

MANAGERIAL AND USAGE CHALLENGES ASSOCIATED WITH THE E-ZWICH PAYMENT SYSTEM IN GHANA

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Abstract

The study investigated managerial and usage challenges associated with the e-zwich smartcard. It focused on four different population categories namely Bank of Ghana, Ghana Interbank Payment Settlement Systems (GhIPSS), Participating Commercial Banks and Users of the e-zwich system. The total sample size selected from these population categories was 102 users, five managers from five commercial banks, and two personnel from the Bank of Ghana/GhIPSS. Inadequate point of sale (POS) terminals was the most prevalent challenge confronting users of the e-zwich card. This was the view expressed by 27% of the respondents who used e-zwich cards. 13% of respondents held the view that complex processes for conducting payments was a challenge associated with use of the e-zwich cards. Other major challenges mentioned were: Lack of knowledge and skills in basic computing; lack of trust in non-cash payments and inadequate marketing (advertisement) campaigns. It was concluded that, significant progress has been made in the use of the e-zwich card, however, many challenges still remain. Project owners and stakeholders should invest in an extensive education campaign, provide training and support on usability issues, implement efficient regulatory mechanisms/policies to drive operation of the e-zwich payment system.

Keywords: E-zwich payment, electronic payment system, Point of sale terminals, Challenges

INTRODUCTION

Cash as a medium of exchange is relatively more convenient and an improvement upon the earlier barter system, but it has its own limitations. Efficient payment system relies on non-cash payments and also notes that an efficient and reliable payment system facilitates economic development (Sumanjeeti, 2009; IHS Global Insight and Visa, 2012). However, Ghana like any other developing country mainly use cash in most business transactions. This Ghanaian economy is thus a cash-based one. This reason why this is so is the huge informal sector embedded in the economy. The informal sector employs a significant portion of the labour force. Hormeku, (1998), estimated that 80% of the Ghanaian labour force is employed by the informal sector.

The introduction of the banking system and use of other payment forms like cheques, payment order and other electronic payment systems has helped to ease the limitations of the cash-based system. However, due to the large size of the informal sector, a large percentage of transactions are still done on cash basis. In order to reduce the cost associated with exchanging goods and services using cash, and the cost of printing worn out currencies and reducing the risk associated with cash based transactions, the Bank of Ghana has introduced many reforms into the Ghanaian banking system.

This reforms were aimed at making payment system more efficient to improve the functioning of the interbank, money, and capital markets in the country. One of these key initiatives of the Bank of Ghana is the introduction of the E-zwich payment system through the Ghana Interbank Payment and Settlement Systems (GhIPPS) in 2008. According to Breckenridge, the e-zwich project was the world's first biometric banking system and differed in some key respects from the one that was in place in South Africa (Breckenridge, 2010).

The reason for the e-zwich project was to integrate the various financial institutions into one system in order to ensure safe and fast transfer of funds and reduce if not eliminate cash transactions. The E-zwich smart card was issued through the financial institutions to potential users to enable them instigate cashless business transactions. The E-zwich payment system was introduced with certain anticipated benefits for the individual users, the commercial banks and the economy as a whole (Breckenridge, 2010).

However, seven years after the introduction of the payment system, the level of awareness and patronage has not been as expected and the project has faced several challenges. Questions asked have included, what challenges have come up following the implementation of the e-zwich payment system and what steps must be taken to address the challenges being faced by the e-zwich payment system in order to realize the full benefits associated with the system?

Some people predicted failure for the project, others think it has died a natural death and others are optimistic that, if the current usage and management challenges facing the e-zwich project are effectively tackled and addressed, there will be a turn around to enable the nation reap the anticipated benefits from its implementation. This paper explores from a cross-section of the Ghanaian population and financial institutions, usage and management challenges associated with the e-zwich payment system with the intent of suggesting ways to improve use and management of the e-zwich payment system.

LITERATURE REVIEW

Overview of payment systems: *The barter system*

Duffy and Ochs (1989) notes that, an object becomes a medium of exchange when many agents who have no interest in that object for their own consumption or use in production still accept the object in trade with the rational expectation that they will be able to trade it for other goods which are of intrinsic value to themselves. During the era of the barter system goods were exchanged for goods and the essence of money as a medium of exchange was absence. However, one of the main problems that confronted the barter system was the issue of double coincidence of wants, which must exist before exchange can take place.

