

# The Role of New Economy Indicators on Banking Sector Performance in Ghana: Trend and Empirical Research Analysis of Banks' Clients and Experts Perception

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**Abstract** The revolution of the new economy is contemporaneous with an improvement in the financial sectors all over the world, while financial innovations make the sector more productive. The banking sector plays an important role in supporting economic growth especially in allocating funds from savers to borrowers. The productivity level of the banking system is of great importance for the whole economy to operate more effectively. Electronic banking has been the center-stage of modern banking with enormous benefits. From this point of view, this research paper contains an effort to critically examine the activities of the banks and make concrete suggestions in the new economy process also at the same time called the information economy, the network economy and the computer age. The research employed a research questionnaire from a survey that sought to seek opinion from customers and experts regarding the banking sector and the new economy in Ghana. Within the scope of the survey, bankers and customers from ADB, GCB, Fidelity Bank, Access Bank and Bonzali Rural Bank, as well as experts from the banking industry and entrepreneurs were interviewed. The findings of the study shows that in the adoption of the new economy in the banking sector, many challenges such as high charges, e-crime and fraud are of great importance. To deal with the challenges of adopting e-banking services, the research paper recommend that the universal banks or commercial banks should undertake rigorous internal control measures to reduce the high charges so as to establish a judicial banking system and also the bank of Ghana should develop a robust regulatory framework to avoid cyber risk and Ponzi banking schemes. Auditing fraud and forensic banking programs will also contribute immensely to macroeconomic stability. After all, even though such difficulties persist, customers and experts mainly use new economy products such as mobile banking, internet banking, and ATM service for ultimate purpose of withdrawing cash, checking account balance and bank statement request. In view of this, the new economy appears to have positively affected the banking sector's activities in Ghana, and the banks are beginning to equip their operations with the latest technology.

**Keywords:** *new economy indicators, banking sector performance, Ghana*

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## 1. Introduction

Since the emergence of new economy in the late 1990s, the new economy indicators have been the drivers and the central nervous system of the global economy and Ghana as a whole. Industry have adapted to changes in technologies, incorporating and often initiating changes to improve productivity, quality and profitability. [1]. in today's world, the role of new economy indicators in the allocation and distribution of financial and non-financial resources in the Ghanaian economy are immeasurable. The immense impact of the elements of new economy in Ghana could be direct or indirect in the allocation and distribution of the country's economic resources. In the

current waves of industry phenomena, the critical elements or indicators of the new economy as we become a global market place are the computer industry (i.e. Personal Computers (PCs), Personal Digital Assistants (PDAs), and Software), the internet industry (i.e. dot-coms or internet users) and the technology enabled services (e.g. Online marketplaces, communication and customer relationship management (CRM) and virtual workplaces). [1] The new economy involves the acquisition, processing and transformation and distribution of information. The three major components are the hardware (Primarily computers) that processes the information, the communication systems that acquire and distribute the information, and the software which, with human help, manages the entire system. [4] The new economy belongs to product and services; information and communication

technology that contributes to good and services. Industrial wave is concern with the distribution and transformation of information and communication, communication management and operations. [5]. the core element of new economy is information and communication technology which constitute communication management and dissemination of information. Further empirical studies reveals that the central bank of Ghana directly or indirectly employs some of elements of new economy like e-zwich, mobile money banking, cheque codeline clearing system in order to deal with the problems of cash-based economy in the aftermath of 2006. In this research, the channels of new economy is perceived to include ATM banking, internet banking, mobile banking, e-zwich payment platform, electronic smart cards such as debit and credit cards, internet users, mobile cellular subscriptions or telephone banking, pc banking etc. According to [15] New Economy," one driven by information technology and characterized by "greater growth and lower unemployment than ever before thought possible through the advances in productivity made possible by a shifting 'mix' featuring less product-centered and more information-centered economic activity." It highlighted opinions at the time that "Growing ratios of market-to-book value that resulting stock prices produce can be justified as the monetization of valuable information assets that accountants have never seen fit to include as legitimate entries on balance sheets (other than as grossly misnamed 'goodwill') [16] The widespread access to, sharing of, and use of information (knowledge) in economic activities through technology. It is greatly facilitated by the "Internet" The communication and distribution of information is no longer limited by space and time, Information is available in real time and at low marginal cost and information flow can be targeted to specific individuals and audiences [17] The world economy is undergoing a fundamental structural change driven by the globalization of business on the one hand and by the revolution in information and communication technology on the other and as a result, the new economy is the superior economic structure that is expected to arise as an outcome of these two forces [18] people understand the economy can be shaped by both official data reports and individual opinions based on personal experiences or beliefs. Similarly, economic forecasters rely on models that incorporate both "hard" and "soft" information. Hard information includes objective and directly quantifiable measures such as output and employment, while soft information includes more subjective measures such as surveys of households or businesses asking about attitudes and expectations. [19] the phenomena of the new economy has been characterized as the weightless economy, the knowledge economy, the digital economy, the electronic economy, the virtual economy or network economy, and several other titles besides. A review of all the different meanings attached to the term brings us to define the new economy as one based on knowledge and information, relying on subsectors such as purely digital goods and services, mixed goods (that is, physical goods that are sold through the Internet) and the ICT industry which provides the support for the afore-mentioned segments. Ideally, the new economy is divided into five major component [20].

1. Knowledge jobs: Indicators measure employment of IT professionals outside the IT industry; jobs held by managers, professionals, and technicians; the educational attainment of the entire workforce; immigration of knowledge workers; migration of domestic knowledge workers; worker productivity in the manufacturing sector; and employment in high-wage traded services.

2. Globalization: Indicators measure foreign direct investment; export orientation of manufacturing and services; and the share of each state's output that goes to high-tech goods and services exports.

3. Economic dynamism: Indicators measure the degree of business churn (i.e., the percentage of new business start-ups and failures); the number of fast-growing firms (businesses listed in the Inc. 5000 index); the number and value of initial public stock offerings (IPOs) by companies; and the number of individual inventor patents granted.

4. The digital economy: Indicators measure Internet and computer use by farmers; the degree to which state governments use information technologies to deliver services; adoption rates and speed of broadband telecommunications; and use of information technology in the health care system and
5. Innovation capacity: Indicators measure the number of jobs in high-tech industries such as electronics manufacturing, telecommunications, and biomedical industries; the number of scientists and engineers in the workforce; the number of patents granted; industry investment in research and development; non-industry investment in research and development; movement toward a clean energy economy; and venture capital investment. The positive implications of the new economy cannot be underestimated since the new economy saves time and make it more convenient for instance [16] real time information transmission and retrieval, what used to take days and weeks of research is now available with few clicks, real time monitoring and communication, capacity for real time response and proximity and geographical location are no longer as important. Also at the microeconomic level, the new economy ensures that [16] the average product cycle has been shortened from five years to between 12 and 18 months by the reduction in the "time to market", competitive pressure from innovation is fierce, products and firms cannot last forever any more, the reduction in the cost of information transmission and communication has enabled better management control in organizations with lower cost, the internet and the information technology revolution enhances predictability and reliability of division of labor across firms and thus shifts the advantage to "De-verticalization" and "out-sourcing". For the same reason, it also shifts the advantage to "Globalization" of supply chains and many services have become highly tradable or potentially highly tradable. Even though the new economy is a critical anchor to product and goods transformation, there have been numerous challenges in measuring the new economy. One of the critical problems involved in measuring the new economy is that [19] there is ambiguity in defining the phenomenon, the goods and services associated with the new economy are going through major technological changes and quality improvements that are not reflected in the price level or in quality indices, ICT-related goods and services are not only the output of industrial goods and

