
ORIGINAL ARTICLE

Fiscal Policy Impact on Performance of Electronic Commerce Companies in Nigeria.

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ABSTRACT

The study examined the degree of impact of tax policy on the performance of electronic commerce companies in Nigeria. The study data were sourced from selected electronic commerce firms and government agencies in Nigeria using stratified simple random sampling technique. Regression analysis was used to determine the effect of fiscal policy on the performance of electronic commerce companies in Nigeria. The findings revealed that a change in fiscal policy variables resulted in a proportionate change in the performance of electronic commerce companies in Nigeria. It was concluded that Nigeria current fiscal policy is not comprehensive enough to support digital economic trends like electronic commerce. The lack of established electronic commerce regulating agency is also consequential to an inefficient electronic commerce sector in Nigeria. The study recommended a review of Nigeria's fiscal policy as it affects contemporary-online businesses like electronic commerce and the development of an all-inclusive-contemporary fiscal policy system that will positively enhance the benefits of electronic commerce business in Nigeria by the Nigeria government. The study further recommended the establishment of a government agency charged with the responsibilities of ensuring the implementation of the reviewed fiscal policy, infrastructural development, and budget monitoring and reporting for capital development projects meant to facilitate the efficiency of electronic commerce business in Nigeria.

Keywords: Electronic commerce, fiscal policy, tax policy, revenue authority, electronic data interchange, internet, optimal tax, Nigeria, online shop, worldwide web.

INTRODUCTION

The cardinal determinant of economic growth and development of a nation is its Fiscal policy. It denotes government pattern of revenue generation through tax policy, borrowings, and

government pattern of expenditure which are considered to be tools government normally employed to control economic activities. It has been viewed by economists as the essence of any government survival. It sets the role of how revenue is generated and distributed to develop the economy of a nation. It is considered a major government tool in stimulating economic growth. "Governments typically use fiscal policy to promote strong and sustainable growth and reduce poverty." (Mark and Asmaa, 2000). Since the fiscal policy has such an important role to play in the development of a nation's economy, it will be an unavoidable economic meltdown if any government fails to maximize the use of its fiscal policy.

As a nation evolves, it important for the essence of its survival to evolve in harmony to the global world. Historically, the importance of fiscal policy as a policy tool has buffed and faded. Before 1930, an approach of limited government, or *laissez-faire*, prevailed in most nations. With the stock market crash and the Great Depression, policymakers pushed for governments to play a more proactive role in the economy through new policies. More recently, countries had scaled back the size and function of government—with markets taking on an enhanced role in the allocation of goods and services—but when the global financial crisis threatened worldwide recession, many countries returned to a more active fiscal policy. Electronic commerce is the emerging global business that makes global goods and services, globally available at the expense of a quality communication technology. For any modern business to flourish both in patronage and in attracting the right kind of people, it must incorporate an electronic commerce unit. This unit presents the company's products and outlook to the entire world through an online shop with the help of the world wide web. however, "Many business enterprise and companies (especially in developing countries) were caught off-guard (by the hype of online shopping habits of customers) during the dot com bubble and stumbled into it without fully understanding how best to harness the power of the related tools and technologies for their needs" (Bhaskar, et al, 2012). This form of business (electronic commerce) removes the need for market space, physical meeting of the buyer and seller and in most cases the physical transfer of consideration for the good acquired or service received. Electronic commerce... is growing at a phenomenal rate as companies and consumers discover the benefits of instant access to data and the ability to make on-screen transactions. But electronic commerce is not the complete story. By fast development of information technology, businesses can join all their internal and external activities - from supply and purchasing to sales and marketing - into a single seamless operation. This is defined as e-business... (Fisher, 2002)

The fast pace of this new market and its ability to facilitate transfer pricing in weak policy countries is alarming. Nigeria being a part of the whole world of electronic commerce gusto cannot deny having its fair share of the corns and prone the invading market has come with; poor fiscal policy, poor infrastructure and low government investment on developing the infrastructural system of the country. As at the date of this paper, Nigeria government spends less than 2% of its GDP on infrastructural development. This compared to the benchmark of 10% is far below expectations.

Irrespective of the shortcomings, It is unclear (as there is no study yet to explain) if the sudden spring-up of over 180 electronic commerce companies in Nigeria was as a result of an optimal fiscal policy for electronic commerce business or an opportunity inform of a loophole in the existing fiscal policy for transfer pricing.

“Nigeria is the largest market in Africa with over 40million Internet users and this is only 25% of Nigeria's (over) 160 (now 180) million people” (Miniwatts Marketing Group,2003). It will be a huge oversight for a growing economy like Nigeria if this potential is not capitalized upon and the electronic commerce industry is regulated and current fiscal policy reviewed to ensure optimal returns from and for electronic commerce business in Nigeria.

Among the many issues facing electronic commerce business in Nigeria are poor infrastructure and lack of government commitment to infrastructure development. Inefficient government fiscal policy lacking modern models that cover how electronic commerce business should be conducted.

Unlike developing countries, developed countries like Canada, Australia, and the United States have clear fiscal policies that guide the conduct of electronic commerce in their country irrespective of the legal status of the electronic commerce companies. The economic development of any country depends on the fiscal policies that govern business activities. Tax policies on online products and services which are better measured using revenue generated from value added tax or sales tax on such products and services and government spending to provide the necessary infrastructure. Where these policies are porous and outdated, the country will face serious challenges including poor revenue generation, tax evasion, avoidance, and inconsistent economic growth. Through appropriate tax administration, expenditure, and regulatory policies, governments seek to attain certain objectives. The achievement of macroeconomic goals namely, full employment, the stability of price level, high and sustainable economic growth and external balance, from time immemorial, has been a policy priority of every economy whether developed or developing, given the susceptibility of macroeconomic variables to fluctuations in the economy.

Income tax policy has a significant role in revenue generation of a nation and the need for an efficient constant review of the income tax policy is paramount for inevitable economic growth. The emphasis for a consistent income tax review is an awareness necessitated by the ever-changing and dynamic global business world.

“Taxes on international income are imposed by national tax laws. Taxation is purely a sovereign right. Each nation-state makes and enforces its own laws. In other words, true international tax law does not exist. Other than tax treaties, most of which are bilateral agreements between sovereign states, international tax law simply refers to the international aspects of national tax laws. Even tax treaties do not replace national tax laws, they merely determine which nation-state has priority where more than one country has a claim” (Jinyan, 2000, pp. 645).