The concept of double coincidence of want postulates that one must want exactly what the other has to offer, when and where it is offered, so that the exchange can occur (Jevons, 1893). According to Ostroy and Starr (1990), there must be a double coincidence, which will rarely happen. The double coincidence is the situation where the supplier of good A wants good B and the supplier of good B wants good A. This problem with the barter system militated against easier exchange of goods and services during the barter system. This major problem with the barter system led to the search for an appropriate medium of exchange. Money was therefore developed as a medium of exchange to overcome this key change of the barter system. With money being the major medium of exchange, payments systems were developed out of a need to facilitate growth of commerce and economic development.

Payment Systems and Its Evolution

According to Cirasino & Garcia (2008) a payment system is the infrastructure (comprised of institutions, instruments, rules, procedures, standards, and technical means) established to enable the transfer of monetary value between parties discharging mutual obligations. The authors argue that, what makes it a "system" is that it employs cash-substitutes; traditional payment systems are negotiable instruments such as drafts (e.g. cheques) and documentary credits such as letter of credits.

In simple terms, Cirasino and Garcia's definition helps appreciate that payment systems are the mechanisms that enable the smooth transfer of funds between buyers and sellers, and/or between banks. In today's world, no economic activities are possible without the transfer of money. In this sense, it can readily be said that payment systems are one of the most significant social infrastructures. According to the World Bank (2010), payment system's technical efficiency determines the efficiency with which transaction money is used in the economy, and the risks associated with its use.

An efficient payments system is one that reduces the cost of exchanging goods and services, and is indispensable to the functioning of the interbank, money, and capital markets. A weak payments system may severely hamper the stability and developmental capacity of an economy; its failures can result in inefficient use of financial resources, inequitable risk sharing among agents, actual losses for participants, and loss of confidence in the financial system and in the very use of money.

Issahaku (2012:88) cited the work done by Benjamin Graham (2003) and argued that the evolution of electronic payment started in 1918, when the Federal Reserve Bank first moved currency via telegraph. However, it was not until the Automated Clearing House (ACH) was set up by the U.S Federal Reserve in 1972 that electronic currency became widespread. According to him this provided the U.S treasury and commercial banks with an alternative to process cheque.

Following this development, researchers over the world have undertaken research, symposia, journal articles, and lectures to evaluate the system of e-payment. Ferguson (2000) examined how businesses and existing industries can be improved by using the Internet or electronic devices. According to the "Global Payment System Survey 2008" conducted by the World Bank, 112 countries out of 142 (or 79%) were using the Real Time Gross Settlement (RTGS) system as of December 2006.

Different types of payment systems

Abrazhevich, (2004) show that while cash payment systems go back thousands of years and paper-cheque payments go back centuries, electronic payments are relatively new and rapidly evolving and in an e-commerce environment, payments take the form of money exchange in an electronic form, and are therefore called electronic payments. Electronic payment is a form of a financial exchange that takes place between the buyer and seller facilitated by means of electronic communications.

Kalakota & Whinston, (1997; cited in Abrazhevich (2004) defined an e-commerce electronic payment as a financial exchange that takes place in an online environment. When the

payment system is efficient, it reduces the cost of exchanging goods and services, and is indispensable to the functioning of the interbank, money, and capital markets. A weak payments system may severely drag on the stability and developmental capacity of an economy; its failures can result in inefficient use of financial resources, inequitable risk sharing among agents, actual losses for participants, and loss of confidence in the financial system and in the very use of money.

Payment systems may be physical or electronic and each has their own procedures and protocols. Standardization has allowed some of these systems and networks to grow to a global scale, but there are still many country and product specific systems. Examples of payment systems that have become globally available are credit card and automated teller machine networks. Specific forms are also used to settle financial transactions for products in the equity markets, bond markets, currency, futures, derivatives, options, transfer funds between financial institutions both domestically and using clearing systems and internationally using the swift network.

Kumaga, (2010:22 cited by Issahaku 2012) further observed that banks and other financial institutions are not adequately automated to enable e-banking and e-payment Taddesse & Kidan, (2005: cited by Issahaku, 2012) also noted that in most African countries the required infrastructure, legal and regulatory framework for electronic payments are lacking. In particular, e-payments infrastructure such as Internet and mobile networks are not widely available in Africa. Abrazhevich (2004:24) citing Schreft (2002), and Kutter & McAndrews (2001) indicated that there have been other attempts to classify payment systems.