services operations but also the input of those engaged in other activities, products are transformed by the new information and communication technologies, so that new products and services are emerging that complicate the measuring process in the services sector and finally The difficulty of measuring information-based and knowledge-based goods, that is, intangibles, especially in the services sector; this, aggravated by the limitations imposed by the lack of full series of temporal data, forces us to rely on forecasts, which vary substantially according to which organizations have calculated them. [6] studied the role of information technology on banking services, his findings reveals that 100 percent of the respondents used ATM as a form of technology facility or channel with internet banking being the least. The various technology facilities used by banks as revealed from literature ([2], and [3] are: Automated Teller Machines (ATMs), Direct Deposit and Withdrawal Services, Pay by Phone Systems/Telephone Banking, Point-of-Sale Transfer Terminals, Personal Computer (PC) Banking Services, Internet Banking, Branch Networking, Electronic Funds Transfer at Point of Sale (EFTPoS) and Electronic Cheque Conversion. it is regarded as the host of new economic phenomena resulting from two concurrent processes: On one hand, globalization; i.e. ongoing deregulation, integration of global markets for capital goods and labour, as well as increased competition, on the other hand, a technological revolution based mostly on general-purpose information and communication technologies (ICT) which having an impact on all sectors of the economy, accelerate productivity and economic growth. [7].The performance of banking industry does not happens out of the blue. There are critical indicators of banks performance as expressed by return on equity (ROE), return on assets (ROA), and net interest margin (NIM). [9]. the performance banking sector has a tremendous implications for the economic development of Ghana. Good financial performance rewards the shareholders for their investment and thus encourages additional investment and finally brings about economic growth [9]. Banking is a business activity of accepting and safeguarding money owned by other individuals and entities, and then lending out this money in order to earn profit. In this research, electronic banking is a system where banking services are provided electronically to bank. Banking Sector Development constitutes formal and informal financial institutions in a well-regulated economy rendering all forms of banking services to businesses, customers and other financial organizations. These includes banks, insurers, microfinance institutions, mobile money service providers, stock exchanges, money lenders and credit unions, wholesale and retail services. According to the views expressed by [21], the banking industry as at end-April 2018 remained sound and stable as evidenced by trends in some key financial soundness indicators. The banking industry continued to be solvent with the main solvency indicator (the capital adequacy ratio remaining well above the statutory requirement of 10.0 percent. Liquidity was adequate although slight declines were witnessed in the core liquidity measures and the industry was generally profitable. Asset quality however remained a source of concern as banks' stock of non-performing loans (NPLs) and the NPL ratio increased between April 2017 and April

2018, with the Commerce & Finance sector accounting for almost a third of total NPLs in the industry with banking sector's total assets of GH¢97.78 billion as at end-April 2018, recorded a growth of 15.7 percent compared with a growth of 31.1 percent in April 2017. This is envisaged by measures adopted by previous government to use Ghana's well-developed banking system to grow the economy. [22] Bad loans caused the banks to suffer great losses during the late 1980s, and decline in the cedi value caused a rise in the banks external loans. In 1988, the government initiated financial reforms to strengthen the banking sector. The reforms aimed to improve profitability, efficiency and productivity of banks. In spite of these reforms in 1990s, banks' performance has remained poor with substantial gaps in service delivery to private agents. The key models of banking sector development indicators employed in the banking industry are liquid liability, private sector credit and domestic credit. For instance: (1) higher Gross Domestic Product (GDP) will strengthen the banking sector development, however, financial liberalization appears to destabilize the banking sector development, and (2) the financial reforms in Ghana require financial liberalization to come in a later stage, when adequate institutions and sound macroeconomic policies are already in place. The Banking intermediaries generally refers to private sector intermediaries, such as banks, private equity, venture capital funds, leasing companies, insurance and pension funds and micro-credit providers. The banking intermediaries is an institution or individual that serves as a middleman for different parties in a financial transaction. According to classical and neoclassical economics, as well as most main stream economics, a banking intermediary or a financial intermediary is typically a bank that consolidates deposits and uses the funds to transform them into loans. Increasingly, international financial institutions provide funding via companies in the banking sector rather than directly financing projects. Resulting from [10], the study identify two the ratio of private credit by deposit money of financial intermediaries to GDP and the ratio of liquid liabilities to GDP as two key measures of size and activities of banking Intermediaries.

Recent studies on banking sector performances focused on the role of information technology on banking industry. For instance, [11], examined the impact of Information Technology (IT) in banking system. A case study in Bank Keshavarzi Iran. The findings proved that IT contributes to the banking system in three different ways: IT saves time of customers and employees conspicuously; IT cuts down budget expenditure by 10 percent in 1991 and facilitates network transactions. He hinted that, the advent of IT to every aspect of human life and business has been so obvious that it does not need to be accentuated more. Technology is influencing competition and the degree of contestability in banking, and technology influence economies of scale as well as the economics of delivery. Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Focusing on both threats and opportunities of information technology. [12] Study by [13], reveals that, Technology has been discovered to be the main driving force of competition in the banking

industry during the period of study. Based on the research conducted by [14], relative advantage is an important factor in determining adoption of new innovations in the banking services. In view of this, the studies delves on the impact of new economy indicators on the performance of banking industry in Ghana by broadening the scope of new economy to include acquisition, processing, transformation and distribution of information in the financial sectors of Ghana's economy. These encapsulate electronic banking services such as Automated Teller Machines (ATMs), internet banking, mobile money transactions, internet users, electronic smart cards such as debit and credit cards, Short Messaging Services (SMS), telephone banking and PCs Banking services.

## 2. Data and Methodology

The primary research method for this study is literature review and Conceptual modeling. The methodology specifically describes the data collection process and the procedure for the data analysis. A survey research was employed, which is one of the most common types of quantitative in social science research.<sup>1</sup>

### 2.1. Survey Research

Survey research is a method used to obtain information needed by giving out questionnaires to the related population. Survey research can be used for explorative intention, explanatory or confirmatory, evaluation, prediction, operational research and development of social indicator. It allows the collection of data about subjects that are exclusively internal to the participant, such as attitudes, opinions, expectations and intentions, and data on these areas are important for the study. Furthermore, it is often obtained by using a questionnaire, these data are standardized allowing easy comparison.

### 2.2. Integrative Methodology

The research adopt an integrative methodology which combined the relevant elements of qualitative and quantitative techniques. This is developed based on using both primary data and secondary data. The research is a scientific investigation to understand the subject matter under study. According to [8] methodology is a general plan of how researchers go about answering your research question(s). They emphasized on the purpose, the strategy and the approach. There are three approaches to conduct research: Qualitative – based on qualitative phenomenon; Quantitative – based on quantitative phenomenon; and Mixed Method-which combine both qualitative and quantitative approach. In this study mixed-method technique was employed thus, both quantitative and qualitative techniques were employed. Combining qualitative and quantitative data ensures effectiveness of the research process as one can enhance the findings of the other. This study adopted a case study strategy. Multiple

verses holistic case study was adapted to establish whether the findings of one case occur in other cases and as consequences, the need to generalize from the findings.

### 2.3. Sample Size

A sample size of ninety-two (92) respondents were selected from the survey. Of these, thirty (30) of the participants constituted bankers precisely bank employees and bank employers such as executive directors, fifty-four (54) customers from the various banks were selected and eight (8) experts will be interviewed for the study. In all a total of forty-four customers and experts will be selected from the survey. These experts will be purposely selected. Thus the judgment of the researcher will be employed to select them.

#### 2.3.1. Sample Size Determination

There are several methods used to calculate the sample size depending on the type of data or study design. The sample size is calculated using either one of the following formulas

$$n = \frac{Z^2 * \pi(1-\pi)}{(P-\pi)^2} \quad (1)$$

or this can also be determined by the formula

$$n = \frac{2(Z_{\alpha} + Z_{1-\beta})^2 \sigma^2}{\Delta^2} \quad (2)$$

Where n is the sample size, Z is the confidence level,  $Z_{\alpha}$ , Z is a constant (set by convention according to the accepted  $\alpha$  error and whether it is a one-sided or two-sided effect), For  $Z_{1-\beta}$ , Z is a constant set by convention according to power of the study,  $\sigma$  is the standard deviation (estimated) and  $\Delta$  the difference in effect of two interventions which is required (estimated effect size),  $\pi$  is 0.40 (since we can't undertake a preliminary study we go for 40/60) and  $(P-\pi)$  is the sampling error. In this research, we applied the first formula in our order with a two-sided effect value of 1.96 to determine our sample size for the study.

Given 90% confidence level and the sampling error 10%

$$n = \frac{1.96^2 * 0.40(1-0.40)}{(0.10)^2} = 92.1984. \quad (3)$$

Hence the sample size for the study will be **92 Participants**.