In this study, the researchers were particular about Nigeria's current fiscal policy impact on the performance of electronic commerce companies. Fiscal policy was unpacked into tax policy, government borrowings and government spending while the performance was measured using the profitability of sampled electronic commerce firms. For the avoidance of confusion, we have used the term electronic commerce to mean any company doing online shopping business in Nigeria irrespective of if such company has an office in Nigeria or not.

Employing a person's regression analysis, we investigated the impact of tax policy on the performance of selected electronic commerce companies in Nigeria. We also examined why and how an electronic commerce company's performance may be affected by its legal status.

THEORETICAL FRAMEWORK

John M. Keynes and Irving Fisher, in their theory of investment, both argued that investments are made until the present value of expected future revenues, at the margin, is equal to the opportunity cost of capital. This means that investments are made until the net present of the value of returns is equal to zero. This theory ties in neatly to the fact that no electronic commerce company will continue to carry on business if the net present of their returns is zero. This creates the logical conclusion that the deficiency in the fiscal policy system of Nigeria is creating some level of motivation for investors in the electronic commerce industry. In this study we are not particular about investment cash flows but about the rate of change on the investment cash flow (an indicative measure of performance) directly or indirectly caused by increase or decrease in the variables of fiscal policy. This study is further supported by the accelerator theory of investment which considers investment implicitly, by assuming that investment is determined by an optimal capital stock.

Another major theory fundamental to this study is Ramsey's Rule on the optimal tax rate. Ramsey argued that the excess of the burden of taxation will be minimized by setting the ratio of tax rates inversely proportional to price elasticities of demand for products. The "optimal" tax rate under the Ramsey Rule is the rate that minimizes the excess burden of taxation while still generating the required revenue. Ramsey Rule provides the basis for a symbiotic effect of tax policy on the tax-entity. While the tax-entity needs quality social infrastructure, the revenue authority needs an adequate tax to provide affordable social infrastructure. Ramsey's inquisitiveness was; "For a given amount of revenue to be extracted from a consumer, what tax system makes the consumer happiest and for a given level of happiness, how can we extract the most revenue from a consumer?" (Ramsey, 1927). In this regard, for every tax policy there are at minimum two parties that are stakeholders; the taxpayer and the revenue collecting authority. Optimal tax policy is therefore achieved when both parties are reasonably satisfied though in a symbiotic structure.

This study, therefore, presents a "symbiotic fiscal policy theory" which states that an optimal fiscal policy only exists at a full benefit to the parties to a tax regime; where tax revenue satisfactorily equates the level of development it was designed to achieve and are proportionate to tax payer's motivation. Our assumptions are; (i) Government expenditure is targeted to meet tax payer's needs (ii) Tax rates are a factor of government expenditure (iii) Taxpayers are positively motivated to pay and motivation is defined by provision of basic public needs (social amenities and infrastructure)). Assuming that government intend to achieve δ_1 economic development by imposing δ_1 tax rate, and taxpayers need p_1 social amenities and infrastructure to be motivated enough to pay tax at δ_1 tax rate, the highest probability that taxpayers will pay tax at δ_1 tax rate is achieved when $(f_x)\delta_1$ as a factor of p_1 is directly proportionate to β_1 . The taxpayer needs quality public infrastructure or social amenities and the government needs adequate tax revenue to provide these infrastructures. Symbiotic fiscal theory equates the two and holds that at this balance optimal fiscal policy is reached. Optimal fiscal policy is, therefore, that fiscal policy that brings equal and opposite satisfaction to the revenue authority and taxpayer. Satisfaction was defined as having adequate motivation to perform

agreed duties (to provide quality infrastructure and social amenities by the government and to pay tax at agreed tax rate by taxpayers).

Studies on tax policies raise two types of concern: the distribution of the burden of the tax on individuals, and the effect of the tax on economic behavior. Clearly, in attempting to discover distributional effects, we should be concerned with the effective incidence of the tax. Taxation as a system has been defined by several scholars as a process of collecting and accounting for the compulsory levy by the government and its agents with the ultimate aim of achieving community goals. Arnold and McIntyre (2002) define “tax as a compulsory levy on income, consumption, and production of goods and services as provided by the relevant legislation.” Taxation is a major tool through which government can generate adequate funds for the development of all sectors of the economy. However, resources generated from taxation must be properly channeled by the government or it will serve as a tool for destroying the economy through corruption.

Geoffrey (2006) contended that “fiscal policy involves the use of government spending, taxation and borrowing to affect the level and growth of aggregate demand, output and jobs creation.” It is the government spending policies that influence macroeconomic conditions. These policies affect tax rates, interest rates, and government spending, in an effort to control the economy. Fiscal policy is the means by which a government adjusts its levels of spending in order to monitor and influence a nation’s economy.

Fiscal policy is the process of government management of the economy through the manipulation of its income and expenditure and to achieve certain desired macroeconomic objectives.

The study deals with the effect of the tax on economic behavior like company growth, profitability and investment on Electronic Commerce. The study theoretical framework considered to some extent the work on measuring taxes on income from capital investment, and on factors influencing Electronic Commerce business and John M Keynes work on “theory of investment.

Taxation plays a very important role in the economic life of a developing country like Nigeria. Today, Nigeria is indeed in dire need of an effective and efficient tax system in order to generate enough revenue that will stimulate economic growth and development.

If tax raises the cost of capital, then it is likely to result in lower investment; conversely, if it lowers the required rate of return, then it is likely to result in a higher investment. Scholars have argued the composition of capital on investment. Generally, the capital on investment depends on how taxes affect the post-tax profit of the investment, which can be measured by an effective average tax rate. Studies reveal that it is particularly difficult to measure the effect on capital investment on a particular market using tax liabilities of companies in this market rather than a source-based tax. This approach is most easily justified in the context of a small open economy, which takes the world rate of return (after source-based taxes) as given. This provides convenient no-arbitrage conditions in which the effect of taxes formally on capital income can be clearly identified. Where we decide to involve other taxes we will have to place assumptions on market conditions.

