

# Cultural Factors That Influence Diffusion of E-Commerce in Ethiopia

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## ABSTRACT

A large amount of research has been conducted in order to seek explanations that clarify e-commerce acceptance throughout the world; however, there is a gap in the research as to how e-commerce acceptance is attributable to national culture. The objective of the study was to examine the influence Hofstede's cultural factors including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation on acceptance and adoption of E-commerce in Ethiopia. The study adopted explanatory research design. The study collected primary data from 238 respondents via Hofstede's five dimensions of national culture in an online survey questionnaire. The data was analyzed using Statistical Package for Social Sciences (SPSS). From statistical tools, descriptive statistics Pearson correlation, and multiple regressions were used to investigate the relationship among the variables. The result of regression indicates that the Hofstede cultural dimensions namely individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation considered were jointly relevant in influencing the acceptance and adoption of E-commerce in Ethiopia. The result shows that the five independent variables (individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation) that were studied, explain 69.7% of diffusion of E-commerce in Ethiopia as represented by the  $R^2$  value. However, in terms of individual effect, among the five service Hofstede cultural dimensions, only uncertainty avoidance and long-term orientation are significant in predicting the diffusion E-commerce in Ethiopia. Long-term orientation and uncertainty avoidance dimension have negatively influenced the acceptance and adoption of E-commerce in Ethiopia. The remaining three Hofstede's cultural factors, namely: individualism, power distance and masculinity have not significant influenced the acceptance and adoption of E-commerce in Ethiopia. By virtue of this research, managers can find out what cultural factors are associated with acceptance and adoption of e-commerce in Ethiopian context.

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## 1. INTRODUCTION

The internet has made significant progress in expanding product availability and revolutionizing the way businesses operate. E-commerce has become one of the most important business advancements in the last decade, and it has been the topic of numerous studies (Santiago, 2013). E-commerce, e-tailing, and e-business, as well as other less well-known terms, have all been used to describe the phenomenon of conducting business online. These words apply to data transfers, purchase processing, inventory management, digital marketing, and a variety of other activities associated with doing traditional commercial operations utilizing a digital, online approach (Capece, 2013).

To better understand electronic commerce (commonly known as e-commerce), one should distinguish between e-commerce and electronic business (e-business). Electronic commerce means electronic buying and selling on the internet (Zhang and Lopez, 2012). E-commerce is defined as —the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, mostly through the Internet and intranets (Wahlberg, 2015). E-business is any electronic transaction (e.g., information exchange), which subsumes e-commerce. E-Business encompasses all the activities that a firm performs for selling and buying services and products using computers and communications technologies as such e-business includes a host of related activities, such as on-line shopping sales force automation supply shopping, automation, chain management, electronic payment systems, web advertising and order management (Kathryn and Kimery, 2011). Again, e-commerce is a subset of e-business. However, sometimes the two are used interchangeably. Consequently, E-business, a major contributor to the popularity of global information technologies, is a system that includes not only those business that center on buying and selling of goods and services to generate revenue, but also those transactions that support revenue generation. There are various types of e-commerce models, for example, business- to-consumer (B2C), e-banking, business-to-business (B2B), consumer-to-consumer (C2C), peer-to-peer (P2P), and mobile commerce (Shavitt & Barnes, 2020).

Despite the fact electronic commerce (E-commerce) has been emerging as one of the most influential

internet applications in the business world; there is a significant gap between the adoption of e-commerce in developed and developing countries. Access to the internet has grown exponentially for a multitude of reasons; one of the most important being the ever-decreasing price of Internet connectivity. In addition, more recently e-commerce has been spreading faster due to cheap access to Internet through the use of cell phones encouraging a new kind of e-commerce known as mobile marketing. Despite the proliferation of mobile Internet and mobile marketing, e-commerce in developing countries is currently ‘Similar to what it was in the United States in the mid-90s’ (Hawk, 2004). As a result, concerns have appeared regarding this ‘digital divide’. This divide has been widening over the past few years impacting the competitiveness of small businesses in developing countries in relation to large, international companies that benefit from strong online markets (Zhu & Thatcher, 2010). This digital divide is even more pronounced in African countries where e-commerce remains negligible in the vast majority of its countries (UNCTAD, 2013). Molla and Licker (2005) state that though there are some studies that discuss the matter of barriers and obstacles towards e-commerce diffusion in developing countries, most tackle the micro-perspective while little consideration to the macro-aspects into consideration (Zhang and Lopez, 2012). The macro-factors include the culture and subcultures existing in the different countries can have on the diffusion of online purchasing.

Meanwhile, culture continues to play an important role in business. With an increasing number of cultural anthropologists entering the worldwide corporate world, multinational firms are beginning to recognize the significance of national culture and its importance, not just to compete and access markets, but also to survive (Yoon, 2009). As a result, an increasing number of studies have examined the impact or relationship between culture and acceptance of new development in e-commerce. Nonetheless, it is not fully comprehensible how these cultural factors, especially within the context of Ethiopia, do affect E-commerce adoption. The objective of this study is to explore the impact of cultural dimensions on the adoption of E-commerce in the Ethiopia context. For the purpose, the study employed Hofstede's cultural dimension, which is based upon five cultural factors including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation.

As the second most populous country in Africa, Ethiopia would be an ideal market for ecommerce. Global and local e-sellers would have a vast market in the country. However, the population is hesitant towards online shopping. There are indeed various factors that affect this spread and the habit of ecommerce, but the main factor still remains culture (Rabayah, et al, 2022). The people are distrustful of the product and the prices online and inability to accept new ideas or changes as well as unjustified fear of the unknown also seem (uncertainty avoidance and long-term vs short term orientations) and Ethiopians have the habit of collectively shopping (collectivism and individualism) in physical stores with the belief of ‘seeing and touching is believing’. Other factors such as income level and social status (power index) affect the online shopping intentions. Seeing other use ecommerce or publicly denounce online shopping (competitive culture) also affect the diffusion of e-commerce in both negative and positive manner (Wahlberg, 2015). There is also lack of research on how these cultures affect the diffusion of e-commerce and how marketers can work around it to fasten the spread of the online shopping culture and open up Ethiopia and its people to a new standard of business. Thus, the study aims to examine the influence Hofstede’s cultural factors including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation on acceptance and adoption of E-commerce in Ethiopia.

The rest of the paper unfolds as follows. In the next section, we review the theoretical and empirical literature to laid down foundation for the study. This is followed by a description of the research model and research methods. We then present the results of the data analysis and discussion of findings. Finally, the author draws conclusions and discuss the implications of the findings, together with limitations of the study and suggestions for future research avenues.

## **2. RELATED LITERATURE REVIEW**

### **2.1. Concepts of Culture**

Many authors have defined culture in several ways. Capece (2013), argue that the notion of culture brings with it the conceptual complexity and confusion. As there is no intact definition for culture, one may find numerous and diverse definitions of the concept. Culture is both an important concept, and an inclusive one. The word culture is derived from the Latin, meaning to till the soil (Hotsede, 2011). The term “culture” originally comes from social anthropology to represent, in a very broad and holistic sense, the qualities of specific human group that are passed from one generation to the next (Zhu & Thatcher, 2010). Even though the concept is borrowed from anthropology though anthropologists disagree among themselves what culture means (Jamal & Ahmed, 2007). There are more than 300 definitions of the concept of culture.