### 2.4. Sampling Procedure

The two major sampling techniques that will be used in the research includes simple random sampling procedure and snowball sampling technique

#### 2.4.1. Simple Random Sampling Technique

This research adopt a simple random sampling techniques in all cases to select the customers at various branches of the bank. Using sampling in this way reduces cost and makes it possible to gather useful information quickly and

<sup>1</sup> This chapter basically focused on both quantitative and qualitative data. The qualitative is mainly collected from the survey via the use of questionnaires to solicit the opinion of bankers, customers and people who have expert knowledge in the Ghanaian Banking Industry.

where the samples are properly selected accurate result are guaranteed. Due to the focus of this study, questionnaires were also administered to 48 customers of the various banks in Ghana and 30 were administered to bankers that is the bank employees and bank employers in different branches of the five selected banks. In order to have better understanding of which bank to select in our survey, we were employed the simple random sampling technique. With this method, 5 major banks were selected from the survey of 33 licensed banks. These banks were registered and licensed by the central bank of Ghana as Commercial and Universal Banks. The five major banks selected for the research were ADB, GCB, Fidelity Bank, Access Bank and Bonzali Rural Bank

#### 2.4.2. Snowball Sampling (Chain Sampling) Technique

In this study, we will employ snowball sampling techniques to identify experts who have full knowledge regarding the business of banking activities in the Ghanaian economy. We shall employ this technique because it is a simple nonprobability sampling technique where existing study recruits future subjects from among their acquaintances. In this case, the sample group is known to grow like a rolling snowball. It is important to indicate that bankers who will be interviewed will aid in identifying experts or financial consultants within the banking industry for our study.

### 2.5. Data Analysis and Presentations

The secondary data sourced from IMF and World Bank were analyzed using Microsoft excel. The primary data were collected from the field using questionnaires and interviews. Then the primary data were edited, coded and cleaned and then analyzed using Microsoft excel.

Table 1. Operationalization of the Study Variables

Variables	Measurements	Units
NIM	Accounting value of bank's net interest revenue as a share of its average interest-bearing (total earning) assets. Banks' non-interest income to the total income. That is banks' income that has been generated by non-interest related activities as a percentage of total income (net interest income plus the non-interest income).	Percent
ROA	Banks' net income to yearly averaged total assets thus banks returns on assets	Percent
ROE	Banks' net income to yearly averaged equity i.e. banks returns on equity	Percent
Mobile Banking	Active number of agent outlets for Ghana	Number
Value of Mobile Money	Measures value of mobile transactions during the reference year for Ghana	Percent of GDP
ATMs	Geographical outreach of ATMs accessibility per 1000Km <sup>2</sup> for Ghana	Number

Source: Researcher's Determination, Nov.2017.

### 2.6. Scope and Limitations of the Study

The period of coverage for this study spans for a year. Published data on all of the variables selected in this study were not all available in one whole but where gathered

bit by bit from various sources. However, adequate information on primary data from various banks in Ghana could not be obtained because most of the banks were not willing to give vital information since it could affect the profitability of the banks by its competitors, budgetary support for the research were also a hindrance because of travel and transport (T &T) expenses. The university did not allocate research allowance for this project.

### 2.7. Data Used and Sources

Sources of data for the study were both primary and secondary data. A structured questionnaire and interview was used to collect the survey data. Questionnaires were distributed to clients of GCB, ADB, Fidelity Bank, Access Bank and Bonzali Rural Bank to provide data for the scientific research. The advantage for using questionnaires is that, it helps to find views as they are in their natural setting. It also ensured quantifiable responses for the same items from all respondents. Furthermore, it saved both time and cost to distribute and analyze. The target population was customers, bankers and experts in the banking industry. This group was targeted because the researcher believed that they could provide the required information to answer the research question. The secondary data used in the study were sourced from the Federal Reserve Economic Data via World Bank (WB) and International Monetary Fund (IMF). Ideally, the primary data were also sourced from were gathered from bank employers, bank employees, customers of the banks and experts in the field of banking in Ghana.

## 3. Empirical Results and Discussion

### 3.1. Trend Analysis of Financial Performance of Banking Sector

This part presents the trend analysis of the performance of banking industry in Ghana spanning from the 1996 to 2016. The Figure 1 below shows the critical trend analysis of the performance of both universal and commercial banks in Ghana using banks' performance indicators as expressed by Net Interest Margin (NIM), Return on Equity (ROE), and Return on Assets (ROA).

From the Figure 1, the trend of the performance of banking industry in Ghana has shown an unpredictable trend. For instance, in 1996 the average bank performance was 14.27, 60.32 and 5.90 as respectively expressed by the banks performance indicators of Ghana's banking sector above. In 1998, Figure 1 for NIM and ROA increased to 16.50 and 8.71 percent respectively while the return on equity (ROE) tremendously increased to 93.82. This means that commercial banks net income to yearly averaged equity rose substantially. one of the possible reasons for the sharp rise in the percentage values of NIM and ROA is the financial liquidation of the banks in the year 1998. In 1999, the percentage figures for NIM, ROE and ROA again decline to 11.46, 58.60 and 5.21 respectively. This significant erratic fall may be attributed to the tremendous decline in non-performing loans. However, the analysis reveals that the global economic

crunch between 2007 and 2008 did affect the financial performance of banking sector in Ghana. The percentage values for NIM, ROE and ROA declined and further decreased to 9.06, 11.77 and 1.37 percentage values in 2009 respectively. This could be attributed to lame monetary policy measures pursued by the Central bank of Ghana to cope with the crisis. Furthermore, performance slightly improved from 2015 to 2016 including ROE percentage figure saw a slightly rise from 21.16 to 21.97. Also, the percentage value for NIM and ROA saw a marginal reduction from 11.11 to 11.89 and from 2.93 to 3.04 respectively. Banks performance indicators in the country has been increasing and decreasing at different periods. This shows that investments in Ghana's banking industry can be volatile due to the fickle trend of the banks performance indicators.

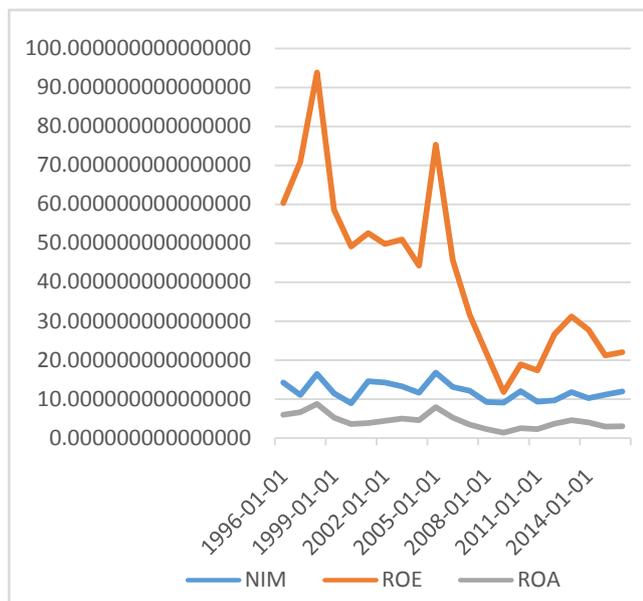


Figure 1. Trend of Banks Performance Indicators (Source: Researchers' Sketch, Nov. 2017)

### 3.2. Trend of Ghana's New Economy Indicators

This section presents the trend analysis of the performance of new economy indicators in Ghana using data from World Bank (WB) and International Monetary Fund (IMF). The data analysis of ATMs key indicator per 1000Km<sup>2</sup> spans from 2008 to 2016. In order to deal with the crippling Ghana's cash-based economy, the bank of Ghana introduced the mobile banking in 2011. In view of this, we based the trend analysis of mobile banking and value of mobile money from 2012 to 2016. The Figure 2 below indicates the trend analysis for the performance of new economy indicators in Ghana as expressed by mobile banking, and value of mobile money.

#### 3.2.1. Mobile Banking and Value of Mobile Money

From Figure 2 mobile banking and the value of mobile money has seen a remarkable increase from 5900 and 0.7888 to 107415 and 46.5230 respectively in 2012 and 2016. This means that the active number of agents' outlets and the value of mobile transactions have tremendously rose since its inception in 2011 by the Bank of Ghana.

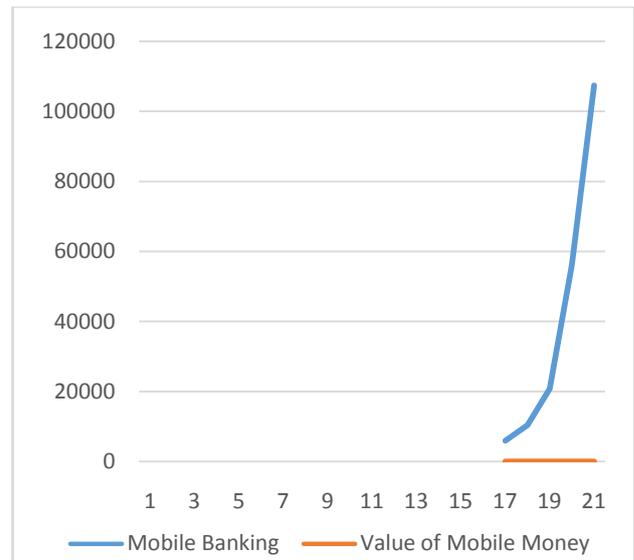


Figure 2. Trend of Mobile Banking and Value of Mobile Money from 2012 to 2016 (Source: Authors' Sketch, Nov. 2017)

#### 3.2.2. Automated Teller Machines (ATMs)

One of the important indicators of new economy in Ghana's banking sector is the Automated Teller Machines (ATMs). In this study, ATMs geographical outreach is measured per 1000Km<sup>2</sup> in terms of accessibility. The ATM was introduced as part of the Real Time Gross Settlement System by the Bank of Ghana to address the problems associated with the cash-based economy. ATMs since its introduction has greatly improved in terms of coverage and accessibility by users per 1000Km<sup>2</sup>. This is evident, it rose from 2.3600 in 2008 to 4.0081 per 1000Km<sup>2</sup>.