Electronic Commerce market conditions are quite unique compares to those of conventional markets. They strive for very primary factors. The market is now an alternative and convenient way of conducting business both within and outside Nigeria. The emergence of Electronic Commerce has broken down the geographical boundaries of the market and has redefined the logical understanding of what a market used to be to a developing nation. Electronic Commerce has no specific market place, make no necessity for the buyer and seller to meet. It is a catalyst for possible economic growth. In the United State alone, *BusinesstoBusiness* (2001) reported that “ an annual online sales of USD 995 billion, followed by Electronic Commerce giants; Amazon.com, Ebag, and Alebaba.com.”

RELATED LITERATURE: THE EMERGENCE OF ELECTRONIC COMMERCE AND GROWTH

Before 1995, Electronic Data Interchange (EDI) was being employed in the exchange of business documents from one computer to another. "EDI originated on the mid-1960s when companies in the transportation and some retail industries were attempting to create a paperless office" (Yan, 2008).

EDI became the first generation of Electronic Commerce and was formalized later by the standard committee of the industry. The development of EDI allowed companies to exchange data, make funds transfer through the computer. EDI will generally use in the mid 1960s but was very slow. The development of Advance Research Project Agency computer Network (ARPANET) strictly for research purpose in 1960 gradually increase from 4 users to 213 in 1982. At around this time, the name "internet" was coined. The ARPANET introduced the second generation of Electronic Commerce. "Then in 1983, the Internet Protocol (IP) became the only approved way to transmit data on the Net, enabling all computers to exchange information equally. (Yan, 2008). This marked the era of the second generation of Electronic Commerce.

High-speed communication prompted the third generation of Electronic Commerce. In 1986, the National Science Foundation Net (NSFNET) was launched to improve the speed of Electronic Commerce. Within supercomputers "the backbone of the NSFNET then became the cornerstone of TCP/IP-based internet. All through the 1980s, the internet maintained a noncommercial native with primary users common to scientist and engine. "In 1990 the hypertext markup language (HTML) was created, with the specification for Uniform Resource Location (URL)" (Yan, 2008). The web environment of today became possible with the emergence of the URL erasing the realm of technical mystique and introducing common user interface. With increased users of the internet, people began to revolutionize the original purpose of the internet to a commercial facilitating purpose- the birth of modern day Electronic Commerce. The most significant milestone, came in 1999, when NSFNET decided to lift the commercial restriction on the use of the networks, and thereby opened up opportunities for Electronic Commerce.

CHALLENGES OF ELECTRONIC COMMERCE ADOPTION IN NIGERIA

Nigeria, like any other Africa country, is still struggling with the challenges an effective Electronic Commerce operation presents. Technology and power growth is slow. Wireless internet providers are both exploitative and inefficient. Taxation of internet sales has become more difficult to administer as large online merchant's trade online and boycott tax regulations which look already incomprehensive and inefficient for the Electronic Commerce industry. "In most African economy, which is a mirroring of Nigeria, Small and Medium Sized Enterprises (SMEs) dominates the market and are a significant component of the entire business world in the continent." (Yan, 2008) Electronic Commerce had invaded these markets unprepared. The developing countries have adapted to Electronic Commerce without a choice. They have learned to accept the risk of insecurity, poor infrastructure, and power supply which looms their economy while they pretend to enjoy the speed and availability Electronic Commerce has brought to them. Like in the colonial period, Electronic Commerce in Nigeria is a modern day colonial master. The country is not ready for it, but it has come. It knows its seat was not yet reserved but it has brought its own stool; structures like stable power supply, effect ITC and legal/regulatory framework which the country currently do not have are the major structure Electronic Commerce strives on to achieve the desired economic returns.

Though Nigeria has adopted Electronic Commerce the country is yet to develop measures that will facilitate a profitable Electronic Commerce experience in her ever-growing market. Millions of revenue that could be generated from Electronic Commerce is lost due to inadequate structures, porous fiscal policy and lack of commitment by the tax agency. It is difficult to create a clear distinction between telecoms and internet infrastructure in Nigeria. The telecoms and internet infrastructure sectors are not treated differently and are usually referred to and dealt with in the same manner. As the case with mobile telephony, internet infrastructure service providers are regulated by the Nigeria Communication Commission ("NCC"). In terms of importance measured by annual revenue generation in at least the last 10 years, the indicators show that the telecommunications sector has been significantly more successful than the broadcasting sector. According to the figures released by the National Bureau of Statistics in April 2014, from its previous contribution of 0.62% in 2001, the telecommunications and information technology services sector contributed 8.68 percent to the Nigeria economy – an equivalent of ₦6.97 trillion. In contrast, the combined contribution of broadcasting and the movie and music industry contributed 1.42%.

Prior to 1992, the telecommunications sector of Nigeria consisted of a monopoly provider – Nigeria Telecommunications Ltd. ("NITEL"). NITEL was the primary provider of both fixed wire and mobile cellular services and was regulated by the Ministry of Communications. By virtue of major reforms and licensing since 2001, Nigeria, with a population of over 167 million people, had at least 146,561,744 (one hundred and forty-six million, five hundred and sixty-one thousand, seven hundred and forty-four) active lines as at May 2015, up from 131,780,703 (one hundred and thirty-one million, seven hundred and eighty thousand, seven hundred and three) active lines as at May 2014. The data from the NCC also shows an increase in the number of internet subscribers, from 67,459,892 (sixty-seven million, four hundred and fifty-nine thousand, eight hundred and ninety-two) as at May 2014 to

88,136,580 (eighty-eight million, one hundred and thirty-six thousand, five hundred and eighty) subscribers as at May 2015.

In a paper titled “ Electronic commerce in Nigeria Market Trend and Consumer Behaviour ” by Ejiro (2014), he attempted to study how the different attitudes toward online shopping are formed, how different group of customers cutting across gender, location, mood time of day, weather condition and current trends affect shopping online in Nigeria. From his research, about 48% are between the ages of 25-34. From this data, we can conclude that newly married persons and youth are more interested in buying online than any other group. People older than 65year are less interested in shopping online and probably prefer shopping offline or are not interested in shopping at all. He argued that “Males prefer to shop more than females representing a difference of 19% from females. In addition, males spend more time shopping online than females and are more likely to convert to customers than females.” (Ejiro, 2014),

He argued that Lagos, the center of business in Nigeria has the highest number of electronic commerce visits. Over 86% of total visits to electronic commerce sites come from Lagos. A distant 2nd in Abuja, the Federal Capital Territory having 9% of electronic commerce. Analyzing user types in Nigeria, it is noticed that returning customers are more likely to convert than new customers. The difference in conversion between returning vs. new customers is about 10%. Moreover, the average session duration for the new visitors is four minutes, whereas, for the returning visitors, it is seven minutes. There are several reasons for high session time and a better conversion rate for return visitors. A few important reasons are:

Brand loyalty: regular buyers: returning visitors are brand loyal, spend more time browsing products, and are keen towards making a purchase as compared to the new visitors.

