

INFORMATION AND COMMUNICATION TECHNOLOGY ADOPTION IMPACT ON FIRMS: A CASE STUDY OF UNIQUE TRUST BANK

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ABSTRACT

This paper assessed how Information and Communication Technology adoption should be organized and managed to enhance the service innovation practices of the firm; and evaluate how service innovation practices improve the competitive advantages of a firm. The quantitative sampling technique was used to administer fifty questionnaires to a sample size of fifty respondents from the Headquarters of Unique Trust Bank. Data collected will be analyzed and interpreted using both descriptive and analytical approach. The paper analyzes both theoretically and empirically how Information and Communication Technology related spending can affect bank profits via competition in financial services that are offered by the banks. The paper utilizes a Hotelling model to examine the differential effects of the Information Communication Technology (ICT) in moderating the relationship between costs and revenue. The results from both methods indicated significant productivity improvement after the adoption of ICT. It concludes that, the implementation of modern technology increase the profitability of the firms and hence, increases productivity.

Keywords: Information and Communication Technology, productivity, innovation, staff

INTRODUCTION

In the current technological age, business firms have taken up the challenge to invest heavily in Information and Communication Technology (ICT) to position themselves dynamically for the technologically-driven world. These firms have adopted ICT to foster changes in managing customer relationships, manufacturing, procurement, the supply chain and all other key activities (Agarwal & Sambamurthy, 2002; Barua & Mukhopadhyay, 2000). This is to enhance their customer relationships, ie provide easy timely and online access of their products to customers, and to increase their capacity to compete within their scope of endeavour (Sambamurthy *et al.*, 2003). ICT enables new innovations, improving of the existing ones and to explore new markets that hitherto were a distance away from them.

According to Afuah (1998) good innovation practices help enhance a firm's competitive advantage. However, there is no definite relationship between the advancement of a firm adopting ICT to any form of competitive advantages or the invention of new innovations. Systematic empirical investigations of these relationships are also scarce and no dominant pattern had emerged (Preissl, 1999).

STATEMENT OF THE PROBLEM

The problem under investigation is to help determine the relationship between the adoption of ICT to new innovations – related activities and to establish the fact that, the adoption of ICT has actually led to new innovation among firms and adding to their competitive edges.

The choice of financial services was influenced by the desire to investigate service firms in a highly competitive, dynamic and technological–driven industry which is so rapidly changing with an upsurge in innovation–related activities.

An organization such as Unique Trust Bank (UT Bank) is a demanding financial and loan industry, which seek to improve productivity and therefore, the need for work with high level business innovations, Information and Communication Technology as an important concept. The problem is how business can be improved using these innovative measures effectively to improve organizational productivity and achieve organizational goals.

OBJECTIVES OF THE STUDY

To this end, the objective of the present study is twofold; to assess how Information and Communication technology adoption should be organized and managed to enhance the service innovation practices of the firm and evaluate how service innovation practices improve the competitive advantages of a firm. The results may help managers to understand service technology adoption within a firm. The study seeks to achieve the following specific objectives:

1. Devise a component-based structure equation model that links these constructs.
2. To evaluate the validity of the linkages.
3. To assess the plausibility of Information and Communication Technology adoption as an antecedent to service innovation practices and introduce the associated hypothesis.
4. To examine how service innovation practices are related to competitive advantages in the context of relevant theoretical perspectives.

METHODOLOGY

Sampling Technique

The random sampling technique was used to administer fifty questionnaires to a sample size of fifty respondents from the Headquarters of Unique Trust Bank.

Data Collection and Analysis Procedure

The questionnaire was used as the main tool for data collection. This instrument was used to elicit information from policy makers and policy implementers. Data collected was analyzed and interpreted using both descriptive and analytical approach. All the information on district and municipal assemblies were gleaned from the internet. The findings were presented in the form of frequency tables and diagrams.

RESULTS AND DISCUSSION

Table 1. Age Distribution of Respondents

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
<25	5	10
26 – 30	11	22
31 – 35	8	16
36 – 40	5	10
41 – 45	6	12
46 – 50	5	10
51 – 55	5	10
Total	50	100

Table 1 displays the age distribution of the respondents in the study. The ages of the respondents ranged between twenty four years and fifty-five years. The highest age group was 26 – 30 years (22%). This was followed by the 31 – 35 age group (16%) and 41 – 45 year group (12%). The age groups below 25 years, 34 – 36, 46 – 50 and 51 – 55 were 10% each. This showed that majority of the workers at UT bank were in their youthful age group.

