The Impact of E-Commerce on National Trade of Ghana

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Abstract

The importance of ecommerce to an economy and businesses cannot be overemphasized. It is recognized that ecommerce to businesses could trigger an innovative way that marketing and necessitate international trade. In effect, the study sought to investigate the effect of E- commerce on the national trade in Ghana. The study sought to analyze the factors that influence the adoption of ecommerce in Ghana. It also determined the effect of ecommerce to the economy of Ghana. The study adopted quantitative approach through the use of primary and secondary data. Research analysis used for this study were the frequency and the generalized method of moment (GMM). With respect to the primary data estimation, the findings of the study showed that ICT, skills and cost in ecommerce are factors influencing ecommerce among businesses in Ghana. On the part of the estimation of the secondary data, the result of study indicated that at one percent level of significant, ecommerce has positive significant effect on economic growth of Ghana. Per the outcome of the study, it was recommended that long term policy should be put in place to ensure the growth of ecommerce in Ghana.

Keywords: Ecommerce, International Trade, Economic growth, Small and Medium Enterprise and Information Communication Technology

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1. Introduction

In recent years electronic marketing has becoming the mostly used platform for both small and large business by developing nation to serve as a tool for economic returns (Yahayu and Day 2015). It has been reported by scholars that there exists a disparity between developed and developing countries in terms of the adoption of ecommerce (AL-Alawi 015). This disparity on the part of the developing nations are often as a result of the limited financial capabilities, better infrastructure that could propel the development and such countries to adopt ecommerce.

In the developed nations, e-commerce is making positive returns and highly patronized by most business. This is however, the opposite of developing nation for instance Ghana, where the adoption of ecommerce is still on down tone. In effect, the highly unbalanced skewed distribution in ecommerce growth implies an unbalanced benefit spread (Awiagah, Kang and Lim 2016).

The era of information or digital age has rationalized how the traditional form of commerce was conducted and Ghana is no exception. Internet and e-commerce acceptance in Ghana are widely spreading across the country and in every region at faster rate than ever thought. Ghana is currently making huge investment in IT infrastructure, telecommunications, digitization of various government businesses and processes, upgrade of internet connectivity and e-commerce. Internet and e-commerce acceptance in businesses, government activities and processes, and in wide range of community engagement are fast becoming imperative and fit in Ghana (Gbeve, 2019).

However, despite these great opportunities and the emerging of businesses in ecommerce, Ghana and for that matter Africa seems to be slacking behind in terms of reaping the benefits that could be generated from ecommerce. With the high digitization of Ghana's economy and technological advancement in the country, the question that begs to be answered is why most businesses are not adopting ecommerce in their operation. It is from this backdrop the study is conducting the adoption of ecommerce in Ghana and its impact on national trade.

1.1 Objective of the Study

Generally, the study seeks to investigate the adoption of ecommerce on the national trade of Ghana. Specifically, the study seeks to;

- 1. Evaluate the factors that influence the adoption of ecommerce in Accra, Ghana
- 2. Determine the effect of ecommerce to the economy of Ghana.

1.2 Justification of the Study

With the growth in information communication technology in Ghana and globally and the adoption of

ecommerce by most businesses to improve efficiency in performing their tasks suggests the relevance of ecommerce to businesses in Ghana.

2. Literature Review

This chapter focused on the theories of ecommerce and empirical studies that focuses on ecommerce.

2.1 Contrast Theory

This theory has been defined by Dawes et al. (1972) as the propensity to amplify the differences a person or a group or nation's own attitudes and the attitudes represented by the opinion of statement presented.