In some cases, return customers make up their minds during or after the first visit and the purchase process is carried out in the second or third visit, resulting in a higher conversion rate for return visitors.

Serious buyers are found frequently comparing products from different sellers and in search of the best option & price. “Out of the total electronic commerce visits, 45% are estimated to be new visitors, whereas the remaining 55% are returning visitors” (Ejiro, 2014). One of the reasons for the considerably good percentage of returning visitor sows largely to the fact that customers were happy with their previous shopping experience and want to buy some more items. Factors such as regular promotions, prices comparison, price drop, special campaign and exclusive site-deals amongst others also played a role in this outcome.

Is mobile truly taking over? Are people using more of mobile devices to complete transactions online than desktop devices? With the introduction of friendlier apps on mobile devices that cost fewer data and enable people to carry out a transaction on the go, is there a shift? According to Ejiro ((2014), 69% of traffic comes from mobile phones. When it comes to operating systems used for shopping online in Nigeria, Android OS takes the leads; accounting for 35.87% of the total sessions. The Android OS is closely followed by the Microsoft Windows operating system with 34.75% of total sessions – hence ,lending credence to the trend of mobile overtaking desktop visits in recent years. More people are now visiting electronic commerce stores with their mobile devices. The resttraffic comes from other operating systems including IOS, Macintosh, Linux, Windows Phone, Series 40, BlackBerry & Nokia OS.As a result of the research conducted by Kaymu with regards to devices used for browsing electronic commerce

websites, mobile devices such as Android phones, iPhones and the likes account for 69% of total visits while desktop traffic coming from PCs and laptops accounted for just 31%. This lends credence to the fact; Mobile has clearly over-taken Desktop visits in Nigeria. Interestingly, total transaction statistics with respect to devices prove that online shoppers prefer to use mobile devices to gather product information, conduct research about the product specs and compare prices, whereas, they find it more convenient to use a desktop, personal computers, and laptops to finally make an online purchase. With more focus on mobile, it is expected that mobile transactions will overtake desktop transactions in a few years from now. With the rapid evolution of technology and the advent of new and advanced software, people make use of different internet browsers to surf the World Wide Web. “Our research reveals that Google Chrome is the most popular internet browser in Nigeria with 25% of the total visitors using this browser; followed quite closely by Firefox at second place with 16% of total electronic commerce visitors. The rest of the 59% electronic commerce traffic in Nigeria comes via Opera Mini, Android Browser, Opera, Internet Explorer, Safari, UC Browser, Safari (in-app).” (Ejoro,2014)

Nigerians usually make online purchases between 11:00 AM and 4:00 PM. According to the research, almost half of the total electronic commerce sessions in Nigeria have recorded at timings between 11:00 AM and 4:00 PM. Apart from the traffic, this peak time also has the maximum electronic commerce transactions. The time during noon and before evening has maximum traffic and orders, as there is no considerable fluctuation in the conversion rates of hours and traffic.

INTERNET INFRASTRUCTURE

‘The Guidelines for the Provision of Internet Service requires ‘all licensees providing internet services or any other related internet protocol based telecommunications service’ to cooperate with ‘all law enforcement and regulatory agencies investigating cybercrime or other illegal activity’ and to ‘provide any service related information requested by the NCC or other legal authority, including information regarding particular users and the content of their communications’. Nigeria Communications Act (2003)

Licensees are permitted to individually charge for the different types of traffic over their networks subject to the approval of the tariffs by the NCC. There are no other specific regulations or guidelines on net neutrality, but the Internet Services Licence issued to ISPs prohibits a licensee from showing undue preference to, or discriminating against, any person in respect of the provision of a service under the Licence or the connection of any equipment approved by the NCC.

“By the provisions of the Communications Act and the NCC’s Guidelines for the Provision of Internet Services, ISPs are prohibited from disseminating, causing to be disseminated or allowing to be accessed through its network, any information that directly, or indirectly, casts aspersions on a religious, political, ethnic group or race, any pornographic material, any obscene articles or any seditious material (as defined under the Nigeria Criminal Code).” Nigeria Communications Act (2003)

VoIP is not separately licensed in Nigeria. In granting International Data Access Licences, the NCC permits the use of any technology to deploy an IDA service and the licensee is permitted to provide VoIP services in these limited circumstances.

RELEVANT TAX REGULATIONS IN NIGERIA AND ISSUES ON ELECTRONIC COMMERCE

Taxation in Nigeria is administered by the three tiers of government; federal, state, and local government with each having its responsibilities and tax jurisdiction clearly established and stated in the act. The major tax laws in existence as of September 2003 and variously related amendment include the following; Personal Income Tax Act 1993 (PITA), Company Profit Tax Act 1990, Value Added Tax 1990, Capital Gains Tax 1990, Customs and Excise management Act of 1990, Stamp duties act of 1990 etc.

“With the exception of the 1999 constitution, the laws have been amended on a yearly basis in conjunction with the annual budget to correct loopholes and to promote their use as macroeconomic management instruments” (Ebere,2012). Ebere argued that the major challenges that the Nigeria tax system is facing include; non-availability of tax statistics; as a government tool, the tax has been the oldest source of income which is believed to have historical data readily available. However, Nigeria tax data is not readily available. There is a serious failure both at the federal and state level in data management. “With the exception of the states of Delta, Lagos, Kaduna and Katsina, and the Nigeria Customs Services, other agencies of the states and relevant federal tax offices have serious failures in data management. Moreover, there are no efforts to have the limited data that are available collated or analyzed on a routine basis, not to mention, having it stored, or made more easily assessable or retrievable. This situation does not provide much input to the policy process.” (Ebere,2012).