Table 2. Grade of Respondents

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Finance manager	20	40
Line Manager	10	20
Sales person	2	4
Junior staff	3	6
Accountant	10	20
Cashier/ Teller	5	10
<i>Total</i>	<i>50</i>	<i>100</i>

As seen in table 2, a high percentage (40%) of the respondents was in the grade of Finance Manager's grade. Line managers and accountants who were next to the finance managers also constituted twenty per cent (20%) each, with cashier / teller forming ten percent (10%). Junior staffs and sales person on their parts were 6% and 4% respectively. It can therefore be deduced that majority of our respondents are financial managers, followed by the accountants. This was due to the fact that, almost all of them use ICT consistently.

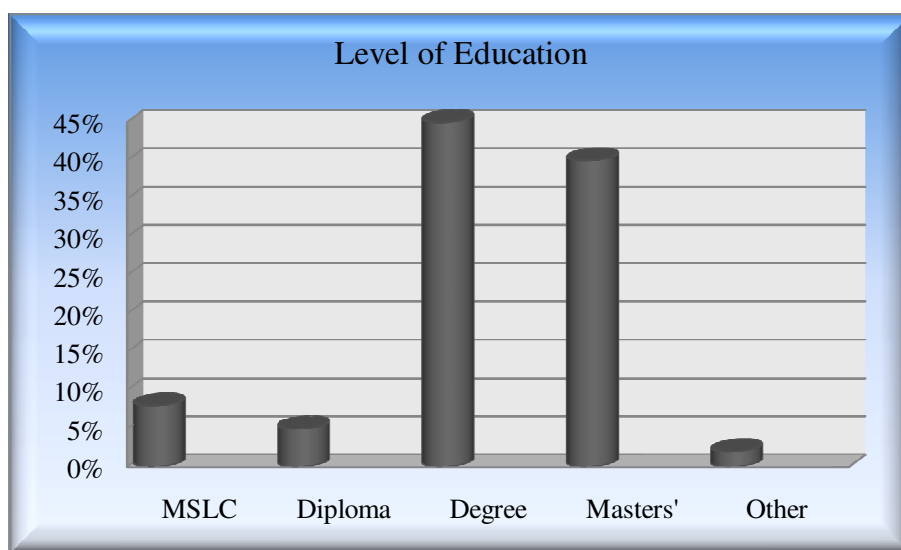


Figure 1. Educational Level of Respondents

Figure 1 depicts the educational level of the respondents. Majority of the respondents (45%) are degree holders from various universities, followed by respondents with a masters' degree, which constitute (40%). 8% of the respondents have HND certificates and 5% with Diploma certificate. 2% of the respondents do not have any of these certificates, but have professional certificate in ACCA, ICA, and CIM-UK.

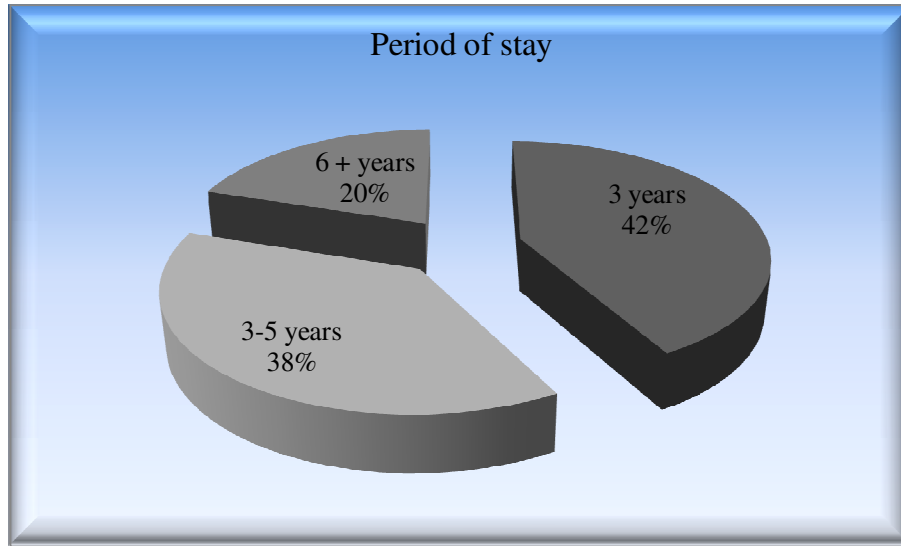


Figure 2. Length of Stay at Facility

Figure 2 indicates that forty two percent (42%) of the respondents had spent less than three years in their facilities. Thirty eight percent (38%) of them had also stayed in their respective facilities between 3-5years, whilst twenty percent (20%) had stayed in their posts for six years and beyond.