However, formal definitions of culture focus on ideologies, norms, customs, shared values and beliefs which characterize an organization. Reid & Hubbell (2005), for example, defines culture as the “customary and traditional way of thinking and doing things, which is shared to greater or lesser degree by all members, and

which new members must learn and at least partially accept in order to be accepted". The American Heritage Dictionary defines "culture", more formally as "the totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought characteristics of a community or population" (Kotter & Heskett 1992). According to Reid & Hubbell (2005), culture is elusive, intangible, implicit, and taken for granted. He further argued that every organization develops a core set of assumptions, understandings, and implicit rules that govern day-to-day behavior in work place (Robbins and Judge, 2013).

A more modern definition depicts culture as the 'software of mind'. That is, 'the collective programming of the mind which distinguishes the members of one group or category of people from another (Hofstede, 2015). According to him, culture is learned rather than inherited (unlike personality which is partly inherited and partly learned) and human nature which is entirely inherited.

While there are several definitions of culture in the literature, one of the best has been offered by Hofstede (2011), who states: "culture is defined as a mixture of values, sets, beliefs, communications and explanation of behavior that provides guidance to people". In same taken, Kathryn and Kimery (2011), defined culture as an established set of beliefs, norms, attitudes and behaviors of a defined set of group or society. In more concise terms, culture can also consider to be acknowledge that is gained, with explanation, the value systems, communication and the behavior of a set of large groups of individuals at the same place with common ideology (Capece 2013).

So, the term culture is very broad term and it is defined differently by different scholars. Even if they define it by their own understanding it represents the same idea. There is no one universally agreed definition of culture. But it all definitions of scholars gave similarity. Accordingly, the definition of culture shares some communality. Although, there are many definitions of culture, most researchers agree that it has basically four characteristics: (i) culture emerges in adaptive interaction, (ii) humans interact with each other, they reach agreement and language of definition concept; (iii) they develop symbols; and (iv) evaluations, pattern of behavior, intellectuality, morals and aesthetic (visual) standards, knowledge, religion and social patrons (Zhu & Thatcher, 2010).

By summarizing the above given definitions, and in lines of the definition provided by Denison (1990) which is accepted for the purpose of this research, culture is defined as the shared norms, values, belief, assumptions, and patterns of behavior of particular organization or group of people.

## 2.2. Hofstede's Cultural Dimensions

The large percentage of the literature reviewed describes national culture using Hofstede's five-dimension framework, which includes power distance, individualism-collectivism, masculinity-femininity, uncertainty avoidance, and long-term orientation. The five dimensions have supported the notion of culture grouping based on ideals that transcend political and geographical barriers through research and analysis. It's worth noting that Hofstede devised the four fundamental aspects of culture in order to discover cultural differences in a methodical but not simplistic manner (Hofstede, 2011).

The sense of power distribution between the most and least powerful is referred to as the Power Distance (PDI). It is considered to reflect whether a culture is authoritarian or democratic, indicating vast and small power distances, which can be summarized as a willingness to accept status or power dominance (Wahlberg, 2015). Borisova (2017) depicts the view of power imbalances between the most and least powerful; it also indicates the willingness of the poorest members of society to resist or tolerate inequality in society. It reflects whether a society is autocratic, hierarchical, or democratic; the higher the score, the more authoritarian the culture and people's perceptions.

Individualism vs. collectivism represents how people identify with others in a cultural framework, indicating a society's specification for the unit that has the right to claim and receive status, whether it is an individual or a group. It is a society's definition of what constitutes a unit with the right to declare and obtain status (Wahlberg, 2015). This dimension, according to Borisova (2017), is a common category in cross-cultural psychology and shows how strongly people identify with others and groups (not the state). The culture is more individualistic if the indicator is high.

Masculinity vs femininity is defined as either power-oriented or social-oriented social relation preferences that reflect gender roles in society, with muscular or power-oriented people imposing a more assertive and competitive culture, whereas status-oriented people reflect a more caring behavior and value quality of life, and are considered more of a feminine culture (Capece, 2013). This, according to Borisova (2017), mirrors societal emotional gender roles. Masculine refers to establishing a more assertive, competitive culture; nevertheless, it does not always imply male (Kathryn and Kimery, 2011). In feminine societies, caring behavior and a high quality of life are emphasized.

The rigidity with which status-power regulations must be observed is referred to as uncertainty avoidance. Fear, however not of specific persons, but broad anxiety in the face of anybody or anything unknown, is the driving force (Rabayah, et al, 2022). It shows a society's ability to accept, or desire to avoid, uncertainty –

particularly, ambiguous, unstructured situations – as well as tolerance for new ideas and change, per the Borisova (2017) literature. As a result, the higher the score, the more emotional the culture is likely to be, and people are likely to be less pragmatic and accepting.

Long-term versus short-term orientation defines a cultural attitude in terms of how change in status-power is accepted. Long term implies a pragmatic approach to claiming status, whereas short term is concerned with the here and now and taking the status conferral (Kathryn and Kimery, 2011). A pragmatic approach to status claiming is implied by a long-term orientation. Each claim or conferral is made with an eye to how it may affect the possibility of future status claims. Short-term orientation, on the other hand, emphasizes the importance of status conferral in the present.

### 2.3 E-commerce

E-commerce has been defined in many different ways. From the variety of definitions offered, the following are the key attributes of e-commerce: e-commerce is technology mediated exchanges between parties as well as electronically based intra-organizational activities which facilitate such exchanges (Zhu & Thatcher, 2010). E-commerce, thus, refers to conducting business via electronic media, and most commonly, the Internet. The internet or world wide web (WWW) is a network of millions of computers linked around the world through telecommunications systems, allowing for almost instantaneous transfer of data (Wahlberg, 2015).

The origin of e-commerce predates the Internet. Early development of e-commerce began in the early 1960s, although most applications associated with innovations surfaced around 1970s in form of electronic funds transfer (EFT) (Capece 2013). Later, another innovation was introduced, known as Electronic Data Interchange (EDI), which allowed business transactions such as purchase orders or invoices to be passed electronically from one organization to another using standard procedures and documents (Ramzy & Eldahan, 2016).

The Internet, a network of computer networks, began in 1969 by the US government to facilitate academic and scientific research (Zhu & Thatcher, 2010). The rapid evolution of the Internet and its graphical component, the World Wide Web in the 1990s and thereafter (Capece 2013), enabled organizations to share and exchange information because it was more affordable than the previous medium of EDI (Wahlberg, 2015). In year 2000, a dot.com crash was experienced whereby several US internet-based businesses collapsed (Zhu & Thatcher, 2010). Since then, there has been hype amongst organizations, governments and practitioners, on finding the best ways to employ ICT with minimum loss and failure of systems. Over the years, the number of Internet users has increased tremendously (Senn, 2004) thereby facilitating the exchange of goods and services amongst businesses (known as B2B e-commerce), and between organizations and individual consumers (B2C e-commerce). However, the growth of e-commerce has been seen to be slower than that anticipated earlier with B2B becoming more popular than B2C (Capece 2013).