Nigeria is also having issues around; prioritizing tax effort, tax administration, a multiplicity of tax and tax regulation. Since 1990 Nigeria has been switching inconsistently between the direct and indirect tax that is less distortionary. Value Added Tax, for instance, is less distortionary because it is applicable to the value-added contents of imports and of domestically produced goods. “The potential for maximizing the benefits of this taxation from, however, is constrained by structural problems in the economy.” (Ebere,2012). The predominance of the informal sector, constituting more than 50 percent of the country’s economy, enables most domestic production including Electronic Commerce products and services to circumvent tax payment. Income tax also faces the same risk. “Since operations in the informal sector are rudimentary without adequate recordkeeping tax assessments are difficult to make” (Ebere, 2012)

The embattled Nigeria tax system has a weak dragon Electronic Commerce. From internal conflict to obvious ambiguities, the country's tax regime looks uncultured and unstructured. The situation is further abused by the high level of bureaucracy, manual tax administration, which is a key weakness to the revenue flow from Electronic Commerce. The country is yet to develop a technologically driven risk-based tax administrative system. Thus both the administrative and regulatory framework of the tax system is manually configured.

According to the world banks, Dony business 2011 report, Nigeria rank 134 out of 183 countries on the ease of paying taxes. “Nigeria has been slipping back consistently on the ease of paying taxes index which is a function of three main indicators-number of tax payment, time required

to comply with tax obligations and total tax rate Nigeria tax issues has wide applicability and potential effect to the ambiguity in the tax law and practice, errors in drafting of tax regulations, large obsolete or out model provision in the laws and poor tax collection and payment when these are addressed, the country will have a stimulated economy and will begin to assume a more competitive position on the global stage. Although Nigeria has made some improvements to the tax system in the recent past, there is still a long way to go and the status quo is not an option. "if taxes are to be collected effectively and fairly, both in monetary and equitable terms, for the benefit of Nigerians, a proposed reform is essential.

The Capital Gain Tax Act (CGTA) stipulates that transactions between connected parties must be at arms-length in order not to impair a best of judgment (BOJ) assessment. This tax doctrine gives room for extreme subjectivity and high discretionary powers to the tax office as no one knows what BOJ will turn out to be. The big question has been why Nigeria is not adapting to the organization for Economic Cooperation and Development (DECD) guidelines on transfer pricing. This capitalization is also a major setback as there is no straight forward guideline to bring clarity to investors.

Another major lapse in the tax policy is the statement, Deduction of tax and sales in the ordinary course of business following the tax laws, sales in the ordinary course of business are not taxable but the law failed to define the ordinary course of business. The deduct of tax at source by the government on online goods leaves Electronic Commerce investors with claimable input tax without adequate output tax, thereby resulting in a perpetual refund position.

Further, the indifference in embracing technology makes it difficult to realize tax from Electronic Commerce. Without fully embracing technology, it will be difficult to realize Nigeria dream of becoming one of the largest economies in the world by 2020. It is important to introduce filing and tax payment that are online based to reduce compliance time, labor and physical resources.

Often, tax administration resorts to estimates that are prone to a wide margin of error or open up tax evasion opportunities. The proportion of online goods relative to the total goods is substantial, yet tax authorities have not devised appropriate means of collection effective sales tax from online transactions.

BENEFITS AND LIMITATIONS OF ELECTRONIC COMMERCE TO DEVELOPING COUNTRIES

Electronic Commerce is the most rewarding market in the world today. It brings with it numerous business possibilities. It expands a company's market place to national and international market place to national and international markets. Making local products available in the global market "with minimal capital outlay, a company can quickly locate more customers, the best suppliers, and the most suitable business partners worldwide. "Electronic Commerce enable companies to produce and procure materials and services from other companies, rapidly and at least cost. It eliminates market distribution channels, making products cheaper and vent or profit higher"(Raymond,2008). This is why this study expects more revenue to be generated from Electronic Commerce for materially the cost of creating, processing, distributing, storing and retrieving information by digitating the process. Electronic Commerce also allows product customization and reduces cost and helps small businesses compete against larger companies.

Electronic Commerce gives customers more device than they cancel easily locate otherwise. It enables shopping 24 hours a day from almost any location. Electronic Commerce allows some merchandise to be sold at lower prices, thereby increasing people's standard of living. "Electronic Commerce facilitates delivery of public services, such as government entitlements, reducing the cost of distribution and change of fraud, and increasing the quality of social services, police work, health care, and education" (Yan, 2008).

Electronic Commerce, like any other emerging market, has its limitations. Must Electronic Commerce products and services lack universally accepted standards for quality, security, and reliability? There are cases of unresolved legal issues, lack of national and international government regulations and industry standards. Customers resistance to changing from a real to a virtual store. People do not yet sufficiently trust paperless, faceless transactions.

REVIEW OF GLOBAL CHALLENGES FACING ELECTRONIC COMMERCE TAXATION

The Challenges of Electronic commerce are manifold. Some of the conceptual challenges thrown by Electronic commerce are how to characterize income and the approach towards residence-based and source-based taxation approaches. The worldwide nature of electronic commerce transaction muddles the issue of 'jurisdiction' which is a principle tenet of taxation. Electronic commerce also challenges traditional company tax rules because businesses can sometimes exist almost totally in cyberspace, with communication tools/ technology being used to carry out interactions with directors or shareholders. Basically electronic commerce challenges when, where and how taxation can be applied in an era where local markets are being transformed into global markets. According to Kirti and Namrata (2014), the growth of electronic commerce in India is rapid.

In the report released by IMRB (Indian Market Research Bureau) & IMAI (Internet and Mobile Association of India) the growth of electronic commerce in India over the years has been analyzed to be on average 262% as at 2011.

METHODOLOGY

This study was carried out using the ex-post facto non-experimental technique in which pre-existing facts are compared on some dependent variables. Variables were not randomly assigned due to the nature of data available. It is so selected in order to masquerade a genuine experiment. This is in view that the study test out possible antecedents of events that have happened but cannot be manipulated. Especially as most of the events occurred then without legal implications while the study seeks to present its occurrence as extortion from the system. This design allows the identification of possible causes of growth in electronic commerce retrospectively. This more closely examines retrospectively the effect of income tax policy on the subsequent outcomes of electronic commerce with a view of establishing a causal link between the variables. The design required the use of classified secondary and primary data.