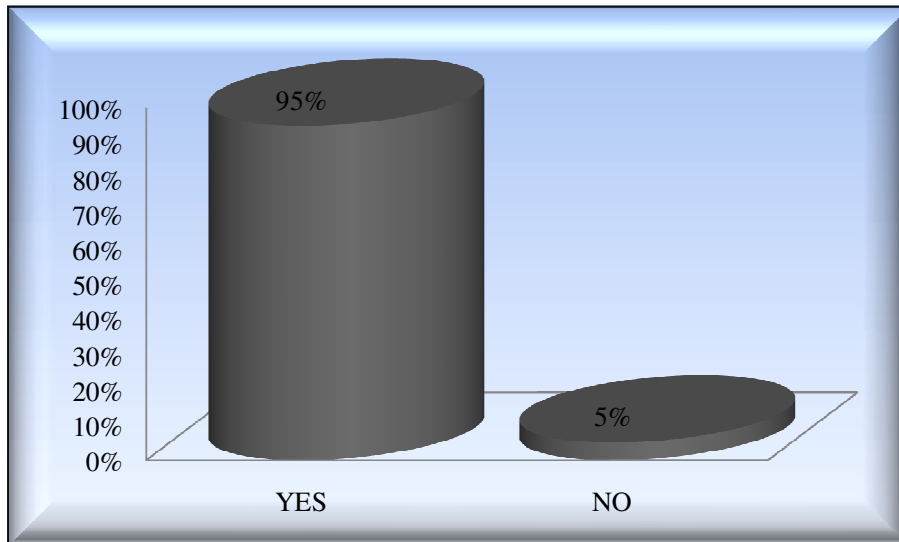


Figure 3. Internal Software

Figure 3 shows that 95% of the respondents agree with the fact that, the bank has internal software for financial reporting. These respondents mainly constitute the accountant, finance manager, junior staffs, line managers, and cashier. The 2% of the respondents who did not agree with the fact that the bank has internal software for financial reporting were mainly the sales people.

Further, from the data collected from the respondents of UT bank, there are two main applications used by the bank. These are the finance and the tally software. The finance are

mainly used by the finance managers and accountants, while the Tally is used by the cashier, junior staffs and the line managers.

Table 3: Challenges of Accounting Software

<i>Variable</i>	<i>Frequency</i>	<i>Percentage (%)</i>
Very challenging	5	10
Normal	30	60
Not challenging	15	30
<i>Total</i>	<i>50</i>	<i>100</i>

From data collected from our respondents, 60% of the respondents claimed that the use of the internal software is normal. They sometimes find challenges, but just for a short while, as narrated by some of the respondents. When these respondents were interviewed as to what challenges they sometimes encountered, they claimed that, they have not been detailed about the whole aspect of the software. They said that, they are certain platform of the software that they know nothing about. As a result of that, it slows down their work, since they have to call for assistance. Further, 30% of the respondents also said that, they find no challenges in using the company software. From the data collected, these respondents are mostly the management of the company. Most of them have been in the company from the beginning. This indicates how competence they are with the software. 10% of the respondents also claimed that the use of the software is very challenging. These people are mainly new employees of the company, and also some of them also hardly use the software. Most of these respondents are also field workers, who market the products of the bank to the public.

Additionally, from the survey gathered, some of the challenges they faced are: most of them lack adequate training on the software, therefore making it difficult to use some platform of the software; some of them also claimed that the software is very complicated; and some of the respondents also said that, the software is very slow, thereby delay inputs.

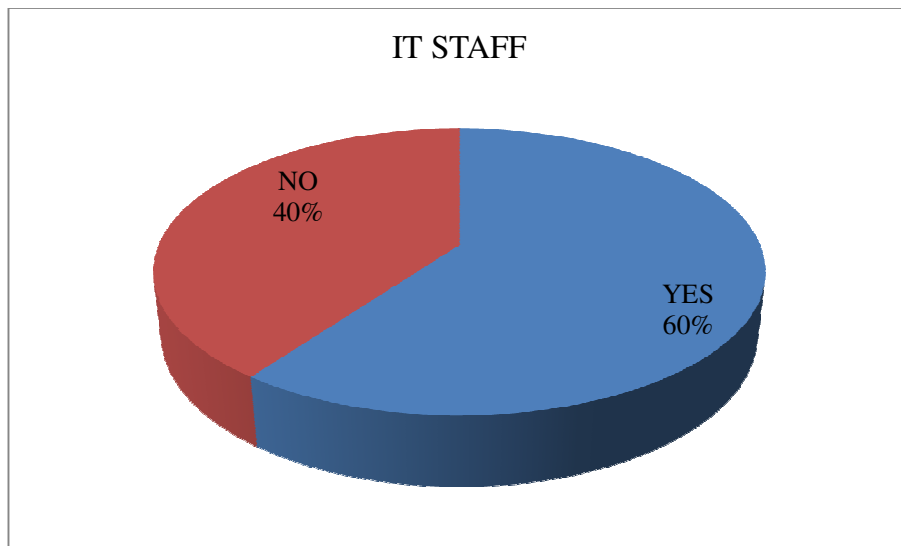


Figure 4. Qualify IT Staff

From data gathered from the respondents, 60% of them claimed that they are qualified IT professionals. When these respondents were interviewed on how qualified they are as IT

