-commerce has been the subject of numerous inspiring ideas.

help companies in some way.

The facet of perceived value-added

For customers, mcommerce must be beneficial. Customers are more willing to accept and pay for a product or service if they believe that what they are getting is worth it.

According to data from several market studies, a significant portion of respondents had no plans to utilize mobile services since they "do not require it" right now. This suggests that the absence of value-added services is the cause of this lack of intention.

Technology or aggregated dissemination difficulties seem to be the main topics in studies on the adoption of m-commerce. Comparing the delayed m-commerce adoption in Europe and Asia to the quick take-up of analogous I-mode services in Japan, however, shows that technology-based and aggregated models fall short in their ability to describe the m-commerce adoption cycle. The value-added service known as "m-commerce" is one that users of mobile devices may access. The innovative business strategy and contents of m-commerce are the source of its additional value.

The dimension of perceived utility.

A person's perception of a system's utility is measured by how much they think it will improve their ability to execute their work, whether that improvement comes in the form of faster task completion or more accurate information. It is a reaction to user evaluation of the external IT attribute. Numerous research has used one of these models to the TAM to explain why end users choose and accept various ICT-systems of various types. The TAM has been both updated and expanded.

Undoubtedly, a lot of the information gleaned from earlier research on the adoption of IT may be useful in comprehending the adoption of mobile services.

The business purpose, such as how IT may enable users to increase effectiveness and efficiency and accomplish task-related objectives, is primarily suggested by traditional acceptance models.

Because it examines the practical drivers of adoption, a significant portion of research on the usage of mobile services in professional settings is fascinating. However, there hasn't been much study on how mobile services are utilized in everyday life or in leisure contexts that has either explicitly addressed how mobile services are used in leisure or how their use blurs the line between leisure and work contexts. These studies suggest that a combination of functional factors relating to work and leisure drive consumer adoption of mobile services.

The perception of usability

What is now possible with technology and what consumers have been made to believe is possible are vastly different. Nearly one-third of the early adopters in Europe who were polled by Boston Consulting gave up on mobile commerce after only a few trials. Mobile applications' usability, security, and privacy are major concerns for consumers. The usefulness and value of mobile commerce are key to its success. From the user's point of view, they may be boiled down to system quality, content quality, trust, and support, all of which have a significant impact on how usable m commerce is.

System and Content Qualitative. The availability of the system around-the-clock, online response times, page loading times, visual appeal, etc. The relevance, clarity, timeliness, and accuracy of the content are only a few examples of its quality.

Mobile devices have several cutting-edge characteristics that make it feasible to utilize them anytime, anywhere. However, due to these devices' inherent constraints, such as their tiny display areas, restricted input and interaction options, slow data transmission rates, etc., mcommerce adoption has been hampered. Mobile device constraints will be slowing down the development of some technologies. For example, 3G devices provide multimode interaction, and 3G mobile networks will increase the speed of data transfer. However, some limits are not anticipated to alter much. As an illustration, its size will keep getting smaller.

Empirical studies demonstrate that a complicated and inefficient user interface restricts the usefulness of mobile devices and prevents their usage for mobile commerce. The usability of mobile application user interfaces must be improved and made easy and effortless in order to make them better.

The usage of the mobile application will be made easier through innovation that overcomes obstacles, clever content design and presentation, and the interface. Therefore, it is believed that a key success component is the improved information arrangement, the clear and efficient display design, and the interface. An improved user interface helps users accomplish their objectives more quickly and with more usability.

5.7 Conclusion

Websites for small businesses that do online trade are prime targets for malicious attacks. Small firms lack the tools necessary to respond to assaults successfully. Teams that are devoted to handling security problems and averting future assaults are present in large and some mid-size organizations. The majority of small enterprises lack the capacity to handle events in the same manner that large organizations do.

It is crucial for e-commerce websites to be secure. In addition to winning and retaining the confidence of customers, compliance with laws and regulations, stakeholders and partners. Numerous organizations have developed numerous security standards, groups to assist in guiding the security of small company servers, although many of those guidelines because the requirements are too expensive or time-consuming.

The e-commerce sector is gradually addressing security vulnerabilities on its internal networks. The staff working with e-commerce platforms can read and put into practice recommendations for safeguarding networks and systems. educating consumers about security problems will ultimately prove to be the most significant element of the online shopping security architecture, despite the fact that it is still in its early phases.