Model specification

Certain models were built in line with the hypotheses to help analyze the study better;

$$PECCN_1 = f(TPN)$$

Transforming into the mathematical equation we have

$$PECCN_1 = a_0 + a_1 TPN + E_p$$

While the dependent variable (that is the explained variable) is equally explained as follows:

PECCN = Performance of Electronic Commerce in Nigeria ((Return on Capital Employed (ROCE))

a_0, b_0, c_0, d_0 = Unknown constant to be estimated $a_1,$

b_1, c_1, d_1 = Unknown constant to be estimated

DATA ANALYSIS

The ordinary least square regression statistical technique was adopted to test all the hypotheses formulated for the study. Data analysis was carried out using SPSS software. The

analysis done is similar to $f(x; \vec{\beta}) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots$ and is presented in table 3.1 below;

TABLE 1

Administration of questionnaires on the hypothesis; Legal Status has no significant impact on the performance of electronic commerce companies in Nigeria

Firms	Number Distributed	Number Returned	Percentage Returned	Percentage not Returned
			%	%
Kona	50	42	84	16
Jumia	50	25	50	50
Deluxe	50	49	98	2
Hybrid Store	50	45	90	10
IEX Games	50	35	70	30
Ink Mart	50	28	56	44
Jaramall	50	40	80	20
Dealdey	50	41	82	18
Deeski	50	18	36	64
Delphi Metals	50	42	84	16
Deluxe	50	38	76	24
Denaki Lingerie	50	29	58	42
Dhaveena Stores	50	48	96	4
Dream care	50	32	64	36
Drinks	50	43	86	14

Source: Field survey 2016

TABLE 2

Analysis of questionnaire for selected research question; Legal status has no significant effect on the performance of electronic commerce companies.

Firms	Strongly Agreed (SA)	Agreed (AG)	Disagreed (DA)	Strongly Disagree (SD)
Kona	4	2	1	1
Jumia	15	5	3	1
Deluxe	1	0	0	2
Hybrid Store	6	3	1	0
IEX Games	10	4	1	1
Ink Mart	15	5	2	0
Jaramall	5	3	1	0
Dealdey	6	2	0	1
Deeski	15	10	5	1
Delphi Metals	4	2	1	2
Deluxe Denaki	6	3	2	1
Lingerie Dhaveena	15	3	2	1
Stores	2	0	0	1
Dream care	8	5	3	0
Drinks	3	2	1	2

Source: a Field survey analysis

Secondary data were extracted from financial statements of selected electronic commerce companies and from the Central Bank of Nigeria online database. The secondary data collected were used to derive the accounting ratios needed for the study and were presented in table 4.2.

Secondary data were used for three of the research hypotheses to test; if tax policy has any significant effect on the performance of electronic commerce companies; if government spending partner has any significant effect on the performance of electronic commerce companies and if government borrowing has any significant effect on the performance of electronic commerce companies in Nigeria.

TABLE 3

Presentation of Secondary Data. On the hypotheses; Tax policy has no significant impact on the performance of Electronic Commerce companies in Nigeria

Data Reality	Year	TAX POLICY Revenue	Capital Expenditure on Transport & Communication	Development Stock	Performance of Electronic Commerce Companies			
		TAX POLICY	STCITD	BIDS	Konga.com ROCE	Jumia.com ROCE	Deluxe.com ROCE	Average ROCE
Clear	2008	404.50	80.10	0.50	1%	2%	31%	11%
Clear	2009	468.40	48.20	0.50	0%	4%	21%	8%
Clear	2010	562.90	68.90	0.20	2%	8%	32%	14%
Clear	2011	649.50	58.80	1.50	3%	15%	34%	17%
Clear	2012	710.15	59.60	1.30	2%	19%	33%	18%
Clear	2013	817.91	89.40	1.00	5%	1%	36%	14%
Mani	2014	942.01	134.10	1.70	6%	21%	42%	23%
Mani	2015	1,084.95	201.15	1.80	8%	25%	44%	26%

Source; <http://statistics.cbn.gov.ng/cbn-onlinestats/DataBrowser.aspx> and financial statements of sampled firms

The study hypothesis was restated in the null form in this section and the variables will be identified.

1. Tax policy on electronic commerce products and services has no significant effect on the performance of e-companies in Nigeria.

Hypothesis one(H₁: tax policy has no significant effect on ROCE of e-commerce) Tax revenue from electronic commerce products and services have no significant effect on the performance of e-companies in Nigeria. The dependent variable in this hypothesis is the

performance of Electronic Commerce companies while the independent variable is the Tax (TAX POLICY) revenue on electronic commerce products and services. Regression statistical technique was used to test the hypothesis. The result is presented in table 4.2

TABLE 4

Regression result of tax policy revenue effect on the performance of electronic commerce companies

Model Summary

Model	R	R Square	Adjusted R Square	Change Statistics				Durbin-Watson	
				R Square Change	F Change	df1	df2		Sig. F Change
1	.907 ^a	.822	.792	.822	27.675	1	6	.002	2.139

a. Predictors: (Constant), Tax Policy

b. Dependent Variable: ROCE

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	205.354	1	205.354	27.675	.002 ^b
	Residual	44.521	6	7.420		
	Total	249.875	7			

a. Dependent Variable: RCECC Predictors: (Constant), TAX POLICY

Correlations

	Taxpolic y	ROCE
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Pearson Correlation	taxpolicy	1.000	.907
	ROCE	.907	1.000
Sig. (1-tailed)	tax policy	.	.001
	ROCE	.001	.
N	taxpolicy	8	8
	ROCE	8	8

The result in table 4.2 shows an R^2 value of 0.822 which implies that about 82 percent change in electronic companies’ performance could be caused by a change in Tax (tax policy). The adjusted R^2 value of 0.792 means that the model is 79 percent goodness fit. Durbin-Watson value of 2.139 shows that data is positively auto correlated.

The F-value of 27.67 which is greater than the critical F-value of 3.14 at 2 and 197 degree of freedom and Pearson correlation value of 0.9 implies that there exists a significant relationship between tax policies and performance of Electronic Commerce companies in Nigeria.

The estimated coefficient of tax policy is positive, meaning that there exists a direct relationship between tax policy and performance of electronic commerce companies. The result is statistically significant at both 5 and 10% level of significance and it is consistent with economic a priori condition.