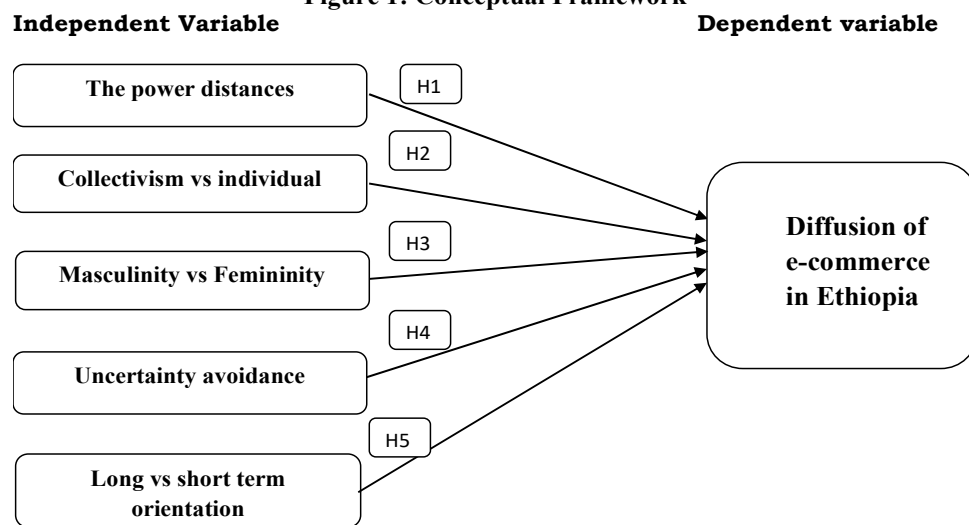
The benefits of e-commerce for SMEs have been a concern for governments and researchers alike due to the significance of this sector to their national economies (Ramzy & Eldahan, 2016). Wahlberg (2015), outlines some of the benefits for engaging in e-commerce for organizations as well as individuals, as follows:

- 1) Geographical reach; there is no barrier for participants as they are able to reach any geographical location on the globe through communication networks.
- 2) Speed; the interaction between the participants of e-commerce happens within a short span of time.
- 3) Productivity; due to the fast speed of Internet transactions, participants of e-commerce can gain a lot of time that they can devote to other activities. This means being able to do more work than they actually anticipated, resulting in higher output.
- 4) Information sharing; any form of information; that is text, audio, video, graphics, or animation can be transferred to all users that are connected to the network. New features; the ability to add new features to the products and services, is another benefit for e-commerce users.
- 5) Lower costs; the cost of business transaction is cheaper than in traditional methods due to the nature of the Internet. Costs are lower also because producers can communicate directly with buyers, removing any middle men.
- 6) Competitive Advantage; It is argued that those companies that develop and implement an effective e-commerce strategy have business advantages over others in their industry that cannot offer similar products, services, or operating capabilities.

### 2.4. Conceptual Framework

A conceptual framework is developed based on the literature and theoretical model reviewed. The framework attempts to explore the impact of cultural dimensions on the adoption of E-commerce in the Ethiopia context based on Hofstede's cultural dimension, which is include five cultural dimensions including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation.

Figure 1: Conceptual Framework



Source: (Ramzy and Eldahan, 2016))

This theoretical frame work is an expanded form of a similar study by Ramzy and Eldahan, (2016) done in Egypt about the role of national culture on diffusion of e-commerce. The paper presents five main hypotheses

- **Hypothesis 1:** Hofstede’s power distance cultural dimensions have an effect on diffusion of e-commerce in Ethiopia’s.
- **Hypothesis 2:** Hofstede’s collectivism and individual cultural dimensions have an effect on diffusion of e-commerce in Ethiopia’s.
- **Hypothesis 3:** Hofstede’s Masculinity Vs Femininity cultural dimensions have an effect on diffusion of e-commerce in Ethiopia’s.
- **Hypothesis 4:** Hofstede’s uncertainty avoidance cultural dimensions have an effect on diffusion of e-commerce in Ethiopia’s.
- **Hypothesis 5:** Hofstede’s Long Vs Short term orientation cultural dimensions have an effect on diffusion of e-commerce in Ethiopia’s.

### 3. RESEARCH DESIGN AND METHODS

The choice of research design depends on objectives that the researchers want to achieve (Newing, 2011). The primary aim of this study was to examine the influence Hofstede’s cultural factors on diffusion of E-commerce in Ethiopia. To achieve this objective, the researcher employed explanatory type of research design through survey questionnaire. The purpose of using explanatory research was to know the cause-and-effect relationship between Hofstede’s cultural dimension and diffusion of E-commerce in Ethiopia.

Regarding research approach, the study employed quantitative approach because the study requires an analysis of the relationships among variables statistically tested, which required a quantitative approach. All this was done using questionnaires and online survey base for data collection.

This research used a primary data obtained through an online questionnaire and adjust for the need of this paper and topic. The researcher used a quantitative study of online purchasing using a conclusive, descriptive, single cross-sectional research design. The data then gathered and analyzed using statistical programs such as SPSS. Since there is an issue of internet amongst some rural areas in the Ethiopian population, a simple random sample would achieve only a small number of respondents who have had experience with the Internet, which may result in a biased conclusion especially on opinions regarding online purchasing and their behavior and opinion regarding it. Therefore, based on previous studies on similar researches, this research used a convenience sampling technique in this survey in order to increase the incidence of finding relevant respondents. While this as expected caused limitations in generalizing the results across Ethiopia, it served the needs of this study while remaining within the time and budget constraints of the author.

The researcher developed an online survey and distributed it randomly to 384 potential respondents. The author prevented multiple responses by allowing respondents to answer using features available on survey websites. Even though the research aimed to get around 284 useable respondents the response rate was at 62.1 percent and among those only 238 was useable.

The questionnaire had three sections, the first section focused on demographics and personal information, the second asked general information on the persons experience with internet usage and the online shopping habits, and the final part focused on measuring using Hofstede’s Dimensions of culture be it the persons opinion

or experience. The responses to the questions were on a Likert five-point scale and then pooled to determine their association with the respondents' frequency of online purchases.

This study used an ordinary least squares (OLS) regression to estimate the linear equation. According to Brooks (2008), ordinary least squares (OLS) or linear least squares is a method to estimate the slope and intercept in a linear regression model. The rationale for choosing OLS is that, if the Classical Linear Regression Model (CLRM) assumptions hold true, then the estimators determined by OLS has a number of desirable properties, and are known as Best Linear Unbiased Estimators (Brooks, 2008). In addition, as noted in Petra (2007) OLS outperforms the other estimation methods when the following holds; the cross section is small- and the-time dimension is short.

#### 4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

##### 4.1 General information of respondents

This section assesses general information of respondents. Respondents were asked about their gender, age, and level of education attained.

##### 4.1.1 Age of the Respondents

Age of respondents is always an important factor while evaluating adoption and usage of e-commerce. Table 1 shows the respondent age.