The most significant danger to e-commerce is posed by Trojan horse programs that are launched against client systems because they are capable of disabling or getting around the bulk of authentication and authorization procedures used in an e-commerce transaction. By using email attachments, the most basic how to download these programs to a remote pc, is possible. In order to raise the general public's understanding of Internet security, training and It will be more vital to have orientation sessions. To combat the widespread opposition to establishing security standards at the business level, the IT and financial control/audit divisions inside the e-commerce site should join forces.

CHAPTER SIX

RESLTS AND DISCUSSION

6.1 Introduction

To accomplish the aforementioned goals, many strategies are combined. The study' main goal was to examine how the company used technology and e-commerce.

Additionally, evaluated and examined were existing ICT and e-commerce statistics. The data gathered interviews conducted with experts in the technological governmental, academic, and commercial areas. For the study, governmental, academic, and commercial areas.

Researchers came up with main information obtained from company-level sample surveys carried out on randomly chosen banks, IT users, telecom, MICT, and businesses. This gives important findings regarding the difficulty. The organization of these case studies was done to support the study. conclusions based on the study itself. The results and analysis of the data are generally presented in this chapter. obtained through interviews, questionnaires, and document analysis. The remainder of this chapter will be

is set up as follows.

The chapter's summary is presented in Section.

- which is followed by a section on the respondents' demographics. Section
- deals with Hargeisa companies' use of technology and e-commerce.

     The conclusion and a discussion of the e-commerce dilemma are presented in Section

- Information on the possibilities offered by e-commerce
- The e-commerce growth factors.

A triangulation strategy was used in this chapter's analysis of the data acquired using various methodologies, as was covered in the methodology section of the study. The employees of several sampling companies, including those at the United Bank, the Ministry of Information Technology, Telecom, a private IT firm, and an Osaka manufacturing firm, received a total of 170 questionnaires. A total of 170 questionnaires were distributed, and 145 usable questionnaires—roughly 34 questioners for each conducted company—were obtained. In addition to the questionnaire, the researcher interviewed a random grocery customer and looked through some bank records pertaining to the banking system. Statistical Package for the Social Sciences (SPSS) software is used to examine the research findings. descriptive metrics for each interview topic and response.

6.2 Demographic information of the respondents

The poll respondents' personal information varies, and in addition to these distinctions, they offer various opinions on the use of online shopping and the variables affecting it. The following details these variations.

Table 6.2.1 Demographic information of respondents

Variable	Classification	Number	Percentage
Gender	male	93	62%
	Female	57	38%
	Missing	0	0%
	Total	150	100%
Age	18-30	96	64%
	31-40	49	32.7%
	41-50	3	2%
	51-60	2	1.3%
	60+	0	0%
	Missing	0	0%
	Total	150	100%
Educational Qualification	Certificate	7	4.7%
	Diploma	8	5.3%
	Degree	76	50.7%
	Masters or more	59	39.3%
	Missing	0	0%
	Total	150	100%

Job Position	Junior	20	13.3%
	Senior	66	44%
	Manager	59	39.3%
	Other	5	3.3%
	Missing	0	0%
	Total	150	100%
Work experience	Less than One Year	10	6.7%
	1-2 Years	48	32%
	3-5	30	45%
	more than 5 years	47	31.3%
	Missing	0	0%
	Total	150	100%
Employment	Employee	85	56.7%
	Business owner	65	43.3%
	Missing	0	0%
	Total	150	100%

Males made up the biggest percentage of participants in this survey, accounting for 62% of responses, as indicated in table 6.2.1 above. In terms of age classification, the youngest participants (18-30 years old) represent for 64% of all respondents.

In terms of educational level, the majority of study participants had a bachelor's degree, accounting for 50% of total participants, with work positions ranging from junior 13.3% to senior 44% to management 39.3%. On the other hand, the majority of participants have 3-5 years of work experience; 57.7% are employees and 43.3% are company owners.

The section that follows highlights Hargeisa's ecommerce and technological practices. These companies' ecommerce and technology practices are built on core frameworks, technology use that ecommerce is primarily based on, and a strategic model of technology adoption framework.

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Table 6.2.2 Hargeisa companies practice of e-commerce and technology

E-commerce in Hargeisa has changed the way business is done. For example, main online transactions implemented on a large scale by banks via mobile and card payment services will play a significant role. These technologies follow the introduction of Electronic financial services that are centralized and real-time, which advanced the banking service and increased bank income as the number of clients expanded.