DISCUSSION OF FINDINGS

Based on the analysis and empirical results, the study uncovered that;

(a) The coefficient of fiscal policy is positive. This implies that improvement in fiscal policy will increase the performance of Electronic Commerce companies in Nigeria. This is in line with our econometric a priori theoretical expectation. Specifically, the result shows that if all the explanatory variables are held constant, a percent increase in performance of electronic commerce companies can be induced by 88 percent improvement in fiscal policy.

(b) The coefficient of tax policy is positive. This implies that improvement in tax policy will increase the performance of electronic commerce companies in Nigeria. This is in line with our econometric a priori theoretical expectation. Specifically, the result shows that if all the explanatory variables are held constant, a percent increase in performance of Electronic Commerce companies can be induced by 82 percent improvement in tax policy.

This study’s curiosity was to bring to limelight the effect of fiscal policy on performance of companies in emerging markets like electronic commerce (online shops) by unpacking the variables of fiscal policy (Taxation, government expenditure and borrowing), testing their individual and collective effect on the average returns on capital of sampled electronic commerce companies in Nigeria.

The study revealed that fiscal policy has a significant influence on the performance of electronic commerce companies in Nigeria. Tax policy has a significant influence on the performance of electronic commerce companies in Nigeria.

CONCLUSION

Electronic commerce is an ever-expanding business model that has the potential to revamp the economy of any state. If the environment is made conducive and the right policies are put in place, electronic commerce will strive favorably and assist in developing other sectors of the economy.

This study identified the effect of fiscal policy components like; taxation, government expenditure and government borrowing on the performance of electronic commerce companies. Based on the findings of this study, It was concluded that Nigeria current fiscal policy is not articulate enough to support current trend of electronic commerce and the lack of established electronic commerce regulating agency are consequential to an inefficient electronic commerce sector in Nigeria.

From the argument of this study is that the current fiscal policy has an effect on the spring-up of over 180 Electronic Commerce companies in Nigeria.

With the support of both external and local literatures and authors in similar study, the study was able to achieve reasonable assurance on it findings and concludes that all other things being equal, for developing economy and specifically Nigeria, a change in any or all of the variables of fiscal policy will directly affect the performance of any electronic commerce company in Nigeria. Unlike earlier studies and authored works on electronic commerce that have basically concentrated on tax evasion/avoidance and tax revenue generation effect on electronic goods and services and vice visa, this study closed the gap in how producing a better fiscal policy will help emerging markets like electronic commerce to foster economic growth and development in developing countries.

The study is affirming that a review of the fiscal policy of developing countries and the development of a comprehensive and contemporary fiscal system is the gateway for an optimal electronic commerce business in developing countries.

RECOMMENDATIONS

The findings of this study are expository and as a result, the researcher recommended that; the government should develop a criterion for the review of Fiscal policy affecting emerging markets like electronic commerce. This should be carried out after a thorough review of Fiscal policies of developed countries. The review should come out with a more comprehensive tax rate, revenue collection and administration policy that will balance the drive of doing electronic commerce business in Nigeria.

The government should establish an agency that is empowered by law to regulate the activities of electronic commerce companies and ensure the implementation of fiscal policies established for such markets.

In this study, the researchers used Person's product moment correlation to obtain the results they provided and suggestions were made that government should undertake an urgent review of the erstwhile practice of obsolete tax rates with the view to fixing a tenable and conducive

tax rate. This could be done by properly fixing, especially companies income tax rates, on one hand, and on the other hand, broadening the income tax base so as to bring more taxable items into the tax net. This will go a long way in ensuring increased revenue generation.

REFERENCES

- Arnold, B., & McIntyre, M. (2002) *International Tax Primer* Kluwer Law International London. 256-276
- Asuquo, A., & Sunday, E. (2012). Inflation Accounting and Control Through Monetary Policy Measures in Nigeria; Multi-regression analysis. *IOSR Journal of Business and Management*, P53-62
- Austan .G., (1999) Evaluating the Costs and Benefits of Taxing Internet Commerce. retrieved from <http://nrs.harvard.edu/urn-3:HUL.InstRepos:9696321>
- Australian Banking and Finance Industry. <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1067&context=ecis2002>
- Bhaskar, P., Sinha N. & Mishra, S.(2012) “E-Business and Electronic commerce - Its development. *International Journal of the Computer, the Internet and management*, 10(2), 1-22.
- Dickson D. A. (2007)Recent Trends and Patterns in Nigeria’s Industrial Development Council for the Development of Social Science Research in Africa.
- Dixit, N., & Datta, K. (2010). Acceptance of E-banking among Adult Customers: An Empirical Investigation in India. *Journal of Internet Banking & Commerce*, 15(2).
- Duke, J., Efiok, S., Kankpang, K. & Emanyi, E. (2013). Impediments of electronic commerce as a tax revenue facilitator in Nigeria. *International Journal of Business Research*, 6 (6), 152-155.
- Ebere C., &Umobong E, (2012) Tax System in Nigeria – Challenges and the Way Forward *Research Journal of Finance and Accounting* www.iiste.org ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol 3, No 5, 2012
- Efendioglu, A. Yip, V. & Murray, W. (2003). Electronic commerce in developing countries: issues and influence. *International Journal of Electronic Commerce*, 2 (3). 121-124
- Eid, M. (2011). Determinants of Electronic Commerce customer satisfaction, trust, and loyalty in Saudi Arabia. *Journal of Electronic Commerce Research*, 12(1), 7893.
- Ejiro E. (2014) “Electronic commerce in NigeriaMarket Trend and Consumer Behaviour” emerging trends” *Journal of Intelligence Systems* 2: 1-3
- Eric E, Jonathan S (1996) Taxation and Economic Growth. *National Tax Journal*
- Fang, Z. (2002). E-government in the digital era: concept, practice, and
- Fisher J (2002) Electronic Commerce Benefits, Challenges and Success Factors in the