**Table 1: Respondent Age**

Age Categories	Frequency	Percent
18-29	96	40.3
30-40	102	42.9
40-50	24	10.1
above 50	16	6.8
Total	275	100.0

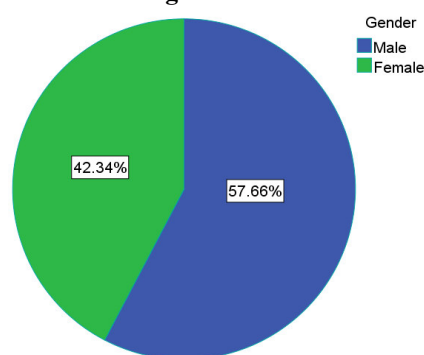
Source: (Field survey, 2023)

It was established that 42.9 percent were between 30 - 40 years. It was further established that 40.3 percent were between 18-29 years old while 10.1 percent of the respondents were between 40 and 50 years. The findings also indicated that 6.8 percent were above 50 years old.

##### 4.1.2. Gender

In terms of gender, the findings shown in figure 2 indicate that 57.6 percent were male while 42.34 percent were female. The findings of the study therefore represent the views of both genders hence gender inclusive. Figure 2 illustrate respondents age distribution.

**Figure 2: Gender**



Source: (Field survey, 2023)

##### 4.3.3. Level of Education

The level of education is vital when adoption and usage of e-commerce. Table 2 shows the respondent educational qualification. As shown in table 2, respondents' level of education was established as follows; majority 48.3 percent attained first Degree while 24.4 percent had attained had attained secondary education. Further findings indicated that 13.9 percent had masters and above while the remaining 13.4 percent had diploma

**Table 2: Educational Qualification**

Age Categories	Frequency	Percent
Highs School	58	24.4
Diploma	32	13.4
Degree	115	48.3
masters and above	33	13.9
Total	238	100.0

Source: (Field survey, 2023)

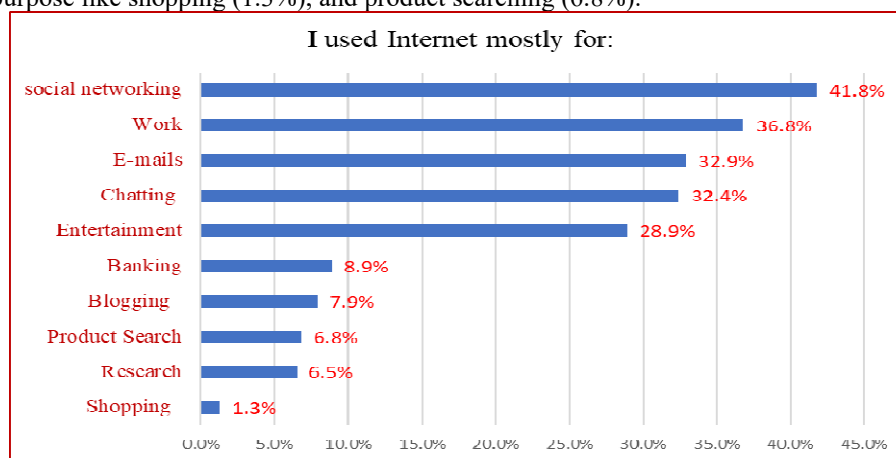
#### 4.3. Respondents experience using intermate and e-commerce

This section provide result on respondents' experience using intermate and e-commerce. In this regard, respondents were asked to rate their internet skill. As presented in table 3, when respondents were asked to rate their internet skill, 60.5 percent rated very good, 15.1 percent rated good and 21.0 percent rated fair. While 2.5 percent rated their internet skill as poor.

**Table 3: How would you rate your internet skill**

		Frequency	Percent	Cumulative Percent
Valid	Very good	144	60.5	60.5
	Good	36	15.1	75.6
	Fair	50	21.0	96.6
	Poor	2	.8	97.5
	Very poor	6	2.5	100.0
	Total	238	100.0	

Respondents were also asked the purpose for mostly using internet, 41.8% indicated that they used internet for social networking, while 36.8% mostly used internet for work. The finding showed that internet is little used for business purpose like shopping (1.3%), and product searching (6.8%).



**Figure 3: The purpose of using internet**

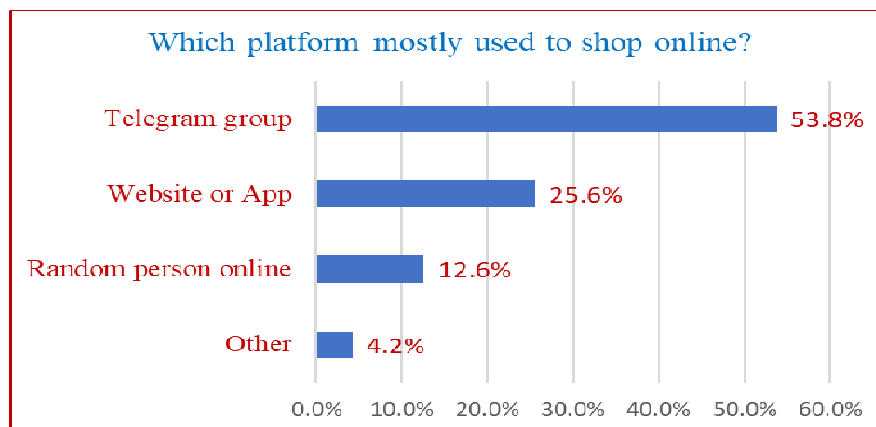
As illustrated in Table 4.5, when respondents were asked about the e-commerce experience 42.9 percent indicated they had 1 – 5 years, while 37.4 percent were 5 – 10 years' experience. Those who had more than 10 years of internet experience constitutes 12.6 percent.

**Table 4: E-commerce experience**

		Frequency	Percent	Cumulative Percent
Valid	None	17	7.1	7.1
	1 - 5 years	102	42.9	50.0
	5 - 10 years	89	37.4	87.4
	Greater than 10 years	30	12.6	100.0
	Total	238	100.0	

Question was asked about how long have they been shopping online. The result indicated that 58.4 percent indicated that it long 1 – 3 years, while 26.9 percent were indicated it long less than year. For those who reported that it long 3 – 5 years constitute 5 percent, while the remaining 1.3 percent (3 respondents) indicated that it long

5 -10 years.



**Figure 4: Platform used to shop online**

Lastly, when respondents were asked about the means they mostly used to shop online, 53.8% indicated that they used telegram group, while 25.6% used websites or app. Those who used random person online constitutes 12.6% and the remaining 4.2% indicated the used other tools.

#### 4.2 Descriptive analysis of study variables

Descriptive statistics were used to explain the basic features of the data that was collected from the online survey. With the aim of Hofstede’s cultural factors including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation on acceptance and adoption of E-commerce in Ethiopia, respondents were asked to give their extent of agreement to the statements with regard to the five Hofstede culture dimensions of individualism, uncertainty avoidance, power distance, long-term orientation and masculinity in a five point Likert scale and then analyzed with descriptive statistics of mean score and standard deviation. Accordingly, the composite mean value shows the average of all respondents’ perceptions on each question. While, standard deviation shows how diverse are the perceptions of respondents for a given questions. In order to obtain the means, and standard deviations for each construct, the retained items in each response case were averaged and SPSS22 was used to calculate the numbers in the table.