The E-zwich Payment System

According to Issahaku, (2012), e-zwich is the brand name for the National Switch and Smart card payment system. The E-zwich payment system is an innovative method for improving accessibility to banking and retail services in Ghana. The e-zwich system offers deposit taking financial institutions (i.e. Universal banks, Rural banks and Savings and Loans) a platform that enables them to interoperate. This enables e-zwich cardholders to perform banking and retail transactions at the outlets of other e-zwich financial institutions.

According to Hesse, (2010), the e-zwich is an electronic clearing and payment system designed to establish a common platform and thereby link the payment systems of all banking and financial institutions in Ghana. It is an innovative and very secure way of paying for goods and services throughout Ghana. The centrepiece of the e-zwich smartcard is that it is a biometric smartcard that can be used online and offline for financial transactions.

The working of the E-zwich smart-card technology is between the client and a merchant, or a client and a Point of Sale (POS) device or ATM, or a client and another client through any of the POS devices. The E-zwich smartcard contains both a current account and savings account wallet. Holders of the E-zwich smartcard can undertake transactions such as retail payments, money transfer, cash advance, cash withdrawals and deposits, third-party bill payments, salaries/pensions payments at any E-zwich point of sale terminal in the country

Anticipated benefits associated with the e-zwich payment system

Abrazhevich (2004) observe that, there are three benefits resulting from the development of electronic payment systems. These are reduced operational and payments processing costs, growing online commerce and decreasing the costs of technology. E-zwich as a payment system on the other hand was introduced with certain intended benefits for users, participating banks and the economy as a whole. One of the expectations of the Bank of Ghana after its introduction was that the e-zwich would reduce cash transactions and encourage savings by the average Ghanaian in the long run.

E-zwich card is easier to obtain than a traditional account since all that is needed is one's fingerprints and valid photo identification (Konadu, 2011). Issahaku (2012) argued that the benefits accruing to organizations who adopted e-zwich system as mode for paying its staff include payments being made entirely at the convenience of the employer, recipients receive their funds as soon as processing is complete, processing can be made to cardholders of all participating financial institutions and processing is secure as the processing official is biometrically verified.

Usage Problems

The introduction of the e-zwich led to mass registration of potential users and distribution of the E-zwich smart card. However, as time went by and the euphoria waned off despite intensive advertisement, the number increased at a decreasing rate. This brings about the question as to why more than five years after the introduction of the E-zwich payment system, it has not been able to drastically reduce if not eliminate, cash transactions in the Ghanaian economy.

Usability has been defined as the extent to which an application is usable and allows users' to accomplish specific goals efficiently and effectively while maintaining high satisfaction (International Organization for Standardization, 1998; Koohang & Ondracek, 2005; Miller, 2005; all cited by Chang, 2011). Neilsen (2000; cited by Chang, 2011) identified five ways by which usability is important to the user. These included: Efficiency, whereby the user understands how to use the device and the dexterity with which the user can perform tasks; the number of times

the user commits error in using the device and the importance of user errors as well as the ease of correcting those errors; and the level of utility or satisfaction derived from using the device by the user.

In the implementation of the e-zwich payment system in Ghana, a number of challenges have affected the success of the e-zwich service. Among these are link failure, frequent breakdown of machines, slow process of service delivery and long queues. Others include inaccessibility of the POS device. Users do not have access to the POS device before and after banking hours as well as weekends thereby preventing the e-zwich customer from making utmost use of the e-zwich smart card. Although, most of the banks have the POS device they cannot provide the service due to malfunctioning of the devices (Tetteh, 2013).

Issahaku, (2012), observes that, some of the service providers (the Banks) also identified challenges such as network connectivity problems, impatient customers, defects with regards to customers' cards due to improper handling, and low benefits to banks as a result of banks operating the service on behalf of GhIPSS. Many critics of the national payment system have asserted that the system was not properly conceived and as a result have cast aspersions on the ability of the nation to realise the anticipated benefits associated with the introduction of the E-zwich system

Challenges facing the e-zwich payment system

Abrazhevich (2004) noted that issues such as trust, usability, applicability, security, and convertibility are extremely important because they can influence subsequent decisions of people whether to use a payment system or not. Notwithstanding the fact that the e-zwich payment system has been recognized as an efficient medium for conducting electronic payments, its adoption is associated with some challenges (Abor, 2004: cited by Issahaku, 2012).