staff, they claimed that they had professional training before being employed and from the past years they have been with the company, anytime the company wants to update their software, network challenges, installation of new software etc, the company do not hire any IT personnel from somewhere, but the IT staff of the company does everything. 40% of the respondents also said that, despite the fact that there is IT staff in the company; most of them do not know how to do their work very well. They claimed that most of these IT workers are diploma holders; therefore they are not competent. Upon further interview, some of the respondents also claimed that, some of the IT staff is very weak in networking and software installations.

Table 4. Relevant Information

<i>Variable</i>	<i>Frequency</i>	<i>Percentage (%)</i>
Yes	45	90
No	5	10
<i>Total</i>	<i>50</i>	<i>100</i>

Results presented in table 4 indicate that 90% of our respondents concluded that, with the use of ICT, they are able to get all relevant information for effective, efficient and complete financial reporting. 10% of the respondent said that, due to the complication nature of the software, poor network and poor installation by IT staff, getting effective and complete financial reporting is a challenge, due to the fact that, some of the balance sheet do not balance due to poor installation of the software.

Furthermore, 95% of our respondents said that, compared to the manual way of financial reporting, which takes days or even weeks in completing it, with the use of the financial software, financial report preparation only takes some few hours to complete, 5% of the respondents also said that, they have no idea as to whether accounting software consumed time or not.

However, upon further interrogation, 98% of the respondents also said that, the use of accounting software has speed up the performance of financial reporting. This is due to the fact that, staffs are able to submit their report on time to management; staffs are able to prepare their reports on time and management are also able to submit these reports to board of directors on time.

SUMMARY OF FINDINGS OF THE STUDY

This study explored the impact of IT implementation on the production function of accounting firms in Ghana. The field interviews revealed that the potential impact of ICT on work efficiency of an individual user, business process, and work group levels. Although ICT has different impacts on professionals at different ranks, the impacts are all in the positive direction. The study represents the first investigation of ICT impact on firm productivity in the accounting industry and provides a successful example for other public accounting firms or professional services firms in evaluating other similar ICT investments. In addition, the rich qualitative information explains the underlying changes in the organization and opens the black box in the traditional quantitative approach to help us understand why productivity may have improved.

CONCLUSION

This paper is concerned with the impact of Information and Communication Technology on the banking industry, as banks are the intensive users of ICT. The usage of ICT can lead to lower costs, but the effect on profitability remains inconclusive owing to the possibility of network effects that arise as a result of competition in financial services. The paper analyzes both theoretically and empirically how Information and Communication Technology related spending can affect bank profits via competition in financial services that are offered by the banks. The paper utilizes a Hotelling model to examine the differential effects of the information technology (IT) in moderating the relationship between costs and revenue.

The relationship between ICT expenditures and bank's financial performance or market share is conditional upon the extent of network effect. If the network effect is too low, ICT expenditures are likely to reduce payroll expenses, increase market share, and increase revenue and profit. The evidence however suggests that the network effect is relatively high in the Ghanaian banking industry, implying that although banks use ICT to improve competitive advantage, the net effect is not as positive as normally expected. In a broader context, the innovation in Information and Communication Technology, deregulation and globalization in the banking industry could reduce the income streams of banks, and thus the strategic responses of the banks, particularly the trend towards mega-mergers and internal cost cutting, are likely to change the dynamics of the banking industry. Given our negative result due to possible network effect, the changing banking environment could still make it sufficiently to offset any reduction in income.

RECOMMENDATION

Future research needs to examine the ICT / accounting relationship. Today accounting and ICT are inseparable. Accountant's use of sophisticated management accounting techniques is clearly dependent on ICT existence. The benefits for accounting from ICT materialize only in uncertain ways and only after long implementations.

Furthermore, financial accounting information is both an output of the banks process, since it is produced by managers, and also an input since it is used in corporate control mechanisms.

One of the most important elements of good ICT in the banking sector is transparent corporate disclosure. Companies are required to provide relevant and reliable information on their activities, strategies and plans. In general, better corporate disclosure enhances the quality and level of monitoring of the firm by shareholders and strengthens the market share of the bank.

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