**Table 5: Grand Mean score for the Construct**

Construct	Mean	SD
Individualism	2.42	1.02
Power Distance	3.46	0.89
Uncertainty Avoidance	3.68	1.12
Long-Term Orientation	2.82	1.25
Masculinity	3.38	1.14
Acceptance and adoption of E-commerce	2.86	1.24

When looking at the individualism dimensions the fundamental issue addressed is the degree of interdependence a society maintains among its members. It has to do with whether people’s self-image is defined in terms of “I” or “We”. In Individualist societies people are supposed to look after themselves and their direct family only. In Collectivist society’s people belong to ‘in groups’ that take care of them in exchange for loyalty. Individualism received a low mean score (2.42) in this survey, which is consistent with Hofstede’s published scores. In Hofstede’s publishing score, Ethiopia with a score of 20 is considered a collectivistic society. This is manifest in a close long-term commitment to the member ‘group’, be that a family, extended family, or extended relationships.

The power distance dimension deals with the fact that all individuals in societies are not equal – it expresses the attitude of the culture towards these inequalities amongst us. The power distance dimension received a moderately high mean score (3.46) in this survey, which is also in consistent with Hofstede’s published scores. In Hofstede’s publishing score, Ethiopia scores high on this dimension (score of 70) which means that people accept a hierarchical order in which everybody has a place and which needs no further justification. Hierarchy in an organization is seen as reflecting inherent inequalities, centralization is popular, subordinates expect to be told what to do and the ideal boss is a benevolent autocrat.

In this survey masculine dimension get moderately high mean value (3.38), which is also in consistent with Hofstede’s published scores. In Hofstede’s publishing score, Ethiopia scores 65 on this dimension and is thus a Masculine society. In Masculine countries people “live in order to work”, managers are expected to be decisive



and assertive, the emphasis is on equity, competition and performance and conflicts are resolved by fighting them out. The higher score on the masculine dimension indicates that the society will be driven by competition, achievement and success, with success being defined by the winner / best in field – a value system that starts in school and continues throughout organizational life.

The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these is reflected in the score on Uncertainty Avoidance. The dimension uncertainty avoidance got high mean score (3.68) in this study. In Hofstede's publishing score, Ethiopia received an intermediate score of 55 on this dimension. The strong uncertainty avoidance is an indication culture that the uncertainty inherent in life is a continuous threat that must be fought. In terms of e-commerce adoption, the strong uncertainty avoidance is an indication of hesitation toward accepting new products and technologies.

Long-Term Orientation dimension describes how every society has to maintain some links with its own past while dealing with the challenges of the present and future, and societies priorities these two existential goals differently. Normative societies, which score low on this dimension, for example, prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. Those with a culture which scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future. Overall, a number of the characteristics of Long-term orientation societies imply willingness to work to gain knowledge and adopt new technology, as well as saving money (thrift), so from a Hofstede perspective, one could assume that increasing Long-Term Orientation would boost perceived usefulness in adopting e-commerce. In Hofstede's publishing score, there was no score for Ethiopia on this dimension. In this study, long-term orientation dimension got low mean (2.82). This is an indication of Ethiopia culture is less inclination of long-term Orientation (more inclined toward short-term orientation). This is an indication of normative societies, which who prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. A low long-term orientation score in terms of e-commerce adoption implies reluctance to new change, such as new products and technology which may be one of the cultural reasons for reluctance in the diffusion of e-commerce in Ethiopia.

Overall, concerning the Hofstede cultural dimensions, the relation between the scores almost similar to the Ethiopia scores on the Hofstede dimensions. However, the scores of the Hofstede dimensions, published by Hofstede, are not directly comparable with stand-alone scores from a Likert scale survey; the Hofstede scores are relative and not absolute, thus the scales may look very different between the constructs. Thus, though it is tempting, it would be hard, if not impossible, to draw conclusions from a direct comparison between the results of this survey and Hofstede's published scores.

Regarding acceptance and adoption of E-commerce, the survey found the grand mean value of 2.86 which is considered low. This is an indication that most of respondents who participated in this survey are reluctance in the accepting and adoption of e-commerce in Ethiopia. Although there are respondents who indicated their intension to use e-commerce, the low grand mean score for acceptance and adoption of E-commerce revealed that majority the respondents find e-commerce less useful and that the outlook for future use is gloomy.

#### **4.3. Correlation Results**

In order to determine the significance level of the correlation and to evaluate the strength of this relationship, a Correlation Coefficient was conducted and the findings are presented in Table 6.

**Table 6: Pearson Correlation of Hofstede Cultural dimensions and adoption of E-commerce**

		Individualism	Power Distance	Uncertainty Avoidance	Long-Term Orientation	Masculinity	Adoption of E-commerce
<b>Individualism</b>	Pearson Correlation	1	.300	.370	.371	.215	.373
	Sig. (2-tailed)		.019	.080	.018	.045	.016
	N	238	238	238	238	238	238
<b>Power Distance</b>	Pearson Correlation	.300	1	.312	.313	.454**	.382
	Sig. (2-tailed)	.019		.012	.120	.000	.090
	N	238	238	238	238	238	238
<b>Uncertainty Avoidance</b>	Pearson Correlation	.370	.312	1	.303	.332	-.802**
	Sig. (2-tailed)	.080	.012		.089	.092	.000
	N	238	238	238	238	238	238
<b>Long-Term Orientation</b>	Pearson Correlation	.371	.313	.303	1	.325	-.776**
	Sig. (2-tailed)	.018	.120	.089		.086	.000
	N	238	238	238	238	238	238
<b>Masculinity</b>	Pearson Correlation	.215	.454**	.332	.325	1	.320
	Sig. (2-tailed)	.460	.000	.092	.086		.092
	N	238	238	238	238	238	238
<b>Adoption of E-commerce</b>	Pearson Correlation	.373	.382	-.802**	-.776**	.320	1
	Sig. (2-tailed)	.016	.090	.000	.019	.092	
	N	238	238	238	238	238	238

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

The results show that uncertainty avoidance dimension was **negatively correlated** to acceptance and adoption of E-commerce with a Pearson's Correlation Coefficient of  $r = -0.802$  and at level of significance of 0.000. This relationship was high according to Marczyk, et al. (2005) interpretation. Ethiopia scores strong uncertainty avoidance which is an indication culture that the uncertainty inherent in life is a continuous threat that must be fought. In terms of e-commerce adoption, the strong uncertainty avoidance is an indication of hesitation toward accepting new products and technologies. This study is in line with Wan, et al. (2016), who discovered that strong uncertainty avoidance dimension had negative relationship with e-commerce diffusion in China. In fact, Arvid (2015) discovered that weak uncertainty avoidance is positively connected with attitudes toward online advertising and online brands in the Swedish culture.

The results show that long-term orientation dimension was **negatively correlated** to acceptance and adoption of E-commerce with a Pearson's Correlation Coefficient of  $r = -0.776$  and at level of significance of 0.000. This relationship was strong according to Marczyk, et al. (2005) interpretation. Ethiopia scores low in long-term orientation dimension which is an indication of normative societies, which who prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. A low long-term orientation score in terms of e-commerce adoption implies reluctance to new change, such as new products and technology. As a result, in Ethiopia, the long-term orientation dimension was negatively associated with E-commerce acceptance and adoption.