Table 6.2.2 Hargeisa companies practice of e-commerce and technology

ITEM	Respondents Response			
	YES	**NO**	**Do not know/ cannot say**	**TOTAL**
The company have its own Web site/homepage	3.6%	62.4%	34%	100%
The company have an IT department	39.2%	60.8%	0%	100%
Do you have awareness and knowledge about the concept of ecommerce	38%	62%	0%	100%
Does your company is using e-commerce	36.2%	60.4%	3.4%	100%
Do the company have information systems strategies, long term strategic, and short term plans been formulated to support the overall E-Commerce adoption and information systems requirements	59.7%	40.3%	0%	100%

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Do you think e-commerce application can simplify trading activities	73.3%	26.7%	0%	100%
Your Company serves more than 24/7 in a week	37.3%	62.7%	0%	100%
Do you agree that electronic commerce has substantial advantages over traditional face to-face, paper-based commerce	64.7%	32%	3.3%	100%

According to table 6.2.2, some Hargeisa enterprises engage in e-commerce and technological products. Of them, some (3.6%) have their own Web site or homepage, while 62.4% have none at all. Additionally, some businesses (39.2%) have an IT department, while just 60.8% do not, according to the respondents. Users and employees need to be aware of e-commerce in order to comprehend and utilize the benefits it provides, although some respondents (38%) are aware of the idea and are informed about it, while another 62% are unaware of the benefits.

Few respondents appear to be aware that their company has developed Many of them have Plans with a long-term vision for information systems, and short-term plans to support the general adoption of E-commerce and information system requirements. and a large number of them either lack access to such information or are completely unaware of the company directives. 59.7% of respondents said "yes," 40.3% said "no,".

Regarding the benefits of e-commerce applications, 73.3 % are aware of them and believe they may make trade operations simpler. However, 0 percent believe e-commerce won't have a significant influence on trading activities, and 26.7% are unsure of its impact, benefits, or drawbacks.

According to the respondents, (44%) their firm serves their customers and conducts business for 24/7, and (55.9%) they don't. E-commerce would allow businesses to work around the clock and serve their consumers. Overall, respondents (49%) concur that e-commerce has important advantages over conventional face-to-face and paper-based trade; however, 29% do not share this opinion and 22% are unsure of the advantages that e-commerce provides.

A total of 44.4% of respondents who were asked about their company's e-commerce and IT operations said "Yes." 24.4% do not respond and 32.4% respond "No." Which suggests that e-commerce is being more widely used as a tool for company and for personal gain. According to the measurement in table

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4.1.2 above, the overall output of the e-commerce and technology practice in Hargeisa is 40.2%, which is higher than the combined percentages of "No," 32.4%, and "can't say," 24.4%. Therefore, the aforementioned result reveals that Hargeisa's e-commerce industry is operating considerably better than it did in the past, demonstrating that e-commerce is one of the economic tools supporting the progress of developing nations like Somaliland.
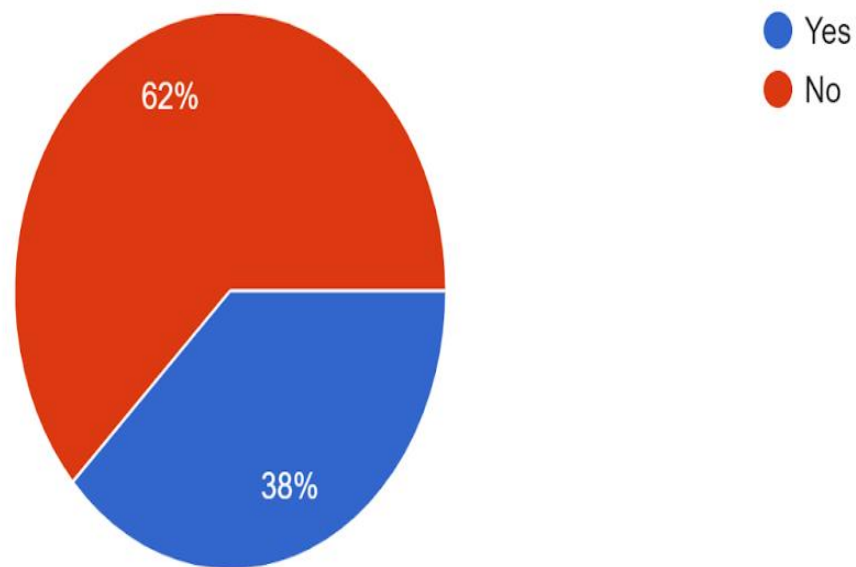
Figure 6.1 Do you have awareness and knowledge about the concept of ecommerce?