### 3.3. Survey Data Analysis

Survey data analysis is based on the discussion and analysis of data collected from the field. The analyses were done on the responses from various respondents from the survey such as bankers, customers and experts in the Ghanaian Banking industry

#### 3.3.1. Analysis of Demographic Data

A total of ninety-two (92) questionnaires were distributed among five major banks namely; Access Bank, Fidelity Bank, Ghana Commercial Bank (GCB), Agriculture Development Bank (ADB) and Bonzali Rural Bank. It is worth noting that, the responses from the survey came from respondents in both northern and southern part of Ghana. That's from Tamale in the north and Accra in the south. However, only Sixty-eight (68) questionnaires representing 73.91% of the total sample size were administered by the bankers, customers and experts. Specifically, Twenty-four (24) were administered by the staffs of the various five banks and Forty-Four (44) questionnaires were administered by both the customers and people who have expert knowledge in banking.

In terms of sex distribution, eight (8) female bankers and sixteen (16) bankers were interviewed. However, twenty-seven (27) male customers and experts and seventeen (17) female customers and experts were interviewed from the survey.

Table 2. Sex Distribution

Banker's Sex Distribution			Customers and Experts' Sex Distribution		
Sex	Frequency	Percentage	Sex	Frequency	Percentage
Male	16	66.67	Male	27	61.36
Female	8	33.33	Female	17	38.64
Total	24	100.00	Total	44	100.00

Source: Author's Field Survey August, 2017.

From Table 2, Sixteen (16) male bankers representing 66.67% of the total responses from bankers while eight (8) female bankers representing 33.33% of the total responses from the banker's population in the survey. Also, twenty-seven (27) representing 61.36% of the total responses from customers and experts were male while seventeen (17) representing 38.64% of the total responses from customers and experts population were females. This clearly indicates that there were more male participants in the survey than female counterparts and it may be attributed to simple random technique used in selecting respondents from the survey.

**3.3.2. The New Economy (IT) as a New System of Delivering Banking Services**

The focal point of this research was to find out the impact of new economy in the banking industry in Ghana in particularly in the delivering of banking services. In view of this, customers and experts shared their opinions the regarding the new economy's impact in the industry as to whether it is vital, essential, desirable or cannot say exactly. In this analysis, the term vital, essential and desirable are not pari passu or hand-in-hand synonymous. Vital means urgently needed, essential represent basic and fundamental and desirable means worth having or seeking.

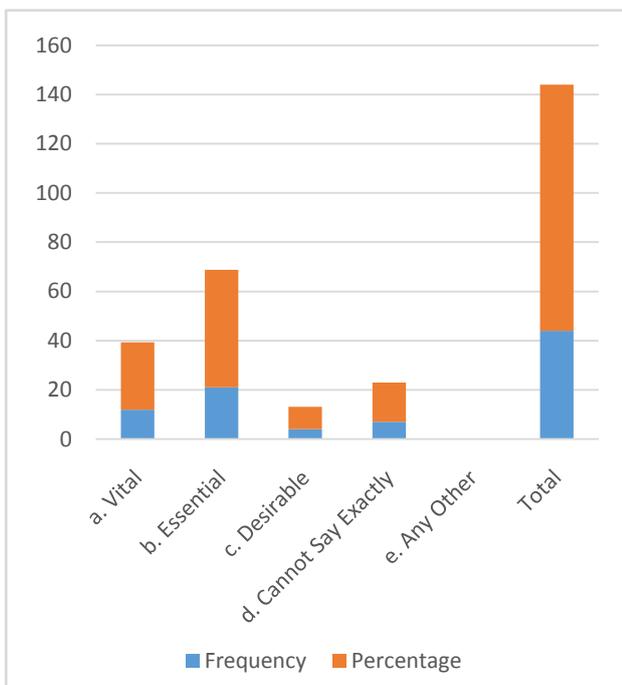


Figure 3. New Economy as a new System of Delivering Banking Services (Source: Researchers' Field Survey, August 2017)

Figure 3 above depicts that, a total of forty-four (44) responses from customers and experts shared their sentiments regarding the impact of information and technology (IT) as a new system of delivering banking services in Ghana. The intricate results reveals that, twelve (12) representing 27.27% of the total respondents indicate that it is vital, twenty-one (21) representing 47.73% shows it is essential, four (4) respondents representing 9.09% indicates its desirable and only seven (7) respondents representing 15.91% says cannot say exactly. However, they were no single respondents that indicates any other. This clearly shows that, information and technology (IT) which is the cornerstone of new economy plays a critical role on the banking industry in Ghana.

**3.3.3. Challenges Facing the Adoption of E-banking Services- Bankers Thought**

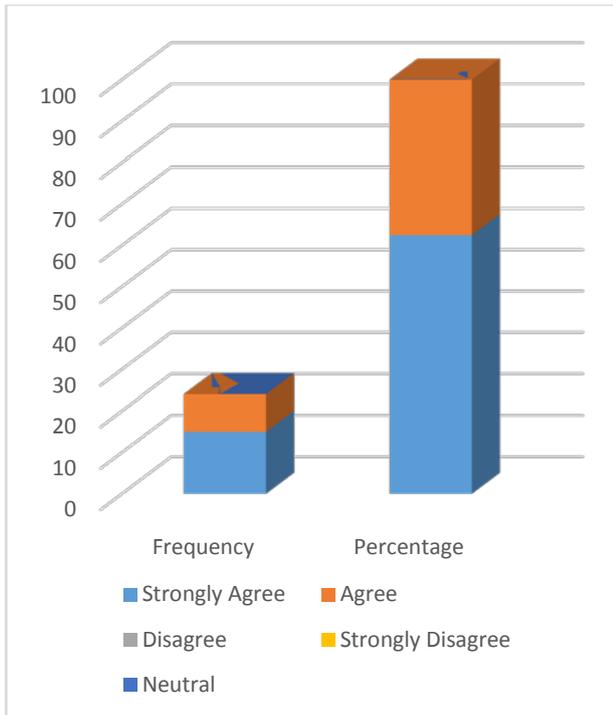
Electronic banking has been the center-stage of modern banking with enormous benefits. However, there are purported to be a lot of challenges facing the adoption e-banking services. In view of this, twenty-four (24) survey questionnaires were administered bankers to state the challenges facing the adoption of e-banking services as one of the critical elements of the new economy. The 24 participants came from 5 selected banks such as ADB, GCB, Fidelity Bank, Access Bank and Bonzali Rural Bank. The respondents stated the following as the challenges facing the adoption of e-banking services:

- The cost of adopting is very high
- No differences in profitability compared to branch banking
- Many bankers fear cross-border risk since the laws are different from one country to another
- Many bankers fear risk management challenges like reputation risk, operational and capital adequacy risk
- Customers fear using e-banking services because electronic crimes are arising greatly.

**3.3.3.1. Graphical Analysis of Challenges Facing the Adoption of New Economy to Promote E-banking Technologies**

There are a lot of challenges facing the adoption of new economy in order to promote E-banking system in Ghana. In view of this, bankers from Access Bank, Fidelity Bank, Ghana Commercial bank, Agricultural Development Bank and Bonzali Rural Bank were interviewed to seek their persuasion about the major challenges facing its adoption. They indicated that, the cost of adopting new economy (IT) is very high and that it requires a huge capital to run this program. Consider Figure 4 below for critical examination of the responses.