2.2 Empirical Review

Factors that influence the adoption of ecommerce in Ghana

There are many elements underlying ecommerce adoption. Per the view of Turban et al. (2016), the drivers of EC can be divided into many categories depending on the kind of agency, and application involved. Several studies have researched on motivation to ecommerce utilization and adoption. According to Aljowaidi, (2015) there may be no agreement on a general framework that can be used in all nations, due to the fact that companies definitely by reality are setup in different environments, and sociocultural. Multiple number of literatures have tested the factors that influence businesses to adopt ecommerce. For instance, Aljowaidi, (2015) investigated the elements motivating companies to undertake ecommerce. The report revealed that what have an impact on the adoption of ecommerce encompass advertising and marketing and broadcasting enough data to potential clients, encouraged owners for such technology, marketing, competition, and enhancing business performance, enhancing purchaser, offerings, advertising, reducing operation charges, enhancing enterprise overall performance. The revealed that businesses adopt ecommerce so as for expanded sales, enhancing customer support, and improving business performance were vital drivers for ecommerce usage.

Smaller firms face Spartan straining on limited monetary and time resource, though the internet connection cost is falling and e-mail is becoming affordable to most companies, the mainframe software and hardware represent a significant investment for SMEs and their costs remain high, there is also a requirement for a substantial investment in training and time for employees to maintain a skilled workforce hence grand contribution remains a substantial investment costs (Lewis and Cockrill, 2012).

The cost of information communication technology have adverse effect on ecommerce development in evolving nations as a result raising a competitive environment which is senseless regulatory framework because of prohibitive internet and infrastructure get admission to. The cost of putting in an e-trade reduce across the finances of buying hardware, software equipment installation, telecommunication fees, initial planning, schooling, continuous upkeep and servicing charges. OECD, (2004). The monthly price of internet connectivity surpasses returns of positive percent of the populace. The rate of net accessibility determines the choices to use net and e-commerce. Thus, to OECD, (2004) presence of a wide range of net connections permit users to pick one of a kind and suitable services in to their specific wishes and potentials from on line activities and another communique offers.

MacGregor (2011) indicated that the excessive expenses in building ecommerce is an obstacle to e-trade adoption; consequently, small and medium enterprises must rely both on voluntary consultancy from higher education institution or the availability of government support and the fact that small businesses encounter challenges acquiring finance compared to large corporations tend to be an exceptional barrier to ecommerce adoption.

ICT skills and adoption of e-commerce

Lack of technical expertise including low computer literacy among employees and owner-managers leading to heavy reliance on external consultants to provide necessary proficiency is an aspect that affect E-commerce adoption in the SMEs yet reliance on external advice does not necessarily have to be from experts. Another thing is that small firms use short term return on investment thus e-commerce is a long term and cynicism of IT industry (Scupola 2018). According to Lapointe and Rivard (2005), There is lack of ICT expertise to manage and support e-commerce software adoption within Small Organizations. Additionally, Internal Resistance is evident by perceived negative impact of the technology on existing IT infrastructure. Lack of awareness of technology and enabling environment is significant to technology adoption readiness in order to counter competition.

The success of adoption of a technology by organizations depends on the IT level of people within such organizations, People within an organization may resist the adoption of a technology due poor training or even lack of training on the same, which can prompt fear on security risk in using such technology and perceived job loss, or loss of control as a result of adoption of such technology (Bull and Maclean 2007). Kurnia et al., (20015) and Molla & Licker, (2005) asserts that decision to reject or accept E-commerce may come from entrepreneurs' comfort of e-commerce applications and the external organizations or other business associates. An organization may be influenced to adopt a technology if owner-managers are equipped with skills on the software applications

and also if peer organizations are adopting the same to remain competitive.

Access to ICT and adoption of e-commerce

UNCTAD (2006) argues that web access in underdeveloped nations is principally constrained to just emailing form of communication and therefore several individuals only perceive the usage of the internet as a platform for email, surfing through the web, and fax communication among individuals, thereby making most people unaware about the relevant of the internet other beneficial tool in the global setting. The absence of hardware at the organizational and at the individual level is a key blockade to accessing the Internet and involving in ecommerce. The presence of a suitable Internet infrastructure is a necessary but not appropriate condition for the development of e-commerce, the necessary infrastructure and deregulation need to be firmly in place. Oxley and Yeung, (2012) asserts that even with access to the necessary equipment, users can not become active ecommerce participants unless they have reasonable confidence in the integrity of transactions undertaken on- line.