Does your company is using e-commerce?

149 responses
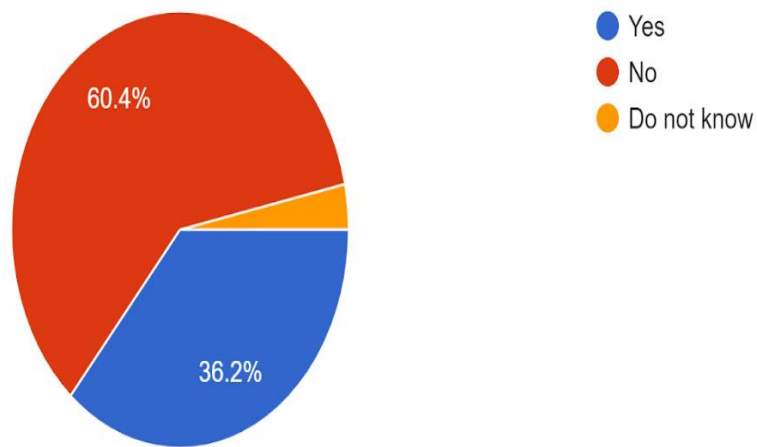
Figure 6.2 Does your company is using e-commerce

Does the company have an IT department?

148 responses
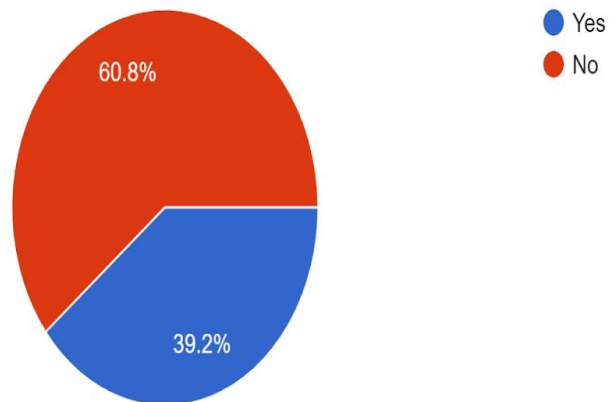
Figure 6.3 The company have an IT department

Does the company have its own Web site/homepage?

149 responses

● Yes
● No

62.4%

37.6%
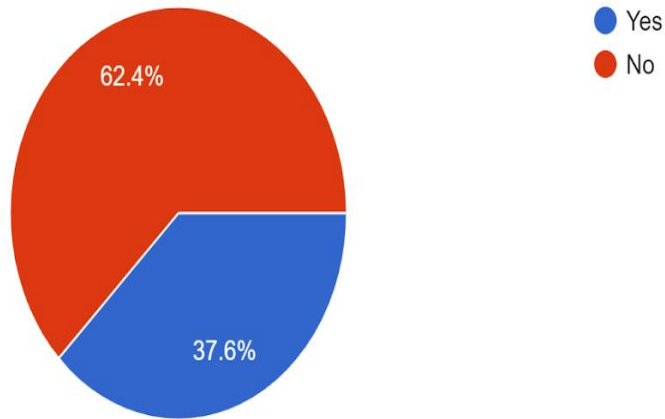
Figure 6.4 The company have its own Web site/homepage

Do the company have information systems strategies, long term strategic, and short term plans been formulated to support the overall E-Commerce adoption and information systems requirements?

149 responses

● Yes
● No

40.3%

59.7%
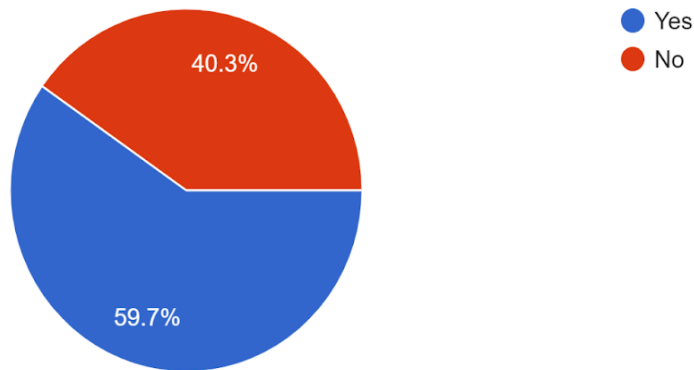
Figure 6.5 Do you agree that electronic commerce has substantial advantages over traditional face to-face, paper-based commerce?