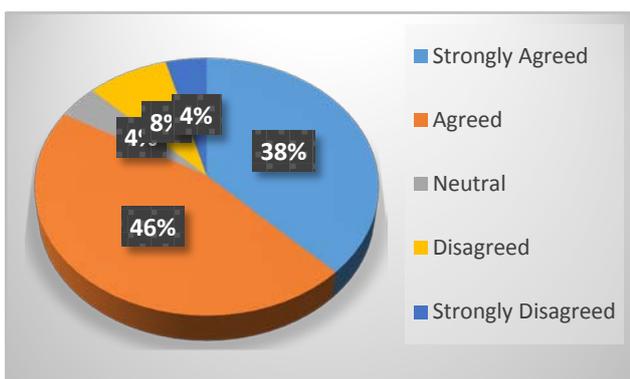
From Figure 4, a total of twenty four (24) bankers were interviewed about the challenges facing the adoption of IT in order to promote E-banking services in Ghana. The results shows that, none of the bankers disagreed, strongly disagreed or remained neutral. This clearly shows that, the bankers agreed (37.5%) and strongly agreed (62.5%) that, there are high cost in adopting IT in order to promote electronic banking even though the benefits associated with the new economy are immeasurable.



**Figure 4.** Graphical Analysis of Challenges Facing the Adoption of new economy (IT) to Promote E-banking Technologies (Source: Author’s Field Survey, August, 2017)

**3.3.3.2. Customers Fear of Using Electronic Banking because Electronic Crimes are Arising Greatly**

A total of twenty four (24) bankers were interviewed to solicit their opinion regarding the fear of using E-banking because of crimes. The results from the bankers opinion indicates that, there is a direct correlation between the use of E-banking and electronic crimes by customers. In a sense that, customers have a greater fear in using electronic banking because there are high risk or crimes associated with the products. This is clearly elaborated in Figure 5 below.

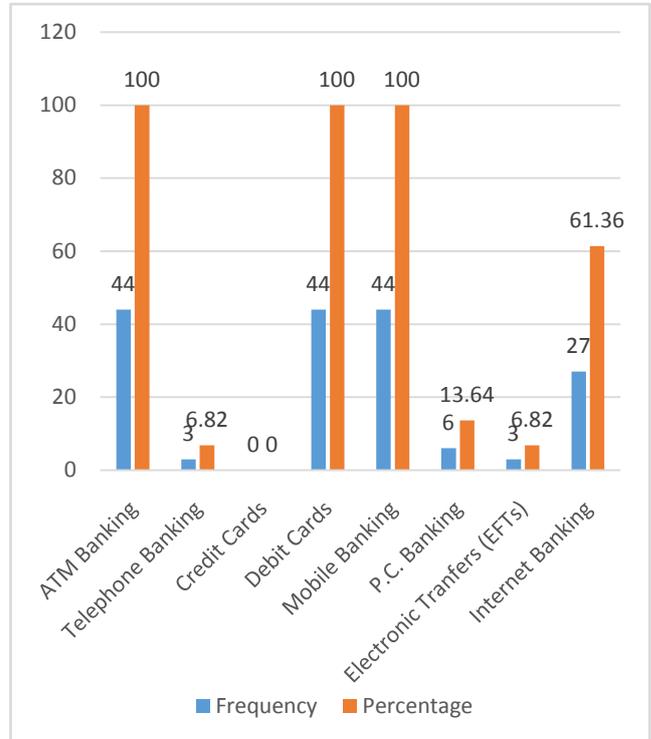


**Figure 5.** Customer Fear of Using E-banking because of electronic crimes arising greatly (Source: Author’s Field Survey August, 2017)

From Figure 5, nine (9) respondents representing 38% of bankers strongly agreed with the assertion that, customers fear using electronic banking because of crimes. Eleven (11) respondents representing 46% of the total number of bankers in the survey agreed with the assertion but not strongly. However, one (1) respondent representing 4% remained neutral. Finally, a total of two (2) respondents representing 8% disagreed and only

one (1) respondent representing 4% of the total number of bankers strongly disagreed. This clearly indicates that, customers have a greater fear of using electronic banking because of crimes associated with it.

**3.3.4. New Economy Indicators / E-Banking Services Used by Banks’ Customers**



**Figure 6.** New Economy/ Indicators/ Channels Used by Bank's Customers (Source: Author’s Field Survey, August. 2017)

Figure 6 above shows the channels of new economy employed by customers of the selected banks. It reveals that all the participants (100%) used ATM banking, debit cards and mobile banking, 61.36% use internet banking, 13.64% use P.C. banking, 6.82% telephone banking. It further indicates that, 6.82% use electronic transfer (EFTs) and finally none of the respondents use credit card in ascending order of usage.

**3.3.5. Importance of Adopting E-Banking Services to Customers and Experts in the Banking Industry**

Participants in the survey were asked to state the importance of adopting e-banking services via the use of survey questionnaires. Responses from the bankers, customers and experts agreed and strongly agreed to the following as being the importance of adopting electronic banking services: E-banking services are generally faster than traditional banking, e-banking services have no time limit since I can use them at any time of the day, there is high degree of convenience in accessing e-banking services, e-banking channels are easier to use than traditional channels, e-banking services are generally cheaper than traditional at the branch, using e-banking service is more prestigious than queuing at the banking halls. These importance stated by the respondents are in tandem with the previous studies reviewed on. However, the study does not conclude that it cuts budget expenditure by 10% as asserted by Dangolania et al [11].

**3.3.6. Purpose of Using New Economy Products by Customers and Experts**

The analysis of this part is based on the purpose of using new economy services or indicators in relation to customers and experts perception about its usefulness more especially regarding ATM Services, internet banking and mobile banking services.

**3.3.6.1. Purpose of Using ATM Services by Customers and Experts**

The Figure 7 and Figure 8 indicates the purpose of using ATM products. This is based on the perception of thirty nine (39) customers and the opinion of five (5) experts in the banking industry.

To determine the purpose of using ATM, we pose the question; I use ATM for: a) depositing cash, b) withdraw of cash, c) request cheque book, d) paying utility bills like (water, phone bills), e) transfer of funds, f) check account balance

(water, phone bills), e) transfer of funds and f) check account balance. Interestingly, as indicated in Figure 7 and Figure 8, the results shows that customers use ATM for the sole purpose of withdrawing cash (i.e. 100% of total respondents), checking account balance (i.e. 100% of total respondents) and only 43.59% of total respondents use ATM for cash depositing. None of the respondents use it for transfer of funds, paying of utility bills and order for cheque books. Conversely, the experts opinion indicates that all people with requisite knowledge in the banking industry use ATM for withdrawal of cash (100% of experts), check account balance (100% of experts), transfer of funds (80% of experts) and 60% of experts says they use it cash depositing. In effect, customers and experts perceives ATM product as an important element in the day-to-day transaction of the selected banks and that it is necessary in terms of withdrawing cash, checking accounts balance, depositing of cash and transfer of funds.

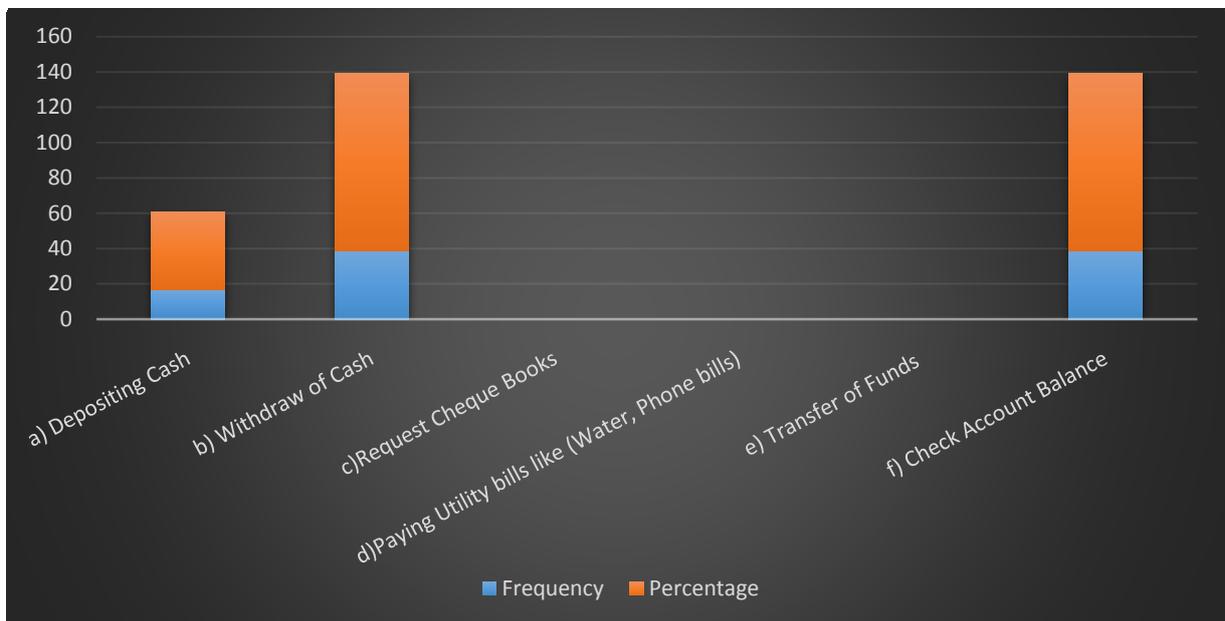


Figure 7. Purpose of Using ATM Services by Customers (Source: Author’s Field Survey, August 2017)