The results further show that the remaining three Hofstede cultural dimensions (individualism, power distance and masculinity) were **positive but weak** relationship with acceptance and adoption of E-commerce. Individualism dimension was positively correlated to acceptance and adoption of E-commerce with a Pearson's Correlation Coefficient of  $r = 0.372$  which was however not statistically significant at 0.05. The results also revealed that there is a weak and positive relationship between power distance and acceptance and adoption of E-commerce with a Pearson's Correlation Coefficient of  $r = 0.382$ , which was also not statistically significant at 0.05. More so, the results also revealed that there is a weak and positive relationship between masculinity and acceptance and adoption of E-commerce with a Pearson's Correlation Coefficient of  $r = 0.320$ , was also not statistically significant at 0.05.

Over all, the result shows that there are negative but relatively strong relationship between the two Hofstede cultural dimensions (uncertainty avoidance and long-term orientation) and acceptance and adoption of E-commerce. The remaining Hofstede cultural dimensions though they have positively correlated with acceptance and adoption of E-commerce, the relationship was weak and also not statistically significant

#### 4.4. Analysis of Regression Results

The main objective of study was to assess the influence of Hofstede’s cultural factors including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation on acceptance and adoption of E-commerce in Ethiopia. This was done through regression analysis. Multiple linear regressions are based on the assumptions of Ordinary Least Square (OLS). When one decides to analyze data by means of multiple regressions, part of the process involves checking to make sure that the data need to analyze can in fact be analyzed using multiple regression. One could do this for the reason that it is only appropriate to use multiple regressions if the data "passes" those assumptions that are required for multiple regressions to give a valid result. So, in the following section necessary diagnostic tests were carried out on the variables

##### 4.4.1 Assumptions/diagnostic test for multiple linear regressions

###### 4.4.1.1 Multicollinearity

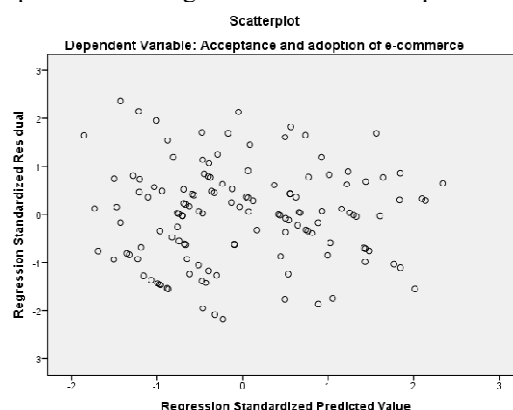
When two or more independent variables are substantially correlated with each other, multicollinearity arises. This complicates determining which independent variable contributes to the variation explained in the dependent variable (Simon, 2004). The Variance Inflation Factor (VIF) is a tool for determining if study variables are multicollinear. Variance Inflation Factor was checked for indication of multicollinearity where their numerical values were all well below the cut-off value of 10 suggested by Neter, et al., (1996). As indicated in table 7, there was no collinearity among the independent variables based on this rule of thumb.

**Table 7: Multicollinearity test for the study variables**

Variable	VIF	Tolerance
Individualism	.572	1.748
Power Distance	.610	1.639
Uncertainty Avoidance	.578	1.730
Long-Term Orientation	.542	1.845
Masculinity	.612	1.635

###### 4.4.1.2. Linearity

The linearity assumption in multiple regression analysis assumes that the dependent variable and each of the independent variables, as well as the dependent variable and the independent variables collectively, must have a linear relationship (Asghar & Saleh, 2012). The most frequent method for evaluating linearity is to create scatter plots and then visually evaluate them for linearity. It is a sign of linearity if the figure has no evident pattern and the points are evenly distributed above and below zero on the X-axis, and to the left and right of zero on the Y-axis. The scatter-plot of studentized residual against linearly predictive value is shown in the figures below. The figures have a horizontal band of points indicating the linear relationship.

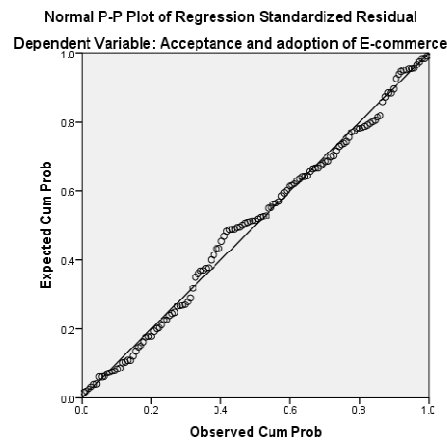


**Figure 5: a Studentized residual scatter plot dependent variables**

###### 4.4.1.3. Normality

The normality assumption in multiple regressions assumes that residuals (errors) are nearly regularly distributed. An assessment of the normality of data is a prerequisite for many statistical tests because normal data is an underlying assumption in parametric testing. There are two main methods of assessing normality: graphically and numerically. Graphical interpretation has the advantage of allowing good judgement to assess normality in situations when numerical tests might be over or under sensitive. Plotting normal P-P for the dependent variable to corroborate the given result is a straightforward technique to check this assumption (Asghar & Saleh, 2012). The cumulative probabilities (values range from 0 to 1) are plotted on the X-axis, and the predicted probabilities given the normal curve are plotted on the Y-axis. The points would be on a straight diagonal line if the sample

was exactly normally distributed. The graph below illustrates Normal P-P plots for the dependent variables (acceptance and adoption of E-commerce), in which the points lie on a straight line, indicating that the data is normally distributed.



**Figure 6: Normal P-P Plot of residual for dependent variables**

Source, (Survey data, 2022)

#### 4.4.2 Result of Multiple linear regression

The objective of the study was to examine the effect of Hofstede’s cultural factors on acceptance and adoption of E-commerce in Ethiopia. Thus, study sought to determine the effect of each of the five cultural dimensions (individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation) on acceptance and adoption of E-commerce in Ethiopia. The result of the regression analysis is presented in the following section

##### 4.4.2.1. The Multiple Coefficient of Determination R<sup>2</sup>

Coefficient of determination explains the percentage of variation in the dependent variable (acceptance and adoption of E-commerce) that is explained by all the five independent variables (individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation). The table 8 below preset the model summary.

**Table 8: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.839 <sup>a</sup>	.703	.697	1.506

a. Predictors: (Constant), Masculinity, Long-Term Orientation, Power Distance, Uncertainty Avoidance, Individualism

b. Dependent Variable: Acceptance and adoption of E-commerce

The result shows that the five independent variables (individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation) that were studied, explain 69.7% of diffusion of E-commerce in Ethiopia as represented by the R<sup>2</sup> value. The remaining 30.3% of diffusion of E-commerce in Ethiopia is left unexplained by the explanatory variables used in the study.

##### 4.4.2.2. ANOVA Interpretation

The result in ANOVA table 9 shows that the sum of squares of the regression is 1230.303 at 5 degrees of freedom and a mean square of 246.061. The residual sum of squares is 519.058 with 229 degrees of freedom and mean square value of 2.267. The test for the joint significant which is given by the F statistic is 108.558, it is statistically significant. This imply that the independent variables, that are individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation considered were relevant in explaining Acceptance and adoption of E-commerce in Ethiopia.