Kasavana (2004) and Banda (2007); cited by Konadu (2011) observe that generally the slow rate of the adoption of cashless transactions in the past can be attributed to customer reluctance to use cards for small value transactions, lack of operator experience with new technology, perceived high costs, users' attachment to the use of physical cash and zero costs incurred in using cash from the users' perspective.

However, in the case of e-zwich Issahaku (2012) explained that lack of acceptance, ignorance, network lapses and lack of tips are the major challenges to the adoption of the e-zwich (Kumaga, 2010; cited by Issahaku, 2012). Tetteh (2013) observe that it is culturally more acceptable for Ghanaians to carry cash than carrying money in the form of a chip thus making it very difficult for them to accept electronic payment systems in general and the e-zwich smart

card in particular. Further work done by Issahaku (2012) revealed other challenges that are militating against the success of the e-zwich service.

These include link failure, frequent breakdown of machines, slow process of service delivery and long queues. In addition, lack of accessibility to point of sales (POS) devices by users adds to the troubles of the payment system. Inadequate point of sale devices was the basic challenge faced when using the e-zwich smart card (Konadu (2011). According to Issahaku, (2012), these challenges seem to be fast defeating the objectives for which such a capital intensive system was deployed by the Bank of Ghana. Certainly, such an important project, into which so much has been invested, cannot be allowed to go waste.

METHODOLOGY

Research design

The study is an exploratory mixed methods research employing purposive sampling technique and some face-to-face interviews to identify from a cross-section of individual respondents (users of the e-zwich card), and some officials from the banking system to explore the challenges being faced in using the e-zwich payment system and how these challenges can be addressed. The main goal of the purposive sampling was to focus on particular characteristics of the respondents that is, their familiarity with the e-zwich banking system. Respondents were made to answer to series of questions that bordered on their knowledge and experiences with the operation of e-zwich payment system in Ghana. All respondents selected by purposive sampling were similar in the sense that they had been engaged in one way or the other with the implementation of the e-zwich payment system.

Study population and sample

The study focused on four different population categories namely Bank of Ghana, Ghana Interbank Payment Settlement Systems (GhIPSS), Participating Commercial Banks and Users of the E-zwich System. The study sample was drawn from the four population categories. The total sample selected from these population categories was one hundred and nine (109). These consisted of five commercial banks, one hundred and two customers or users of the E-zwich cards, two personnel each from the Bank of Ghana/GhIPSS.

The purposively sampled banks included the Ghana Commercial, Barclays, Ecobank, Agricultural Development, and Stanbic. All the banks sampled have presence in various parts of the country. However, due to the limited time available distribution of questionnaires were limited to branches within the Accra Metropolis. For each of these banks, a purposively sampled of twenty of their customers. The customers or the users were sampled to ascertain

their extent of usage and the benefits that are accruing to them as a result of the usage of the e-zwich payment cards.

In addition, two senior personnel at the Bank of Ghana/ GhIPSS were sampled for the study. These respondents were selected on the basis of their role and level of expertise regarding the implementation of the e-zwich payment system. Also, these personnel were selected because of their knowledge of the anticipated benefits and the challenges associated with the adoption of the e-zwich as a means of electronic payment system.

Data Collection Instruments

Key informant interview was held with the personnel from the Bank of Ghana/GhIPSS. The interview covered among others, challenges faced with the implementation of the e-zwich payment system. Questionnaires were used for sampled commercial banks and their customers. The instruments comprised a mix of open-ended, close-ended questions modelled after the five-point Likert scale rating.

Reliability and Validity

To ensure that the instrument for the data was reliable such that the results obtained were valid, the questionnaire was pre-tested at the Accra High Street Branch of Barclays Bank. As part of the pilot study, three questionnaires were administered on one Manager, Customer Service Advisor and one customer of the bank through purposive sampling. The pilot allowed for modification of those items on the questionnaire that were considered unclear, and misleading. Thus, the pilot study ensured that the instrument was valid and reliable and hence appropriate for the study.