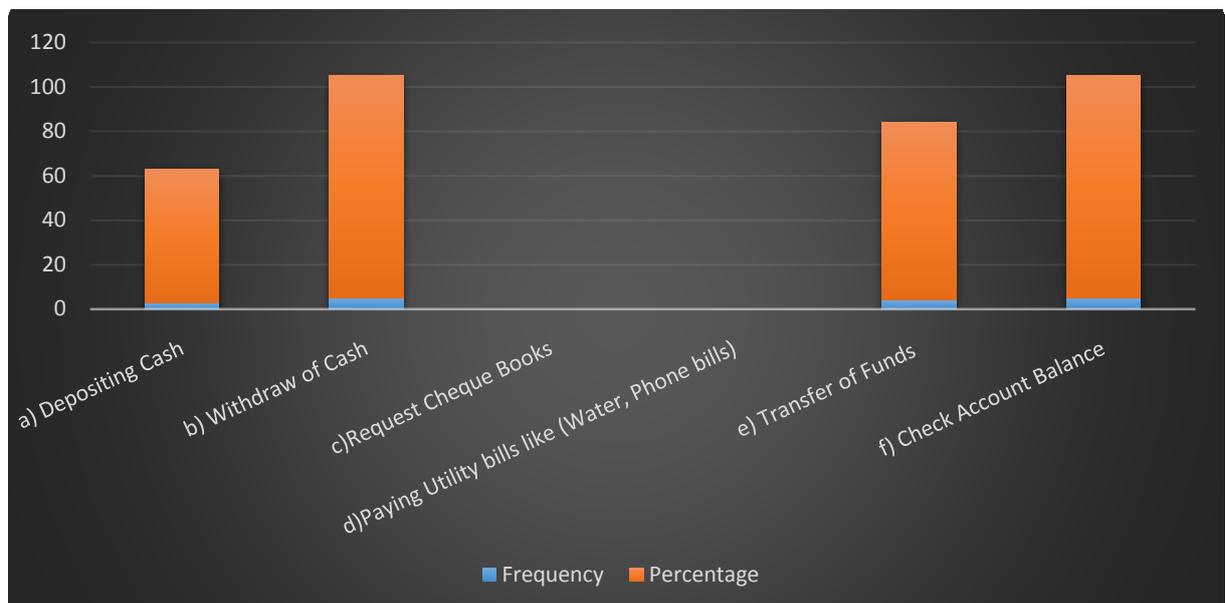


Figure 8. Purpose of Using ATM Services by Experts (Source: Author’s Field Survey, August 2017)

**3.3.6.2. Purpose of Using Internet Banking (Bank Website) by Customers and Experts**

The Figure 9 and Figure 10 shows the responses of banks customers and expert’s perception about the essence of using internet banking.

From Figure 9 and Figure 10 shows the essence of using internet banking by customers and experts in the banking industry. The analysis of the figures reveals that all the customers (100% of respondents) indicates that they use internet banking for accounts balance checking, checking of bank statement and after sales-services like e-mail enquiries and only 74.36% of the customers use internet banking for transfer of funds. None of the respondents use internet for the other purposes.

Also, Figure 10 reveals experts opinion on the usefulness of the internet banking. The response of the experts indicates that 100 percent of them use internet to check account balance, bank statement, transfer of funds and after sales-services like email enquiries. However, 60 percent of the experts use internet banking to know bank products advertised by the selected banks.

**3.3.6.3. Purpose of Using Mobile Banking by Customers and Experts**

The Figure 11 and Figure 12 shows the analysis of customers and experts response in relation to the use of mobile banking.

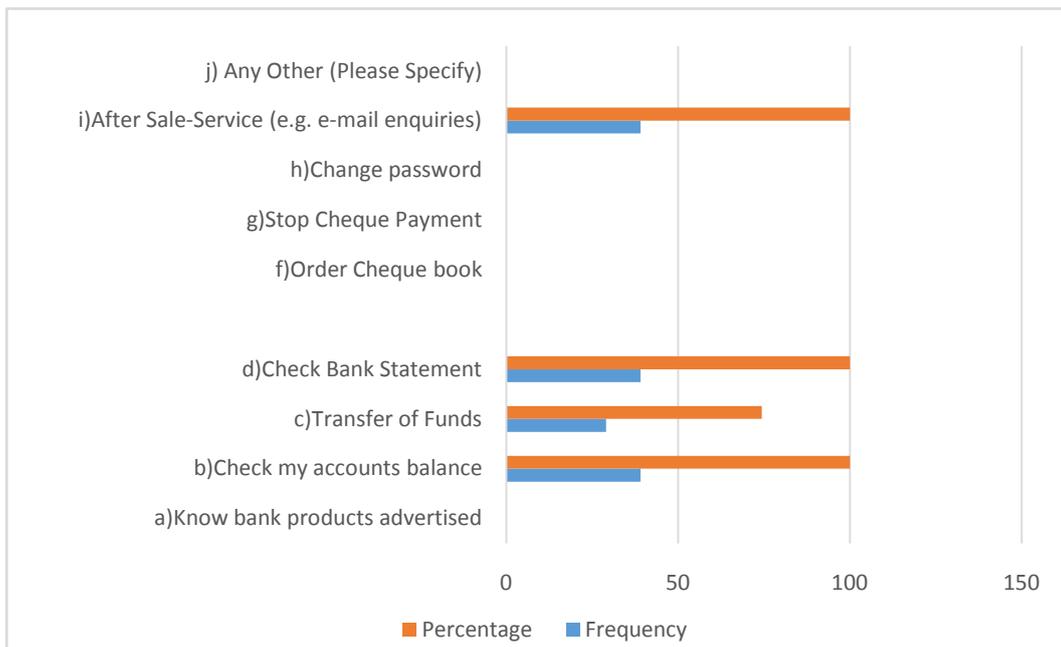


Figure 9. Purpose of Using Internet banking by Customers (Source: Author’s Field Survey, August 2017)

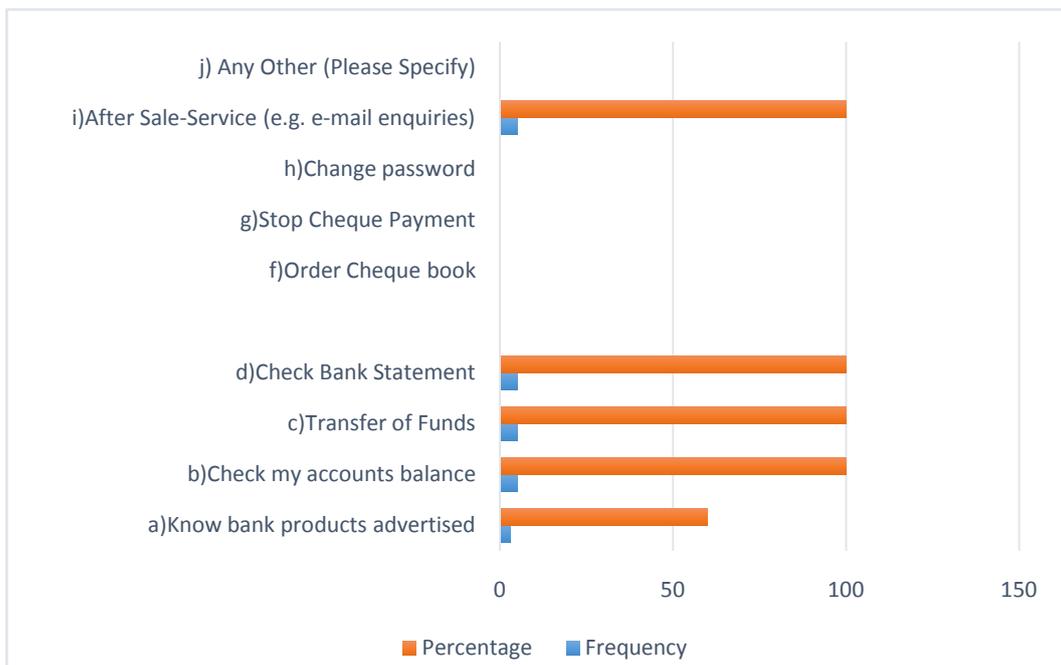


Figure 10. Purpose of Using Internet Banking by Experts (Source: Author’s Field Survey, August 2017)