Determine the effect of ecommerce to the economy of Ghana

One of the crucial tools for increase in growing nations can be the adoption of ecommerce (Rahayu and Day, 2015). It allows small and medium scaled agencies like to compete on a greater international stage. E-commerce participation can be first on the national and nearby ranges after which to the wider worldwide market (Al-Alawi and Al-Ali, 2015). There is, but, an obvious disparity among e-commerce adoption in advanced and developing nations. Under developed nations regularly lack the wanted monetary, legal and infrastructure to assist the development, adoption, and diffusion of e-commerce. About 91% of e-commerce happens in developed nations, with Africa and the middle East accounting for approximately 2.4% of the full (United countries conference on trade and development, 2015). This distinctly skewed distribution in e-trade growth implies an unbalanced advantage spread (Awiagah et al., 2016), which further widens the virtual and monetary divide between evolved and growing countries (Olusola and Motunrayo, 2015). Frempong (2007) but, argues that with right structuring and modelling, e-commerce can be the disruptive device SMEs in developing counties should use to escape the 'poverty cycle'.

Currently, e-commerce has end up the new framework for business forcing traders and marketers to restructure their company agency and enterprise models to respond to the new needs imposed via the marketplace (Ferrera and Kessedjian, 2019). There may be a shift wherein clients demand more price consolation, reliability, and velocity best feasible thru digital trading. Digital enterprise (e-commerce) is defined by using Khan, (2016) as the buying and selling of goods and services over a computer network or even mobile cellphone community. E-commerce structures have caused a simplified and powerful consumer to business and the enterprise to patron processes, consequently flawlessly augmenting the enterprise strategies (Samadi, Nogoev and Yazdanifard, 2011). E-trade promotes an efficient and intention-orientated evaluation for each the events participating in the call for and deliver aspects. That is a end result of wide range of avenues that it presents to each the dealers and the shoppers. Okadapao, Omwenga, & Oboko (2016) argue that with the amplified use of the e-trade, business structures, specifically SMEs have received a huge enhance, accordingly ensuring that the SMEs live on.

3. Research Methods

This chapter provided the various procedures and methods the study adopted in achieving the objective of the study.

3.1 Model Specification

The model specification for the study is in two folds, that is the secondary data model and the empirical data. The secondary is looked at in the section first, before the empirical model specification.

- 3.1.1 Secondary Data Model Specification
- The study used generalized method of moment as the estimation techniques.

The Effect of ecommerce on businesses/the economy of Ghana

Per the view of Zahonogo (2017), trade and business improve economic efficiency and leads to the reduction in poverty. In promoting economic and social development of a nation, there requires the introduction of information and communication technology according to a report from Kaufmann and Riggins (2012); UNCTAD (2019). The more e-commerce develops and its impact felt, the higher socio-economic effects or influence are likely to emerge (K. Sharma & N. D Gupta, 2014). The work of Rahayu and Day, (2015) and concluded that ecommerce is a contributing factor to the growth of small and medium enterprises and consequently to the growth of the economy. Per the view of Alawi and Ali (2015), e-commerce participation could be first at the national and regional levels and then to the broader international market.

Ferrera and Kessedjian (2019) indicated in their study that currently, e-commerce has become the new framework for business forcing investors and entrepreneurs to restructure their corporate organization and business models to respond to the new demands imposed by the market. Samadi, Nogoev and Yazdanifard, (2011) report found that e-commerce platforms have led to a simplified and effective consumer to business and the business to consumer processes, therefore perfectly augmenting the business processes and promoting the growth of the economy. Another study by Babu, (2017) agrees that ecommerce have given most economies the opportunity to achieve economic growth that would have been difficult to realize.