Do you think e-commerce application can simplify trading activities?

150 responses
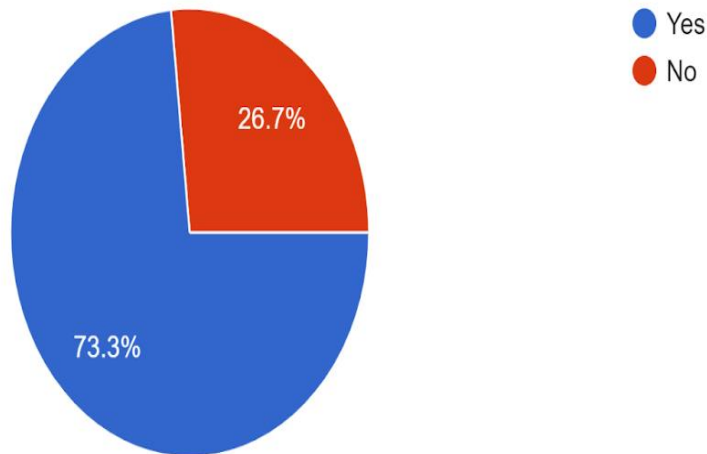
Figure 6.6 Do you think e-commerce application can simplify trading activities?

Does your organization plans to use e-commerce applications?
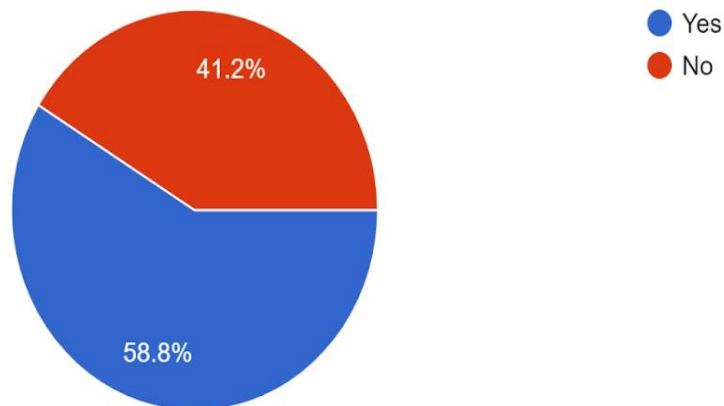
148 responses

Figure 6.7 Does your company is using e-commerce?

Do you agree that electronic commerce has substantial advantages over traditional face-to-face, paper-based commerce?
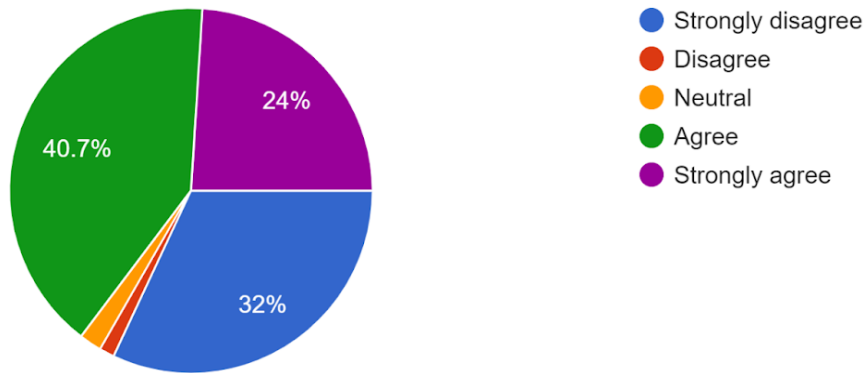
150 responses

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

24%
40.7%
32%

Figure 6.8 Do you agree that electronic commerce has substantial advantages over traditional face to-face, paper-based commerce?