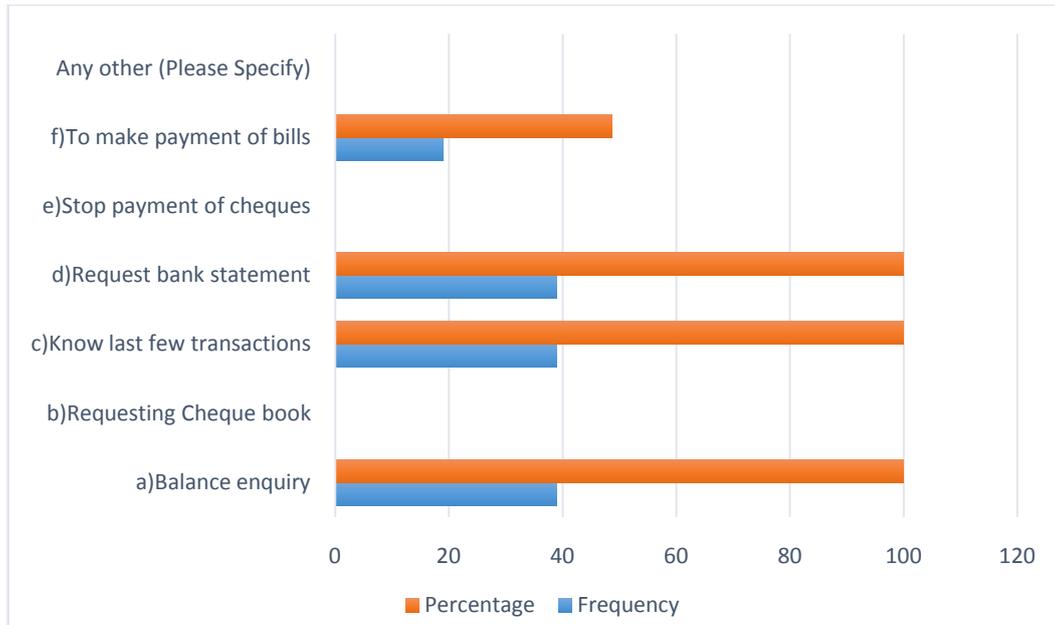


Figure 11. Purpose of Using Mobile Banking by Customers (Source: Author’s Field Survey, August 2017)

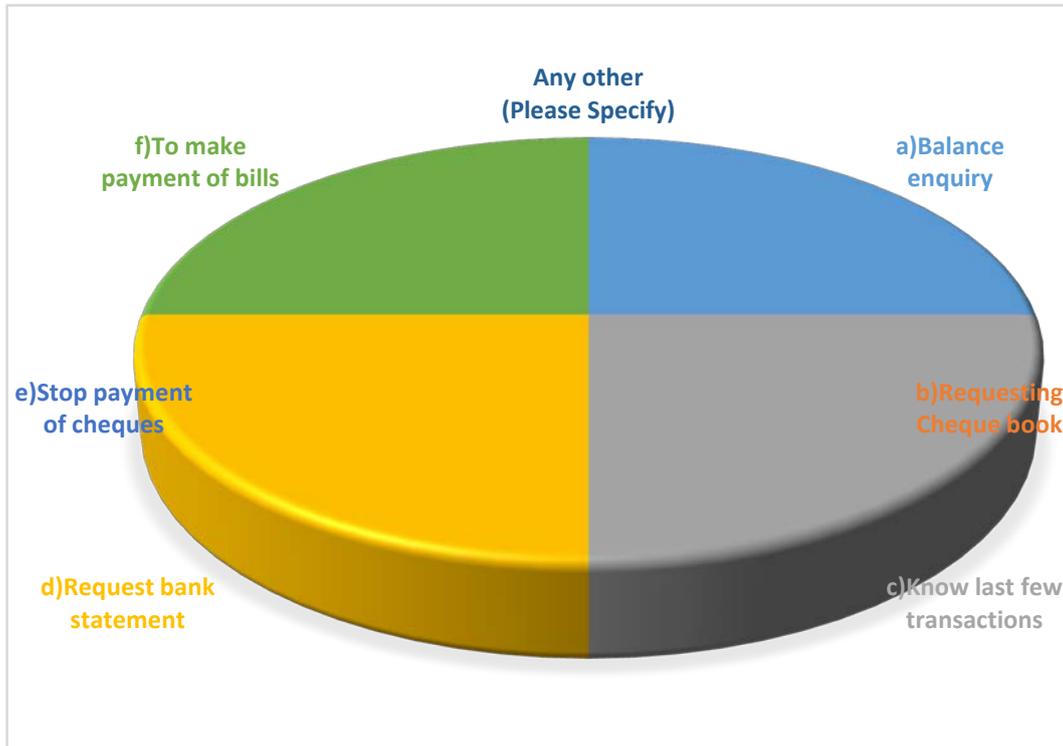


Figure 12. Purpose of Using Mobile Banking by Experts (Source: Author’s Field Survey, August 2017)

From the Figure 11 and Figure 12 indicates that 100 percent of customers use mobile banking to make balance enquiry, request bank statement and make last few transactions that occur in their bank account. However, 48.72% of the customers use mobile banking for payment of bills and none of the customers use mobile banking to stop payment of cheques, or request for cheque book. On the part of the experts, 100 percent of them indicates that they use mobile banking to make payment of bills, balance enquiry, place request for bank statement, and to have knowledge of last few transactions that occur in their bank account. However, none of them use mobile banking to stop payment or request for cheque books.

## 4. Summary and Conclusions

This chapter deals with the summary of the research, conclusion. The conclusion was drawn from the analysis and empirical literature review.

### 4.1. Summary of Findings

The new economy is a critical component of the modern day banking activities in every facet of the globe not only limited to the Ghanaian economy. The cornerstone of the new economy has been the information and communication technology. [5] This means that, the current banking activities cannot function successfully

without the use of ITC. In view of this, the study analyzes the effect and challenges of new economy indicators on banking sector performance using both survey data and secondary data from World Bank (WB) and IMF. The research makes the following findings:

1. The empirical research aimed at identifying and measuring the trend of financial performance of banks. The question of what determines banks performance is no longer relevant. The analysis of the study reveals that net interest margin (NIM), return on equity (ROE) and return on assets (ROA) are the critical elements in measuring the performance of banking sector. The study agrees with assertion made by [9]. With regards to the trend analysis of Ghana's banking sector performance indicates that the performance of banks largely depends on NIM, ROE and ROA but banks performance indicators in the country has been erratic thus increasing and decreasing at different periods. This shows that Ghana's banking sector performance can be volatile due to the fickle trend of the banks performance indicators.
2. An important elements of new economy as we become a global market place are the computer industry (e.g PCs, PDA and Software), the internet industries (e.g dot-coms or internet users) and the technology enabled services (e.g online market places, communication and customer relationship management (CRM) and virtual workplaces) [1], [2], and [3], are: Automated Teller Machines (ATMs), Direct Deposit and Withdrawal Services, Pay by Phone Systems/Telephone Banking, Point-of-Sale Transfer Terminals, Personal Computer (PC) Banking Services, Internet Banking, Branch Networking, Electronic Funds Transfer at Point of Sale (EFTPoS) and Electronic Cheque Conversion. Based on the views expressed by [1], Abor [2]; FTC and [3] we identified the key indicators of new economy as internet users, mobile cellular subscriptions, mobile banking, value of mobile money, ATMs, debit cards, credit cards, telephone and P.C. banking, and Electronic transfers. Furthermore, the research findings reveals that the analysis for the performance of new economy indicators in Ghana as expressed by internet users, mobile cellular subscriptions, mobile banking, value of mobile money, and Automated Teller Machines (ATMs) has improved immensely. In a case of mobile cellular subscriptions, the analysis reveals that, in every 100 people you will find 135 persons being subscribed to a public mobile telephone service using cellular technology which provide access to the public switched telephone network, post-paid and prepaid subscriptions. It further shows that mobile banking operated by banks and the value of mobile money has seen a remarkable increase from 5900 and 0.7888 to 107415 and 46.5230 respectively in 2012 and 2016. This means that the active number of agents' outlets and the value of mobile transactions have tremendously rose since its inception in 2011 by the Bank of Ghana.
3. To establish the purpose of using new economy products by customers and experts in the banking industry, the analysis reveals that customers and experts mainly use mobile banking, internet banking and ATM services for the ultimate purpose of withdrawing cash, checking accounts, making bank statement enquiries and transfer of funds.
4. To identify the challenges facing the adoption of e-banking services, the findings reveals the following as the numerous challenges facing its adoption as stated by bankers in the survey the cost of adopting is very high, no differences in profitability compared to branch banking, many bankers fear cross-border risk since the laws are different from one country to another, many bankers fear risk management challenges like reputation risk, operational and capital adequacy risk, customers fear using e-banking services because electronic crimes are arising greatly.
5. Based on the opinions shared by 44 customers and experts in the banking sector in Figure 3, the findings indicates that the new economy is a new system of delivering banking services and that it is vital, desirable and essentials to the banking industry.
6. Finally, the analysis of the survey data reveals that it is important to adopt e-banking services by customers and experts in Ghana's banking industry since E-banking services are generally faster than traditional banking, no time limit, there is high degree of convenience in accessing e-banking services, channels are easier to use than traditional channels, are generally cheaper than traditional at the branch, it is more prestigious than queuing at the banking halls. These importance stated by the respondents are in tandem with the previous studies reviewed on. However, the study does not conclude that it cuts budget expenditure by 10% as asserted by [11].
7. One of the important aims of the study is to identify the key indicators of new economy employed by customers and experts, the findings shows that customers and experts used some forms of new economy indicators in their respective banks. It reveals that all the participants (100%) used ATM banking, debit cards and mobile banking, 61.36% use internet banking, 13.64% use P.C. banking, 6.82% telephone banking. It further indicates that, 6.82% use electronic transfer (EFTs) and finally none of the respondents use credit card in ascending order of usage.