The model is specified in equation (3.1).

$GDP = F(ECO, INT, INF, EXR, GDP, TO, TEL, EXH) \dots (3.1)$

Where GDP as the gross domestic product, INT is lending interest rate, INF is inflation, EXR is exchange rate, TO is trade openness, TEL is telephone, ELEC is electricity consumption.

Thus, per the review of previous studies and the model, the study hypothesizes that;

1. H1: There is a positive effect of ecommerce on businesses/the economy of Ghana

3.2 Types and Sources of Data

The sources of data for this research comprised of two approaches. The information required is sometimes already available and needs to be extracted. However, there is information that needs to be collected. Thus, the sources of data for the study entailed both primary and secondary sources of data.

Secondary sources of data

The secondary sources of data entailed sources like report from various small and medium enterprises that engages in ecommerce, data from the World Bank, HDI, IMF were of great sources to the study.

Primary Sources of Data

The primary source of data for the study formed the first-hand information from the respondents that form part of the study. This information was collected with the aid of questionnaire and interview. The questionnaire made up of close ended and open-ended questions.

3.3 Target Population

The target population for the primary data comprises of all employees in small and medium enterprise that engage in ecommerce in Ghana. In all, the estimated population for the study was 1424.

3.4 Sampling technique

In research, the need to sample is one that is almost invariably encountered. With the probability sampling, the cluster sampling was the first sampling technique adopted to select a group e-commerce business based on their characteristics and proximity. After the small medium enterprises were clustered based on their features in terms of their location, systematic sampling was then adopted to select respondents from the the e-commerce businesses. The sample size was selected on proportional basis. The study determined the sample size using Taro Yamane (1967) formula at confidence interval of 95%. Hence, the sample size for the study was 312.

3.5 Instruments for Data Collection

The study adopted questionnaire as the instrument for data collection. The questionnaires were then be given to respondents to answer at their convenience. Thus, in the collection of data, respondents were given full access to the questions that needed to be answered.

3.6 Data Type

The study used secondary date and it covered the period 1995 to 2020 for 26 countries. The choice of the study period and countries were based on data availability. Data on foreign direct investment, exchange rate, inflation, GDP were sourced from World Bank's *World Development Indicators*, 2020.

4. Estimation Techniques and Method of Data Analysis

The study was analysed using descriptive approach and inferential approach. Under the descriptive analysis, the measures of association and measures of central tendencies were used in the analysis of data. With the inferential statistics, the study GMM analysis was the statistical tools adopted.

4.1 Factors that Influence the Adoption of Ecommerce in Accra, Ghana

This section of the study focuses on the factors that hinder the adoption of ecommerce. This section is divided into two subsections, that is, cost of information communication on the adoption of ecommerce and the knowledge and skills needed for the adoption of ecommerce.

Cost of ICT on adoption of e-commerce

As indicated by Turban et al., (2016) there are motivating factors leading to the adoption of ecommerce. This study on the other hand considered both the inhibiting and motivating factors to the adoption of ecommerce. The outcome of the study is represented in table 1.

| | | | | | Std |
|-----------------------------------------------------------------------|-----|-----|-----|----------|-------|
| | Ν | Min | Max | Mean | Dev |
| The cost of electronic materials has a negative influence on adoption | 312 | 1 | 5 | 4.01 | 1.070 |
| of e-commerce | | | | | |
| The cost of internet connectivity is affordable to SMEs in Ghana | 312 | 1 | 5 | 3.77 | 1.122 |
| Accessibility and availability of ICT is effective for adoption of e- | 312 | 1 | 5 | 3.85 | 1.357 |
| commerce | | | | | |
| SMEs have successfully developed ICT and related Infrastructure | 312 | 1 | 5 | 3.67 | 1.299 |
| | | | | NT 2 02) | |