Data Analysis

Content analysis was used for the qualitative data collected. A limited quantitative data analysis technique was also employed for the questions modelled after the five-point Likert scale rating. For the quantitative data, analytical methods such as frequencies, percentages, were used to analyse the data and results were presented in the form of tables and charts.

EMPIRICAL RESULTS

Demographics

In all together, 102 responses were received out of the 113 from the users survey resulting in an 90% response rate. In addition, 6 key informant interviews were completed with officials from the participating commercial banks. Gender is an important variable in the adoption of

technology. Hence the study sought to find out the gender of respondents in relation to the adoption of the e-zwich as shown in Table 1 below.

Table 1. Gender of Individual Respondents

Gender	Individual Respondents		Holders of E-zwich Cards	
	Number	%	Number	%
Male	64	63	64	64
Female	38	37	36	36
Totals	102	100	100	100

Out of the 102 individual respondents that participated in the study, 63 percent were males while 37 percent of them were females. Out of this 102 individual respondents, 100 of them are holders of e-zwich cards representing 98% of the respondents. From table 1, the holders of the e-zwich cards, 64% are males while 36% are women.

Age of Individual Respondents

Age is a key variable that influences the ability and capacity of people to embrace new things, events or conditions. A person's age determines his or her interest in adopting new technology.

Table 2: Age of Individual Respondents

Age Group	Individual Respondents		Holders of E-zwich Cards	
	Number	%	Number	%
Below 20	-	-	-	-
20 – 29	30	29.40	37	37
30 – 39	46	45.10	53	53
40 – 49	14	13.70	5	5
50 – 59	8	7.80	5	5
60 and above	4	4.00	-	-
Totals	102	100	100	100

Table 2 shows that, majority of the respondents in this study were those in the 30-39 age group representing 45% of the total number of respondents. The second highest was the 20-29 age group (representing 29%) and the third highest was the 40-49 age group representing 14%. This is followed by the 50-59 age group representing 8% with 60 and above age group representing only 4%. There were no respondents below the age of 20 years. Out of these responses, still the 30-39 age groups represent 53% of those who had sign on to the E-zwich payment system. This is followed by the 20-29 age group who represent 37% of those who had signed up on the E-zwich system. The 40-49 and 50-59 each represent 5% of those with the e-zwich cards.

Length of e-zwich card usage

The survey asked respondents how long they have been using the e-zwich card to understand whether the promotional and educational activities of GhIPSS have yield any impact on new enrolments to the e-zwich payment system. It was found that 42% of respondents had used the e-zwich payment system for only a year, 32% have used it for up to two years, 10% have used it from 3 to 4 years and 16% have used it over four years. This means that most of these respondents did not sign on during the early years after the launch of the e-zwich payment system. This may be due to their lack of confidence in the system at early years of introducing the e-zwich and probably preferred to wait and see how it would go before signing up.

Factors affecting individual respondents choice of payment systems

Respondents were asked to indicate what factors influenced their choice of payment systems. Results showed that, respondents adopted a particular payment system based on certain reasons. Table 3 shows the factors that influenced respondents' choice of a payment system.