Your Company serves more than 24/7 of the customers per day?
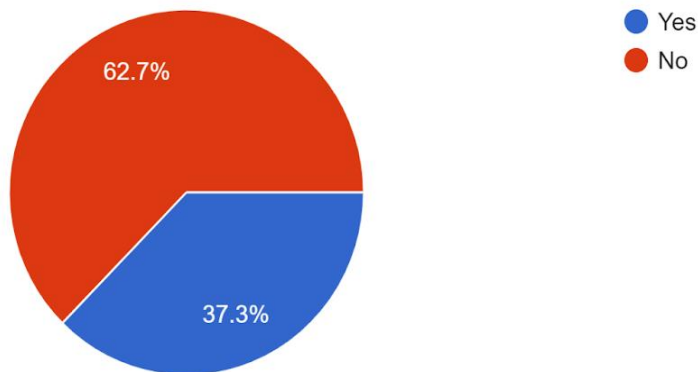
150 responses

- Yes
- No

62.7%
37.3%

Figure 6.9 Your Company serves more than 24/7 in a week?

CHAPTER SEVEN
SWOT ANALYSIS

7.1 Introduction

SWOT analysis is a method of determining a company's strategy. It examines the enterprise's internal and fixed conditions. The goal is to locate the core competitive advantage. S stands for Strength, W for Weakness, O for Opportunity, and T for Threat in this analysis.

The majority of the time, we observe that using electronic tools for doing business adds value either by decreasing transaction costs, by fostering some kind of network effect, or by a combination of the two. SWOT analysis is the process of evaluating a We attempt to identify the strengths and weaknesses of e-commerce in relation to the Hargeisa business environment in this section of the SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats).

After that, we attempt to identify the dangers and possibilities that environment presents. According to the questions an analyst would pose when doing a SWOT analysis, this is depicted in the following picture.

7.2 Strengths

- Global market: The largest advantage of e-commerce is boundary-less access, which means that there is no requirement for a physical building or other boundaries in order to do business. All businesses may now grow internationally thanks to it. The growth of international merchants could be aided by the expansion of retail marketplaces globally.

- Time saving: Without a doubt, online transactions happen quickly. Because there is less movement, time is saved.

- No time constraints: Online trans may be utilized anywhere, at any time, as there are no time restrictions, as demonstrated by the 25X7 idea.

- Price/Product comparison: Among the rights that every consumer has are information and the ability to make decisions. E-commerce offers consumers a platform to compare pricing and goods in an effective and efficient manner. It has a tendency to have far more effective and efficient negotiations. In comparison to conventional local or national retailers, it will often have far more negotiating leverage with suppliers.

- Cost effective: Eliminating a long supply chain of middlemen, reducing the requirement for physical infrastructure, and outsourcing logistics are enabling small businesses to compete with industry giants.
- Flexible target market segmentation: A successful business hinges on making the correct segmentation decisions. In this case, the target market segment is flexible and may be changed at any moment.
- Fast Exchange of information: A speedy, just-in-time response is always possible thanks to "e," which always ensures swift and accurate information sharing between businesses and customers.
- Faster buying procedure: The supplier only needs to click for the customer to make a purchase. The purchasing procedure is sped up since there is no need for the customer to walk around or search for the ideal goods at the ideal price.
- Niche Market: It is a notion of sub-segmentation where products from uncommon species are accessible without the user making any particular efforts. The internet can be used to sell almost anything. Even if a product is aimed for a lesser market, the customer will be online someplace.

7.3 Weaknesses

- Security: The main obstacle to the growth of e-commerce is security.
- Customers frequently felt uneasy, especially regarding the reliability of the payment procedure.
- Fake websites: There are a lot of fraudulent websites that advertise better service and safe transactions online. These websites can not only defame e-commerce but also give it a poor name.
- Fraud: Hackers abuse the personal and financial information given for trading purposes to further their own illegitimate interests.
- Fewer discounts and bargaining: Discounts are rarely offered by internet retailers, and haggling is impossible.
- Long delivery timing: Delivery is typically an outside activity, handled by people who don't care about the seller's schedule. As it suits them, they provide their services. One cannot always wait for the delivery because it may take days or even weeks.
- Impossibility of physical examination: Products that require a human touch before selection and whose selection is solely based on their physical state are not appropriate for e-commerce businesses. Online items cannot be worn, handled, or used as a seat.
- Limitation of products: There can be only a certain amount of goods offered.

- Lack of personal services: Although physical goods may be readily available, intangible personal services are lacking.
- Limited exposure: There will be no or limited exposure to e-commerce in emerging communities without internet connection.
- Limited advertising: Because e-commerce does not allow for mass advertising, there are few advertising alternatives accessible. Only those with computer literacy are eligible to see the ads. Only those who feel at ease using e-commerce applications were selected from among them.
- Customer's satisfaction: Between the buyer and the vendor, there is no direct face-to-face connection. Therefore, there is no need to try to persuade the buyer.