Table 1 Cost of ICT on adoption of e-commerce

(MEAN= 3.83)

In an attempt to investigate the factors that influence the adoption of ecommerce, the study examined the role of cost involved in ecommerce. For that matter, in table 1, the study examined whether the cost of electronic materials in ecommerce has a negative influence on the adoption of ecommerce. The result of the study showed that out of the 312 respondents, just about 9.7 percent disagreed with notion that the cost of electronic materials influences the adoption ecommerce. However, about 77.6 percent of respondents were in support of the view that the cost of ecommerce materials in terms of computer and other electronic gadgets influence the adoption of ecommerce by businesses. The outcome is supported with the mean value of 4.01 which clearly suggests that businesses will consider the cost of materials involved in adopting ecommerce before being on board.

Lewis and Cockrill (2012), indicated in their report that individuals tend to adopt ecommerce when by also considering the cost of internet connections. In respect to this, the study investigated the whether the cost of internet connectivity is affordable to businesses the adopt ecommerce in Accra, Ghana. The result of the study showed that about 10.6 percent of the respondents believe that the cost of internet connectivity is expensive and hinders the business operation. It was also recorded that about 13.5 percent were uncertain about the cost of internet. They were of the view that since they have no reference point to determine how affordable or expensive the cost of internet is, they cannot conclude. However, majority of respondents with a percentage of having a percentage of 75.9% were in consonant with the notion that the cost of internet connectivity is affordable to SMEs in Accra Ghana. The argument points to the fact that other countries are paying more than what they are paying in Ghana. The outcome of the study is no surprise as the average response also confirmed that cost of internet connectivity is affordable to businesses in Accra Ghana (Mean = 3.77).

Oxley and Yeung (2012) in their study concluded that even with access to materials and there is the lack of necessary infrastructure, ecommerce will be challenged to be incorporated by any organization. For this reason, the study sought to consider whether accessibility and availability of information communication technology will aid in effective in ecommerce adoption and if that is available in Accra, Ghana. Revealed from table 4.5, the average response of 3.85 clearly indicates that accessibility and availability are critical to ecommerce adoption. The result of the study indicated that about percentage of 75.4% of the respondents agree to the view that when there is accessibility and availability of ICT, ecommerce is easily adopted. To them, Ghana has created the room for the adoption of ecommerce due to the accessibility and availability of ICT infrastructure.

Still on the cost of ecommerce adoption, there was the need to examine whether SMEs have successfully developed ICT and related Infrastructure in Accra Ghana. The result from table 4.5 provided a clear picture to the small and medium enterprises in Accra Ghana on adoption of ecommerce. The result showed that SMEs in Ghana, mildly agree to the notion that they have successfully developed ICT and related infrastructure for their ecommerce operation (mean= 3.67). This is not surprising since internet connectivity and easy accessibility to electronic gadgets has made the adoption of ecommerce much simpler.

The outcome of the study is supported by the overall average result. The average value of 3.83 clearly shows that small and medium enterprises in Accra, Ghana have successfully developed ICT and related infrastructure for their ecommerce operation.

ICT knowledge and skills on adoption of e-commerce

Scupola (2018), in his study was of the view that ecommerce requires technical expertise in computer literacy among employees and owner-manager. Thus, to him, small organizations seem to lack ICT expertise to manage and support ecommerce software adoption. This study therefore investigated the knowledge and skills of workers in ICT among small and medium enterprises.