- Gentry, W. (2005). "Optimal Taxation." Encyclopedia of Taxation and Tax Policy. Edited by Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle. Washington, DC: Urban Institute
- Geoffrey, M. (2006). The Macroeconomics of Fiscal Policy, vol 1 <http://econpapers.repec.org/RePEc:mtp:titles:0262112957>
- Gordon, L. (2011). The effect of information security breaches: Has there been a downward shift in costs? *Journal of Computer Security, Department of Accounting and Information*, 19 (1), 33-56, Assurance School of Business, University of Maryland College Park, MD 20742, USA
- Graham, J. (2001) The Theory and Practice of corporate finance: Evidence from the field. Working paper, Duke University.
- Gummerus, J., Liljander, V., Pura, M., & Van Riel, A. (2004). Customer loyalty to content-based websites: the case of an online health-care service. *Journal of Services Marketing*, 18(3), 175-186.
- Harrison, M. D., Choudhury, V., & Kacmar, C. (2002). The effect of initial consumer trust on intentions to transact with a web site: a trust-building model. *The Journal of Strategic Information Systems*, 11(3), 297-323.
- Henry, S (2006) Web Standards and Regulatory Compliance. Retrieved from <http://new.ipfw.edu/dotAsset/240786.pdf>
- Howcroft, B., Hamilton, R., & Hewer, P. (2002). Consumer attitude and the usage and adoption of home-based banking in the United Kingdom. *International journal of bank marketing*, 20(3), 111-121. <http://www.bioinfo.in/contents>. Web. 18 June 2017
- Bristol, M. (2001). The impact of electronic commerce on tax revenues in the Caribbean community. *Journal of World Development*, 30 (7)
- Jaeger, P. T. (2003). The endless wire: E-government as a global phenomenon. *Government Information Quarterly*, 20(4), 323-331.
- Jinyan, L. (2000) Electronic commerce Tax Policy in Australia, Canada and the United States. UNSW Law Journal. OECD, TAG, Tax Notes International 1565-78 (first draft), available at <www.oecd.org/daf>.
- John H, Robin M (2003) The Reality of Electronic commerce with Developing Countries. London School of Economics and Political Science. Retrieved from https://eprints.lse.ac.uk/3710/1/The_reality_of_electronic_commerce_with_developing_countries
- John H, Robin M, Daniel P, and Hubert S. (2003); [The_reality_of_e-commerce_with_developing_countries](http://www.gapresearch.org/production/electronic_commerce.html) www.gapresearch.org/production/electronic_commerce.html

Johnson-George, C., & Swap, W. C. (1982). Measurement of specific interpersonal trust: Construction and validation of a scale to assess trust in a specific other. *Journal of Personality and Social Psychology*, 43(6), 1306.

Jumia Online survey. Retrieved from; <https://static-market.jumia.com.ng/cms/creative-corner/guides/research/Electronic-commerce-NG.pdf>

Karunasena, K., & Deng, H. (2012). Critical factors for evaluating the public value of e-government in Sri Lanka. *Government Information Quarterly*, 29(1), 7684.

Kee, H. W., & Knox, R. E. (1970).

Kirti and Namrata (2014) *International Journal of Information and Computation Technology*. ISSN 0974-2239 Volume 4, Number 1 (2014), pp. 99-106
International Research Publications House <http://www.irphouse.com/ijict.htm>

Leonard C. Opara (2014) *Tax Challenges Of Electronic commerce In Nigeria: The Panacea For Legal Jurisprudence*. Retrieved from; <http://www.eajournals.org/wp-content/uploads/Tax-Challenges-of-Electronic-commerce-in-Nigeria-The-Panacea-for-Legal-Jurisprudence>

Macek, R. & Janku, J. (2015). The impact of fiscal policy on economic growth depending on institutional conditions. *Economic Growth and Tax Components: An Analysis of Tax Changes in OECD*. *Applied Economics*, 37(19), 1466-4283. ISSN 1514- 0326

Mark Hallerberg (2000) *Fiscal Governance in Europe*. Cambridge University Press London.

Mark Horton & Asmaa El-Ganain. (2012). "Fiscal Policy: Taking and Giving Away" *Journal of finance and development*: 2-12. International Monetary Fund, <http://www.imf.org/external/pubs/ft/fandd/basics/fiscpol.htm#author>. Web 31 Dec 2016. stimulated glucose utilization. *British journal of pharmacology*, 112(2), 671-675.

MiniwatMarketingroup. (2003). Diffusion of innovation & citizen adoption of e-government. In *The Fifth International Conference on Electronic Commerce* (pp. 57-63).

Moon, B. Yoo, and Y.C. Choe. (2006). The paradox of Information Quality: Do Consumers Pay More for Premium Product Information on E-Commerce Sites? *Proceedings of Association for Information Systems (AMCIS) 2006* p57.

Nigeria Communications Act (2003) *Guidelines For The Provision Of Internet Service Published By The Nigeria Communications Commission*. Retrieved from <https://www.ncc.gov.ng/docman-main/legalregulatory/guidelines/62guidelines-for-the-provision-of-internet-service/file>

Ogbele, O. Amadi, S. & Essi, I. (2011). Fiscal policy and economic growth in Nigeria:

a Granger causality analysis. *American Journal of Social and Management Sciences* ISSN Print: 2156-1540, ISSN Online: 2151-1559, doi:10.5251/ajsms.2011.2.4.356.359

- Olakunri, O. O. (2000) The Wealth of the Nation. Paper presented at the second Annual Tax Conference of the Chartered Institute of Taxation of Nigeria, Lagos
- Ramsey, Frank (1927). "A Contribution to the Theory of Taxation." *Economic Journal*. 37. Retrieved from; http://sites-final.uclouvain.be/econ/DW/DOCTORALWS2004/bruno/classical%20paper/ramsey_taxation.pdf
- Rasheed, O.(2010). Productivity in the Nigeria Manufacturing Sub-Sector. *European Journal of Economics, Finance and Administrative Sciences*, 6(8): 1450-2275.
- Raymond, D. (2008). Modeling web site design across cultures: relationships to trust, satisfaction, and e-loyalty. *Journal of Management Information Systems*, 24(4), 47-72.
- Renstrom, T (1999) "Optimal Dynamic Taxation." *The Current State of Economic Science*. Edited by S.B. Dahiya. Tilburg: Spellbound Publications Retrieved from <https://www.ntanet.org/NTJ/49/4/ntj-v49n04p617-42-taxation> economicgrowth Vol 49 no. pp. 617-42
- Richman, P. (1963). *Taxation of Foreign Investment Income*. Baltimore: Johns Hopkins Press, 140.
- United Nations Conference on Trade and Development (2003) *World Investment Report*. retrieved from; http://unctad.org/en/docs/wir2001overview_en