**Table 9: ANOVA for Hofstede cultural dimensions and acceptance of E-commerce <sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1230.303	5	246.061	108.558	.000 <sup>b</sup>
	Residual	519.058	229	2.267		
	Total	1749.362	234			

a. Dependent Variable: Acceptance and adoption of E-commerce

b. Predictors: (Constant), Masculinity, Long-Term Orientation, Power Distance, Uncertainty Avoidance, Individualism

#### 4.5.2.3. Regression Coefficients

The findings in Table 4.10 show the coefficients of the regression. According to the findings, among the five service Hofstede cultural dimensions, only uncertainty avoidance and long-term orientation are significant in predicting the diffusion E-commerce in Ethiopia since the p values were less than 0.05.

**Table 4.10: Coefficients for Hofstede cultural dimensions**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.582	.604		-2.619	.009
1 Individualism	.059	.037	.076	1.606	.110
Power Distance	.064	.038	.077	1.673	.096
Uncertainty Avoidance	-.287	.043	-.315	6.653	.000
Long-Term Orientation	-.523	.053	-.479	9.806	.000
Masculinity	.076	.050	.070	1.524	.129

a. Dependent Variable: Acceptance and adoption of E-commerce

Long-Term Orientation has negatively influenced the acceptance and adoption of E-commerce in Ethiopia with a beta value (beta =-.523) and t value of 9.806 which is significant. Similarly, uncertainty avoidance dimension has also negatively influenced the acceptance and adoption of E-commerce in Ethiopia with a beta value (beta =-.287) and t value of 6.653 which is statistically significant. The remaining three Hofstede's cultural factors, namely: individualism, power distance and masculinity have not significant influenced the acceptance and adoption of E-commerce in Ethiopia.

#### 4.5 Hypothesis Test

The study used multiple linear regression analysis to determine the statistical relationship between the independent and dependent variables. All the five null hypotheses as stated in chapter two of this study were tested using multiple linear regression models.

**Table 11: Summary of hypotheses testing**

Hypotheses	t-statistics	Sig.	Decision
H1: Hofstede's power distance cultural dimension has an effect on diffusion of e-commerce in Ethiopia.	1.673	.096	Rejected
H2: Hofstede's individualism cultural dimension has an effect on diffusion of e-commerce in Ethiopia.	1.606	0.11	Rejected
H3: Hofstede's Masculinity cultural dimension has an effect on diffusion of e-commerce in Ethiopia.	1.524	0.129	Rejected
H4: Hofstede's uncertainty avoidance cultural dimension has an effect on diffusion of e-commerce in Ethiopia.	6.653	0.000	Accepted
H5: Hofstede's Long term orientation cultural dimension has an effect on diffusion of e-commerce in Ethiopia.	9.806	0.000	Accepted

**1)H1: Hofstede's power distance cultural dimension has an effect on diffusion of e-commerce in Ethiopia.**

Decision: reject the formulated hypothesis since as show on Table 11 above the t-statistics for power distance cultural dimension is 1.673 which is not significant at 0.05. This finding is consistence with Arvid (2015), who found that there is no association between power distance and Attitude towards using e-commerce. More so, Capece (2013), found that power distance has not significantly affecting the acceptance of e-commerce in Italian context. However, Yoon (2009), found that power distance has significantly affecting attitude towards using online advertising and online brands.

**2)H2: Hofstede's individualism cultural dimension has an effect on diffusion of e-commerce in Ethiopia.**

Decision: reject the formulated hypothesis since as show on Table 11 above the t-statistics for individualism cultural dimension is 1.606 which is not significant at 0.05. This finding is in line with that of Arvid (2015), who reported no link between the individualism cultural dimension and attitudes toward adopting e-commerce. Similarly, Yoon (2009) revealed that individualism had no influence on how people feel about using online advertising and businesses. However, Capece (2013) found that individuality has a significant impact on e-commerce adoption in the Italian context.

**3)Hofstede's Masculinity cultural dimension has an effect on diffusion of e-commerce in Ethiopia.**

Decision: reject the formulated hypothesis since as show on Table 11 above the t-statistics for masculinity cultural dimension is 1.152 which is not significant at 0.05. This finding is in line with that of Wan, et al (2016),

who found no relationship between the masculinity cultural dimension and attitude towards online advertising and online brands. Similarly, Yoon (2009) revealed that masculinity had no influence on using online advertising and businesses.

**4)H4: Hofstede's uncertainty avoidance cultural dimension has an effect on diffusion of e-commerce in Ethiopia.**

Conclusion: Failed to reject the formulated hypothesis since as show on table 11 above the t-statistics for Hofstede's uncertainty avoidance cultural dimension is 6.653 which is significant at 0.00. It indicates that the strong uncertainty avoidance culture of Ethiopia has discouraging the acceptance and adoption of e-commerce. Ethiopia has a scored strong uncertainty avoidance, indicating a society that views life's inherent uncertainty as a constant threat that must be combated. In terms of e-commerce adoption, the strong uncertainty avoidance is an indication of hesitation toward accepting new products and technologies. This study is in line with Wan, et al. (2016), who discovered that strong uncertainty avoidance dimension negatively influencing diffusion of e-commerce in China. On the contrary, Arvid (2015) also found that weak uncertainty avoidance had positively affecting attitudes toward online advertising and online brands in the Swedish culture.

**5)H5: Hofstede's Long term orientation cultural dimension has an effect on diffusion of e-commerce in Ethiopia**

Conclusion: Failed to reject the formulated hypothesis since as show on Table 11 above the t-statistics for Hofstede's long term orientation cultural dimension is 9.806 which is significant. It indicates that Ethiopia low score in long-term orientation dimension is an indication of Ethiopia culture is less inclination of long-term Orientation (more inclined toward short-term orientation). This is an indication of normative societies, which who prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. Number of the characteristics of short-term orientation societies like Ethiopia imply lack of willingness to work to gain knowledge and adopt new technology, as well so from a Hofstede perspective, one could assume that increasing short-term orientation would decrease perceived usefulness in adopting e-commerce. A low long-term orientation score in terms of e-commerce adoption implies reluctance to new change, such as new products and technology which may be one of the cultural reasons for reluctance in the diffusion of e-commerce in Ethiopia. This research supports the findings of Wan, et al. (2016), who revealed that short-term orientation had a negative influence on diffusion of e-commerce in China. Arvid (2015), on the other hand, found that long-term orientation had a positive influence on views about online advertising and online brands in Swedish culture.

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary of Findings

The study was conducted with an aim to assess the effect of Hofstede's cultural factors on acceptance and adoption of e-commerce in Ethiopia. The summary of major findings was presented here after. Concerning the Hofstede cultural dimensions, the relation between the scores almost similar to the Ethiopia scores on the Hofstede dimensions. Individualism received a low mean score (2.42) in this survey, which is consistent with Hofstede's published scores. The power distance dimension received a moderately high mean score (3.46) in this survey. Masculine dimension gets moderately high mean value (3.38), which is also in consistent with Hofstede's published scores. However, the dimension uncertainty avoidance got high mean score (3.68) in this study. In Hofstede's publishing score, Ethiopia received an intermediate score of 55 on this dimension. The strong uncertainty avoidance is an indication culture that the uncertainty inherent in life is a continuous threat that must be fought. In terms of e-commerce adoption, the strong uncertainty avoidance is an indication of hesitation toward accepting new products and technologies. In this study, long-term orientation dimension got low mean (2.82). This is an indication of Ethiopia culture is less inclination of long-term Orientation.