| | | | | | Std |
|---------------------------------------------------------------|-----|-----|-----|--------------|-------|
| | Ν | Min | Max | Mean | Dev |
| Ecommerce project requires considerable level of ICT skills | 312 | 1 | 5 | 3.50 | 1.296 |
| Without training of the human resources on the ever-changing | 312 | 1 | 5 | 3.75 | 1.345 |
| technology adoption of e-commerce will be hampered | | | | | |
| The ability to configure, operate and maintains a system is a | 312 | 1 | 5 | 3.83 | 1.281 |
| critical success factor and this depends on people | | | | | |
| Adoption of e-commerce depends on the ICT skills of people | 312 | 1 | 5 | 3.96 | 1.251 |
| operating it | | | | | |
| Entrepreneurs of SMEs in Ghana are comfortable with use | 312 | 1 | 5 | 2.92 | 1.513 |
| and applications of e-commerce | | | | | |
| | | | | (MEAN= 3.60) | |

Table 2 ICT knowledge and skills on adoption of e-commerce

From table 2, the study sought to find out whether ecommerce project requires considerable level of ICT skills. The outcome of the study showed that 18.3 percent of respondents were of the notion ecommerce project does not require considerable level of ICT skills. This was followed by about 15.7 percent of respondents were uncertain as to whether ecommerce project requires considerable level of ICT skills. Majority of respondents (66%) on the other hand, were in support of the notion that ecommerce project requires considerable level of ICT skills. The average value of 3.50 also confirms that respondents mildly support the view that ecommerce project requires considerable level of ICT skills.

There have been considerable scholars indicating that without training of the human resources on the everchanging technology adoption of e-commerce will be hampered. In this regard, the study sought to find out from respondents on whether ecommerce requires continues training of workers in ICT. The outcome of the study showed that 18.3 percent of respondents do not agree to the notion that ecommerce requires continues training of workers in ICT. It was also recorded that 9.9 percent of the respondents were uncertain about training of workers continuously in ICT. Majority of respondents, however, were of the view that for ecommerce to be well managed in small and medium enterprises, there is the need for workers to be trained continuously in ICT. The average response also confirms the result of the majority as averagely, (3.75) respondents believe that workers in small and medium enterprises require ICT training to improve ecommerce.

Having to secure a platform for ecommerce alone is not enough, thus, the ability to configure, operate and maintains a system is a critical success factor and this depends on people. The study therefore sought to find out whether the kind of skills people have influence how effective ecommerce will be. Table 4.6 showed that mean value of 3.83 support the view that individuals that have the ability to configure, operate and maintain a system is critical. The result of the study maintains that indeed, the ability to configure, operate and maintain ecommerce system is key to the progress of ecommerce as supported by majority of respondents with about 73.4 percent.

The study also focused on the role of ICT skills and the operation of ecommerce by small and medium enterprises. The outcome of the study revealed that 12.5 percent of respondents do not agree to the view that the adoption of e-commerce depends on the ICT skills of people operating it. The study also found that 33 respondents out of 312 sampled were uncertain on whether the adoption of ecommerce depends on ICT skills of people operating it. The study however found that majority of respondents with a percentage of 76.9% are in support of the notion that the adoption of e-commerce depends on the ICT skills of people operating it. This outcome of the study is also confirmed by the average response of 3.96, which indicates that ICT skills is key to people operating ecommerce.

The study sought to investigate whether entrepreneurs are comfortable with the use of ecommerce in Accra, Ghana. The outcome of the study showed that out of the 312 respondents sampled, 33 of them were uncertain on whether entrepreneurs in Accra, Ghana are comfortable with the use and operation of ecommerce. Also, the study showed that about 44.2 percent of respondents were not in support of the view that entrepreneurs of small and medium enterprises in Accra, Ghana are comfortable with the use and operation of ecommerce. Most respondents (45.2%) on the other hand were of the view that entrepreneurs are comfortable with ecommerce usage and operation (see Appendix D). The average value of 2.92 however, was not in support of the statement as it depicts that most respondents mildly do not agree to the statement that entrepreneurs are comfortable with the use and operation of ecommerce in Accra, Ghana.

The study found the overall average response of 3.60 which clearly indicates that ICT knowledge and skills play a key role in the adoption of e-commerce. One key outcome of the study depicts the need for training for owners and entrepreneurs in ICT usage in the operation of ecommerce in Accra, Ghana.