7.4 Opportunities

1. Changing trends: The public is highly brand aware. Branded goods are more appealing to them than local products. They won't mind purchasing such items online if they are available across international borders. E-commerce is efficient and quick, and it allows for global financial transactions to be carried out from anywhere.
   The population of the future will feel more at ease making purchases exclusively online.
2. Increasing number of user: The daily usage of the internet is growing. Online shopping is more convenient for people.
3. Regular Global expansion: E-commerce can be run nonstop, wherever it is, at any time. There is always room for growth. The target demographic is the whole current population as well as any new residents who do not utilize online shopping.
4. High availability: The corporate world is active with every single mouse click. Shopping is still a choice for those who work during the day and struggle to find time for themselves, regardless of what time of day it is, including late at night.
5. Wide business growth: The potential for growth of an e-business is vast.
6. In every interval, business occurred. The process of closing gaps never ends, and as a result, neither does the process of corporate expansion.
7. Advertising: Advertising is more affordable than traditional offline systems.

7.5 Threats

- Competitors: Global competition exists in addition to local competition.
- The level of competition is rising daily. Large corporations have already joined this industry. At the expense of their businesses, they are creating habits in individuals.
- Changes in environment, law and regulations: E-commerce may be distressed by changes in fashion, legislation, and fads, as well as by changes in trends, fashion, and fad.
- Innovation: Customers today are constantly looking for new products and methods. Innovation will always put a strain on consumers' wallets, whether it's in the form of a new product, location, promotion, or even price.
- Privacy concerns: The worry that information may be abused to commit identity fraud or send spam email.
- No direct interaction: In e-commerce, there is no face-to-face communication between the buyer and the supplier. Negotiation is not possible. People choose to make in-person purchases over internet ones in order to feel more personally involved.
- Fraud: People that run e-commerce with unjust methods risk losing the trust and confidence of ordinary people.
- Risk: Nature of fraud

CHAPTER 8: CONCLUSION

8.1 Conclusion

This study intends to look into the primary opportunity for e-commerce in Hargeisa Somaliland. Access to ICT has been difficult in developing nations over the past ten years because of a variety of causes, including the delivery of services depending on technology, like e-commerce, which was made possible by changes in markets, legislation, and technologies. Increased access has released ecommerce's transformational potential, influencing the interactions between individuals, governments, and businesses. Changes to these interactions and e-commerce itself hold the potential to increase economic prospects for bettering service delivery to the business community, increasing transparent and effective government and quickening societal transformation. On the potential of questions about e-commerce, overlapping questions have been established to identify the trend of the respondents and to cross verify the true meaning of the respondents toward the e-commerce perception in general. Furthermore, no other service options are available, ensuring that technological innovation and quality of service are maintained. Service and added value for customers are inadequate. According to the results of the survey, there is a shortage of skilled workers to manage the E-commerce system, as well as low internet penetration and access in particular. In order to determine the human factors that influence the decision to use an ecommerce opportunity, In agreement with a majority of respondents, e-commerce an increase in sales. With the existing Hargeisa business environment, there is an opportunity for full-scale e-commerce adoption.in contrast to respondents' previous reaction from talent and chance for an e-commerce service and solution, it also demonstrates that human elements are positive toward technology in terms of risk and security. And another willing to accept the technology it provides, such as ecommerce.

In comparison to earlier, the banking sector has expanded and introduced numerous technological frameworks that hasten the adoption of e-commerce. As a result, the People will feel more comfortable doing business in Hargeisa thanks to the e-banking system by facilitating faster transactions and other banking activities and opening up new opportunities for companies to offer online services. One indication that legislation and regulations positioned as a motivator for national e-commerce will offer security and comfort while minimizing risk issues associated with it is the idea that exploiting online enterprises for profit is popular. It is believed that acting as an advisor or consultant and offering training will make it easier to take advantage of the e-commerce opportunity. In Hargeisa, e-commerce services have been seen as a chance to create a favorable business, political, economic, and social environment for

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e-commerce.