Table 3: Factors affecting respondents choice of payment systems

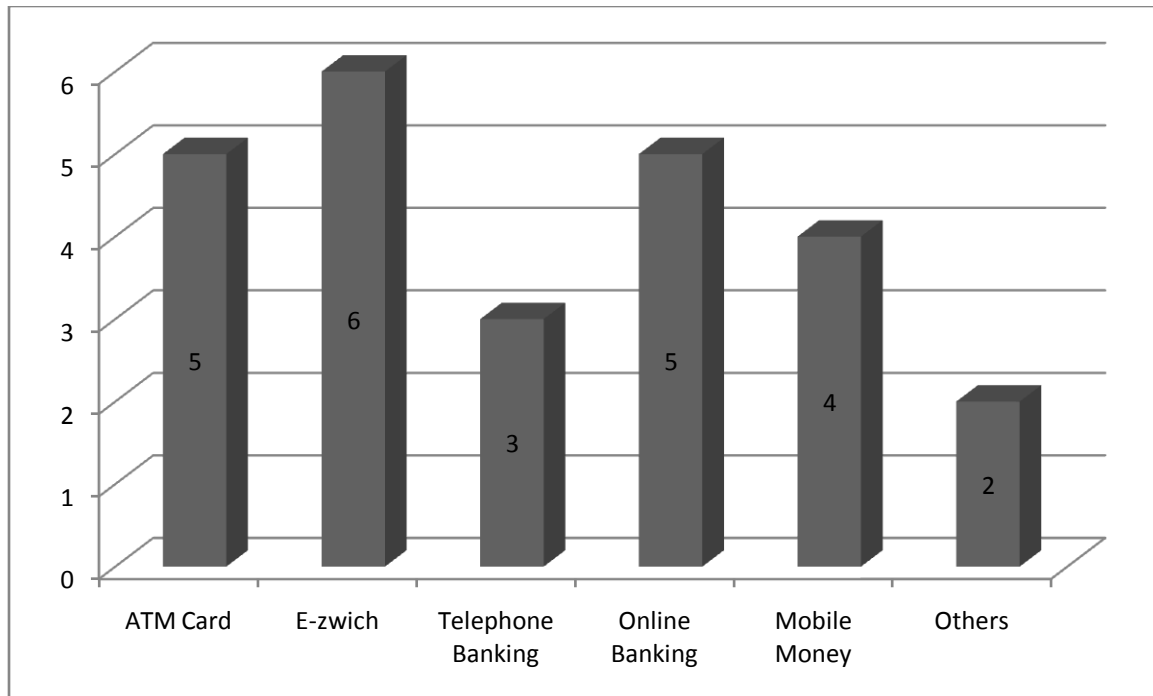
Factors affecting choice of payment system	Individual Respondents		Holders of E-zwich Cards	
	Number	Percentage (%)	Number	Percentage (%)
Customers income	17	17	10	10
Availability of payment system	30	29	36	36
Customer education level	15	15	13	13
Risk management	19	18	20	20
Specific nature of payment made	10	10	11	11
Personal preference of customers	11	11	10	10
Totals	102	100	100	100

One of the factors affecting choice of payment system was the availability of payment system. The objective was to determine from respondents' their opinion on how the availability of payment system influenced their choice of payment system they used for transactions. Table 3 shows that, availability of payment system was very key determinant of respondents' choice of payment systems. 29% of all the respondents and 36% of the holders of the e-zwich card indicated that the availability of payment was key factor influencing their decisions. The reason for this may be the absence of electronic payment systems with some of the respondents' banks.

Figure 1 below shows that of the six banks that responded, all the six are offering the E-zwich payment systems to their customers. However, only five are offering ATM visa card services, four offering mobile banking and three offering telephone banking services. The

unavailability of some types of payment systems implied that clients could not adopt them. This is mainly so because it is the responsibility of the service provider to provide the electronic payment system for use by their clients.

Figure 1: Availability of payment system on banking platform



Also, based on the response from the six banks, some of them are not offering certain services with the use of their e-zwich electronic payment cards. This is shown by the Table 4. All the six banks allow their e-zwich card holders to use it for cash transfers (36%). However, only few banks allowed their e-zwich card holders to use it to check account balances (24%), print mini statements (24%) and pay for goods and services (16%). All the respondent banks do not allow their e-zwich card holders to use it to order bank drafts.

Table 4: Available services for usage by e-zwich card holders

Usage of e-zwich cards	Holders of e-zwich cards	
	Numbers	Percentage (%)
Cash transfers	36	36
Checking account balance	24	24
Printing mini statements	24	24
Payment for goods and services	16	16
Order bank drafts	-	-
Others	-	-
Totals	100	100

Challenges associated with the use of the e-zwich payment system

Respondents were asked to enumerate the challenges they are facing with the usage of their e-zwich cards. This was aimed at determining the usage and managerial challenges facing users of the e-zwich smart card and to analyse how these have impacted on their confidence and acceptance of the e-zwich payment system. Although a small proportion of the respondents placed money on their smart card as at the time of the survey, it was made known to the researcher through the face-to-face interaction with section of the respondents that some of the challenges listed below were responsible for their refusal to use the e-zwich smart card. Table 5, shows results.