## 4.2. Conclusion

Despite the numerous challenges facing the adoption of new economy, the findings of the research proved that, the new economy is a new system of delivering banking services and that it is essential, desirable and vital to the customer's need of the various banks. The analysis of the survey data via questionnaires indicates that the benefits of using e-banking services are immeasurable since it has no time limit, convenience and keeps clients of the banks to be abreast with requisite knowledge, and information regarding every single transaction being carried out in their accounts in the best possible way, it saves the time of

the customers and bank employees conspicuously. In effect, the new economy has leapfrogged the activities of current banking industries in Ghana. Banks have gradually equipped themselves with the state-of-art-technologies.

Furthermore, based on the analysis of the survey data, we concluded that customers and experts in the banking industry, use new economy products such as mobile banking, internet banking and ATM services for the ultimate purpose of withdrawing cash, checking accounts, making bank statement enquiries and transfer of funds. Interestingly the trend analysis of new economy indicators improved tremendously over the years under study. The study also reveals that customers have a greater fear of using electronic banking because of e-crimes and cyber fraud associated with it. Finally, as part of the challenges facing the adoption of new economy especially e-banking services, the research concludes that there are high cost in adopting IT in order to promote electronic banking even though the benefits associated with the new economy cannot be quantified.

### 4.3. Recommendations

The research paper recommend that the commercial banks should undertake rigorous controls to reduce the high charges, establish a judicial banking system by developing proper regulatory framework to avoid the risk of cyber fraud and Ponzi banking system. Auditing fraud and forensic banking programs will also contribute immensely towards arresting Ponzi banking schemes and octopus financial institutions and thus ensuring macroeconomic stability. This is important to making the path of new economy a reality in the Ghanaian banking industry if employed strategically by government, stakeholders, key players and captains of the various banking industry in Ghana

### References

- [1] Investing Answers. "New Economy" Financial Dictionary Retrieved from <https://investinganswers.com/financial-dictionary/economics/new-economy-546>.
- [2] J. Abor. Technological Innovations and Banking in Ghana: An Evaluation of Customers' Perceptions. Legon: University of Ghana, 2004.
- [3] F. A. Eshun. The role Telecommunication on banking services in Ghana. [https://publications.theseus.fi/bitstream/handle/10024/4513/Abeku\\_Edited\\_Thesis.pdf?sequence](https://publications.theseus.fi/bitstream/handle/10024/4513/Abeku_Edited_Thesis.pdf?sequence), 2009.
- [4] W. D Nordhaus. Technology, Economic Growth and the New Economy, Yale University, 13<sup>th</sup> June, 2000.
- [5] S. A. Söylemez Yeni Ekonomi, Boyut Kitapları, Boyut Matbaacılık ve Boyut Yayın Grubu ISBN 975-521-430-5 PP 21-23, 2001.
- [6] O.Kwabena., K. Roderick, and O. K. Kwame. The Role of Information on Banking Service Delivery: A Perspective from customers in Ghana, *International Journal of Innovative Research in Management*, 2 (6): ISSN 2319-6912, 2013.
- [7] M. Piatkowski. The Economic and Institutional Determinants of the New Economy in Transition Economics, *Aeta Oeconomica*, 53 (1): 1-27, 2003.
- [8] Saunders, Lewis, and Thornhill .Research for Business Students.Pearson-Prenticehall. London, 2009.
- [9] O. O. Vincent and B. K Gemechu, Determinants of Financial Performance of Commercial Banks in Kenya, *International Journal of Economics and Financial Issues*, 3(1): 237-252, 2013. ISSN: 2146-4138.
- [10] Beck, T. A. Demirgüç, and Rose Lenine. A new Database on the Structure and Development of Financial Sector, *World Bank Economic Review*, 14(3): 597-605, 1999.
- [11] S.K. Dangolania. The impact of Information Technology in Banking System: A case study in Bank of Keshavarzi, Iran, 30: 13-16, 2011.
- [12] S. Bili. & L. Raymond. Information technology: Threats and opportunities for small and medium-sized enterprises", *International Journal of Information Management*. 13(6), 439-448, 1993.
- [13] A. A. Agboola. Impact of Electronic Banking on Customer Services in Lagos, Nigeria" in *Ife Journal of Economics and Finance*. Department of Economics, O.A.U, Ile-Ife, Nigeria, 5 (1&2), 2001.
- [14] L. G. Tornatzky; R. J. Klein. Innovation characteristics and innovation adoption implementation: A meta-analysis of findings, *IEEE Transactions on Engineering Management*, EM-29: 28-45, 1982.
- [15] Two Decades Later, is the "New Economy" Finally Here? [Internet]. Harvard Business School, Business Research for Business Leaders. 2018 [cited 2018 Nov 23]. p. 1. Available from: <https://hbswk.hbs.edu/item/two-decades-later-is-the-new-economy-finally-here>
- [16] Lau LJ, Li K-T. The Impact of the New Economy on Developing Countries [Internet]. Stanford University; 2000 [cited 2018 Nov 23]. Available from: <https://web.stanford.edu/~ljlau/Presentations/Presentations/NBS.PDF>.
- [17] Pohjola M. The New Economy: facts, impacts and policies. *Inf Econ Policy* [Internet]. 2002 Jun 1 [cited 2018 Nov 23]; 14(2): 133-44.
- [18] Shapiro AH, Wilson DJ. What's in the News? A New Economic Indicator [Internet]. 2017 [cited 2018 Nov 23]. Available from: <https://www.frbsf.org/economic-research/files/el2017-10.pdf>.
- [19] Nanclares NH, Lera López F. The So Called New Economy and the ICT: Concept and Measurement\*\*. In: *Global Consequences of the Information Technology* [Internet]. London; 2000 [cited 2018 Nov 23]. p. 1-16.
- [20] Atkinson RD, John Wu J. The Center for Data Innovation | Open Data In the G8 0 [Internet]. 2017 [cited 2018 Nov 23]. Available from: [www.itif.org](http://www.itif.org).
- [21] Bank of Ghana, Banking Sector Report Page | i [Internet]. 2018 [cited 2018 Nov 23]. Available from: [https://www.bog.gov.gh/privatecontent/MPC\\_Press\\_Releases/Banking\\_Sector\\_Report\\_May\\_2018.pdf](https://www.bog.gov.gh/privatecontent/MPC_Press_Releases/Banking_Sector_Report_May_2018.pdf).
- [22] Owusu-Antwi G, Mensah, Lord, Crabbe M, Antwi J. Determinants of Bank Performance in Ghana, the Economic Value Added (EVA) Approach. *Int J Econ Financ* [Internet]. 2014; 7(1). Available from: <http://www.ccsenet.org/journal/index.php/ijef/article/view/29698>.