The growth factor in The government is attempting and starting to play a significant role in the development of e-commerce compared to before, according to information from the Somaliland Minister of Information and Communication Technology (MICT), who is responsible for creating the draft version of the ecommerce framework's laws and regulations. It is anticipated that e-commerce as a service will result in more competitiveness than ever before, helping Hargeisa's economy to grow and develop.

Additionally, the younger generation will contribute significantly to the expansion of e-commerce because they are more likely to use technology for personal purposes on a daily basis. This will increase demand for e-commerce services that offer convenience for both individuals and the country as a whole and offer a solution to time wastage when completing specific tasks, allowing for the efficient and effective use of human resources the time wasted performing a particular task in order to maximize the use of human resources and free up more time for other economic activities that will have a significant impact on Hargeisa's economic growth. As we discuss the idea of e-commerce, technology has already advanced too far on the other side of the globe, resulting in the current emergence of e-commerce "virtual reality shopping experiences."

8.2 Further suggested work

It has been attempted to primarily examine e-commerce opportunities in Hargeisa in this paper. E-commerce had been conceptualized in great detail investigated in the thesis's overall problem, and an analysis of relevant publications, reports from various institutions, and statistics information had been done additionally to the questioner.

As one of the most significant aspects of the contemporary digital economy, Hargeisa must adjust rules and guidelines for online shopping the quick Improvements to the market's organization and technology. This is due to the direction of electronic commerce growth increasing development and entry the global economy. Focused efforts on spectrum distribution, the introduction of competitiveness, providing practical Arrangements for connections that guarantee universal entrance to ICT, and making it low-cost and accessible to the underserved, among other things, are required.

Additionally, in order to benefit from the expansion of e-commerce and its transformative potential, Governments had to encourage the growth of e-commerce, as well as adopt ICT themselves, in order to improve the delivery of services like education, which addresses skill shortages, and other areas. enhance the effectiveness and transparency of government and business. While many of these obstacles have been

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overcome, some significant ones still need to be overcome. These include acknowledging the importance of ICT access, Internet use, ICT skills, and the adoption of e-commerce applications in the industry.

Maintaining a focus on competition while encouraging the ecommerce regulatory environment's stability and predictability will help policymakers and regulators deal with emerging policy and regulatory challenges, new business models, and the convergence of technologies.

Support investments in public-private partnerships that will catalyze the growth of e-commerce; find and support strategies that will encourage end users to have affordable access to technology; strengthening the ability to meet client demands for e-commerce applications.

By mobilizing and utilizing private sector investments, we can expand access while increasing access to the information infrastructure. Competition and access will rise more quickly with the help of improved e-commerce frameworks, a robust regulatory environment, policy changes, and private investments.

The results of this assessment show that e-commerce can be used to advance development goals under the when the conditions are favorable and policymakers take into account enabling factors, the local environment, and constraints, as well as skills.

The results are consistent with a growing body of research that shows how investments in e-commerce can boost productivity and growth. They also show how e-commerce has the potential to change how businesses operate or how added-value services are provided to customers. The ability to grow and develop e-commerce through this medium is provided by the mobile phone.

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Appendix A

Section A: Demographic Data

1: Sex
    a. Male
    b. Female

2: Age
    a. 18-30
    b. 31-40
    c. 41-50
    e. 51-60
    f. 61+

3: Educational Qualification
    a. Certificate
    b. Diploma holder
    c. First Degree
    d. Masters or more

4: Are you employee or business owner?
    a. Employee

    b. Business owner

5 Your current position in the organization:
    a. Junior
    b. Senior
    c. Manager
    d. other

6: Your work experience in the organization with this position

    a. Less than One year
    b. 1-2 Years
    c. 3-5 Years
    d. more than 5 years

Section B: Company Data

1: Do you have awareness and knowledge about the concept of ecommerce?
    a. Yes
    b. No

2: Does your company is using e-commerce?
    a. Yes
    b. No
    c. Do not know

3: Does the company have an IT department?
    a. Yes
    b. No

4: Does the company have its own Web site/homepage?

a. Yes

b. No

5: Do the company have information systems strategies, long term strategic, and short term plans been formulated to support the overall E-Commerce adoption and information systems requirements?

a. Yes

b. No

6: Do you think e-commerce application can simplify trading activities?

a. Yes

b. No

7: Does your organization plans to use e-commerce applications?

a. Yes

b. No

8: Do you agree that electronic commerce has substantial advantages over traditional face-to-face, paper-based commerce?

a. Strongly disagree

b. Disagree

Appendix B

Thank you