4.2 Hypothesis testing of the Significant effect of Ecommerce on Growth of Ghana's Economy

In testing for how ecommerce affects the economic growth of Ghana, the study adopted the GMM. The use of

GMM was to consider autocorrelation and heteroskedasticity. In essence, this method ensures the all variables used accurate represent the study for better outcome. In addition, the study focused on the generalized method of moment to prevent the lag term from influencing the outcome and since the lag term of economic growth could influence the outcome of the study, there was the need to adopt this method.

| Variables | Coefficient | Std. err Robust | P (z) |
|-----------|-------------|-----------------|--------|
| LNECO | 4.5574343 | 0.752662 | 0.000 |
| LNPOP | 1.343466 | 1.164411 | 0.394 |
| LNTO | 2.655656 | 0.0244789 | 0.000 |
| LNINF | -0.2558989 | 0.191141 | 0.412 |
| LNEXCH | -1.256283 | 1.65854 | 0.3023 |
| LNINFRA | 1.454785 | 0.0145734 | 0.000 |
| LNTEL | 1.541147 | 1.47961 | 0.3513 |
| r-square | 0.8792 | | |

| Table | 3 GMM I | Estimator o | f Economic | Growth Model | |
|-------|---------|-------------|------------|---------------------|--|
| | | | | | |

2022 Computation from IMF and World Bank data

Table 3 represents the generalized method of moment which estimates the effect of ecommerce on economic growth of Ghana. This method was adopted to eliminate heteroskedasticity and autocorrelation among the variables. In effect, this method provides accurate result by considering the lag term of GDP. The study found that the r squared value was 0.8792 which explains that the explanatory variables selected for the study has about 87.92 percent influence on the dependent variable. Thus, ecommerce which is the main explanatory variable and population growth, international trade, inflation, exchange rate, infrastructure, and telephone which represent the controlled variables have 87.92 percent effect on economic growth.

With respect to the estimation, the result showed that population growth has no effect on economic growth in Ghana, however, showed a positive relationship between the two variables. This indicates that when there a rise in population, GDP growth also increases in Ghana. Another variable was inflation, the result revealed that there is no significant effect of inflation on the economic growth of Ghana. The study showed that even though there is no significant effect of inflation on GDP, there is negative relationship between inflation and economic growth. Following inflation, the study considered another controlled variable which is international trade. The study found that international trade has positive significant effect of significant. Exchange rate on the other hand, was found to have no significant effect on economic growth of Ghana. The result however showed that economic growth and exchange rate are negatively related. Telephone as one of the controlled variables had no significant effect on economic growth of the nation. The last controlled variable was infrastructure. The result revealed that infrastructure development has positive significant effect on economic growth of Ghana. In this effect, improving the infrastructure development of Ghana results in economic growth of Ghana.

The main explanatory variable which is ecommerce was also estimated to identify the effect on economic growth. The result showed that there is a positive significant effect of ecommerce on Ghana's GDP. Thus, ecommerce tends to affect the economic growth of the country at one percent level of significant. In this regard, for the nation to achieve economic growth, there should be improvement in ecommerce adoption by businesses and government of Ghana.

5. Conclusion

Ecommerce which is now the key tool for businesses was the main approach to this study. The findings of the study showed that cost of ecommerce, knowledge and skills and the accessibility are the main influences for adoption of ecommerce. The outcome of the study also indicated ecommerce provides great benefits to businesses in Ghana as the adoption of ecommerce leads to growth. With high search for the adoption of ecommerce in Ghana among businesses, there is therefore the need to improve upon the various IT infrastructure to support businesses efficiency in service delivery. The need for further studies is key to the growth of businesses and the growth of the nation at large. For that reason, this study recommends that there should be further study that considers the role of ICT engagement in business growth in Ghana.

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