The findings of the study from inertial statistics revealed that the combined effect of Hofstede's cultural dimensions significantly influenced acceptance and adoption of e-commerce in Ethiopia. The correlation result shows that there are negative but relatively strong relationship between the two Hofstede cultural dimensions (uncertainty avoidance and long-term orientation) and acceptance and adoption of E-commerce. The remaining Hotheaded cultural dimensions though they have positively correlated with acceptance and adoption of E-commerce, the relationship was weak and also not statistically significant. The finding also indicates that the highest relationship was found between long-term orientation and acceptance and adoption of E-commerce.

The result of regression also indicates that the Hofstede cultural dimensions namely individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation considered were jointly relevant in influencing the acceptance and adoption of E-commerce in Ethiopia. The result shows that the five independent variables (individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation) that were studied, explain 69.7% of diffusion of E-commerce in Ethiopia as represented by the  $R^2$  value. However, in terms of individual effect, among the five service Hofstede cultural dimensions, only uncertainty avoidance and long-term orientation are significant in predicting the diffusion E-commerce in Ethiopia since the p values were less than 0.05. Long-Term Orientation has negatively influenced

the acceptance and adoption of E-commerce in Ethiopia with a beta value (beta =-.523) and t value of 9.806 which is significant. Similarly, uncertainty avoidance dimension has also negatively influenced the acceptance and adoption of E-commerce in Ethiopia with a beta value (beta =-.287) and t value of 6.653 which is statistically significant. The remaining three Hofstede's cultural factors, namely: individualism, power distance and masculinity have not significant influenced the acceptance and adoption of E-commerce in Ethiopia.

## 5.2 Conclusion

The study was undertaken to assess the effect of Hofstede's cultural dimensions including individualism, uncertainty avoidance, power distance, masculinity and femininity, and long-term orientation on acceptance and adoption of e-commerce in Ethiopia. Accordingly, based on the findings presented in the above section; the researcher makes some conclusions concerning the relationship between Hofstede's cultural dimensions and diffusion of e-commerce in Ethiopia.

The first specific objective of the study sought to investigate whether the power distance as one element of Hofstede cultural dimension affect the acceptance and adoption of e-commerce in Ethiopia. The finding from regression revealed that power distance has not significantly influenced the acceptance and adoption of e-commerce in Ethiopia. This was backed by the significance test, which revealed that the effect was statistically not significant and hence rejected the formulated hypothesis.

The second specific objective of the study was to investigate whether the individualism as one element of Hofstede cultural dimension affect the acceptance and adoption of e-commerce in Ethiopia. The finding from regression revealed that individualism has not significantly influenced the acceptance and adoption of e-commerce in Ethiopia. This was supported by the test for significance which showed that the effect was statistically not significant and hence rejected the formulated hypothesis.

The third specific objective of the study was to investigate whether the uncertainty avoidance as one element of Hofstede cultural dimension affect the acceptance and adoption of e-commerce in Ethiopia. The finding from regression also revealed that the uncertainty avoidance has negatively and significantly influenced the acceptance and adoption of e-commerce in Ethiopia. This was supported by the test for significance which showed that the effect was statistically significant and hence accepted the formulated hypothesis. Ethiopia has a scored strong uncertainty avoidance score, indicating a society that views life's inherent uncertainty as a constant threat that must be combated. In terms of e-commerce adoption, the strong uncertainty avoidance is an indication of hesitation toward accepting new products and technologies.

The fourth specific objective of the study was to investigate whether the long-term orientation as one element of Hofstede cultural dimension affect the acceptance and adoption of E-commerce in Ethiopia. The finding from regression also revealed that the long-term orientation has negatively and significantly influenced the acceptance and adoption of e-commerce in Ethiopia. This was supported by the test for significance which showed that the effect was statistically significant and hence accepted the formulated hypothesis. Ethiopia has short-term orientation. Number of the characteristics of short-term orientation societies indicating lack of willingness to work to gain knowledge and adopt new technology, as well so from a Hofstede perspective, one could assume that increasing short-term orientation would decrease perceived usefulness in adopting e-commerce. A low long-term orientation score in terms of e-commerce adoption implies reluctance to new change, such as new products and technology which may be one of the cultural reasons for reluctance in the diffusion of e-commerce in Ethiopia.

The fifth specific objective of the study was to investigate whether the masculinity as one element of Hofstede cultural dimension affect the acceptance and adoption of e-commerce in Ethiopia. The finding from regression revealed that masculinity has not significantly influenced the acceptance and adoption of e-commerce in Ethiopia. This was supported by the test for significance which showed that the effect was statistically not significant and hence rejected the formulated hypothesis.

## 5.3 Recommendation

Advancement of the global internet technology and consumer experience dynamics in the new global market has created a critical challenge for marketing managers, specifically for e-commerce models. The findings of this study suggest that managers should consider cultural dimensions of each country in scrutiny when they decide to formulate strategies about online marketing. The more knowledge an e-commerce company possesses about the cultural values of Ethiopians, the less likely its online strategies will fail. Another implication for managers is the degree to which the findings of this study can be extended to other countries with identical cultural similarities, thereby reducing the associated risks and costs of online strategies

Marketing managers should understand that perception of firm's branding and advertising activities may vary across different countries and it should be noted that different people from different countries and discrepant cultures might perceive and understand the advertising messages completely differently. Advertisers who know the cultural context of each target country are successful because a good advertisement is one that

conveys the message in a persuasive manner in such a way that it will be felt under the cultural skin of the society. Therefore, advertisements are powerful tools for convincing the public to buy a product or service or to follow a specific task or avoid a specific action.

By virtue of this research, managers can find out what cultural factors are associated with acceptance and adoption of e-commerce in Ethiopian context. Since uncertainty avoidance and long-term orientation have the highest impact on acceptance and adoption of e-commerce in Ethiopian context, managers can appreciate the way online users value their time and have a futuristic view, which will consequently shape their attitude. Internet advancement has changed the way consumers search for information, interact with each other and purchase retail products; thus, consumer satisfaction and reaction are consequences of the feelings and attitudes experienced when accumulating all the benefits that a person hopes to receive from his or her interaction with the online vendor. In terms of avoiding uncertainty, managers should consider the doubt that internet users have about security and trust issues.

#### 5.4 Area Further Research

Although this research provides some significant insights into the influence of Hofstede cultural dimensions on diffusion of e-commerce in Ethiopia, there is still a chance to extend the findings to gain a more comprehensive understanding. The study of the research is confined with limited sample size. Therefore, future researchers should also make their researches in wider sample. Another consideration for future research is to examine Hofstede's theory on other aspects of life, particularly marketing mix. By doing so, it will extend the knowledge in confirming Hofstede's cultural dimensions. Therefore, further investigation is needed to examine whether the dominant ethnicity in a country with multiple ethnic groups would affect the subordinate culture and minorities positively or negatively.

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### **Conflicts of interests**

This original research work has not published elsewhere and has no conflicts of interest.