Table 5: Managerial and usability challenges with e-zwich payment system

Problems associated with usage and management of the e-zwich payment system	E-zwich Card holders	
	Numbers	Percentage (%)
Lack of knowledge and skills in basic computing	10	10
Complex processes for conducting payments	13	13
Preference of human tellers to machines	8	8
Preference for cash / paper payments	8	8
Lack of trust in non-cash payments	10	10
Inadequate point of sale terminals	27	27
Inadequate marketing campaigns	10	10
Personal preference of customers	7	7
Poor attitude to new products and services	7	7
IT and network Issues	-	-
Totals	100	100

Responses received from the individual e-zwich card holders indicate that inadequate point of sale terminals were the most prevalent challenges confronting the users of the e-zwich card. According to Table 5, the inadequate point of sales terminal accounted for 27 % of responses received. This view was also supported by the responses received from the key informants from the participating banks. According to the response from the interviews from participating banks, inadequate point of sales terminals, lack of trust in non-cash payments and poor attitude to new products and services were the most key challenges associated with the use of the e-zwich cards.

Responses received from the individual card holders placed complex processes for conducting payments as the second key challenge associated with the use of the e-zwich cards. It is important to note that all the various challenges indicated in Table 5 were also identified by the various respondents as militating against their use of the e-zwich cards. Interestingly, all the challenges enumerated above were also anticipated by the Ghana Inter-bank Payment and

Settlement Systems (GhIPSS), a department within the Bank of Ghana that has been charged with the responsibility of implementing and managing the e-zwich payment systems.

Inadequate point of sale terminals and lack of knowledge and skills in basic computing identified by GhIPSS was generally acknowledged as a significant factor affecting electronic payment systems in Ghana. This implies, the limited knowledge of the innovation, in terms of how they operate, its benefits and what services exist. This affects both the merchants and the consumers alike. With the very high level of illiteracy in Ghana, most Ghanaians do not appreciate the economic importance of electronic payment systems and as such the e-zwich payment system. This has subsequently led to the lack of knowledge and skill required to effectively operate the system. Many potential consumers are not adequately educated on the benefits and advantages of e-zwich and therefore still use cash for their daily transactions.

The socio-cultural issues are generally related to the state of the development in the country and the heavy cash dependent economy as was also reflected in the response given by the individual respondents in terms of their preference for cash as one of the challenges associated with the usage of the e-zwich cards. Due to this behavioural constraint from the customers, it is difficult to convince a customer to switch to different forms of payment, especially when they are familiar and are not particularly dissatisfied with the use of cash.

Discussions with key officials of the GhIPSS who were associated with the project confirmed that on a scale of one to five, usability and operational (management) challenges were identified as the most key challenge faced during the project implementation.

DISCUSSIONS

The research results indicate that more males (63%) are using the E-zwich product than women (37%). This findings agree with the observations made by Venkatesh and Morris (2000) that men may be more task oriented than women. In this context, task-orientation may be defined as the accomplishment of a task that requires the use of technology.

While 98% of the individual respondents use the e-zwich card, the results indicate that most of the users are from the age bracket 30 to 39 years (45%). In a typical Ghanaian population, these may be people in their early working years. Users from the age bracket, 20 to 29 were the next big group of e-zwich users (29%). Users in the age bracket 40 to 49 years constituted 14%. This probably emphasises that the working population above 40 years are yet to have more confidence in the e-zwich payment system. This may also indicate that e-zwich cards are not attractive to those in the higher age brackets some of whom may have been working years before the introduction of the e-zwich payment and as such may have signed on to other forms of electronic payment system.

The study results reveal that most of the users (about 42%) of the e-zwich payment system are those who have in sign-up within a year and 32% within two years. This may be due to the initial challenges, and lack of confidence and appeal of the e-zwich to the users. The recent increase in the number of users signing on to the e-zwich payment system could be attributed to increase in educational campaigns being pursued by GhIPSS. However, although the results indicate a recent increase in sign on to the system, the face-to-face interviews with officials from the participating banks reveal that, the number of active users are very low, as only about 10% of the card holders use their cards on daily basis. This result is further compounded by the fact that majority of e-zwich card users do not have money on their cards for most of the time. This may be attributed to the socio-economic status of the people who have signed on to the payment system.

The study also revealed that the e-zwich payment system is still confronted with some challenges that are working against the success and achievement of the benefits associated with the payment system. Results show that 27% of the individual card holders indicate that the inadequate point of sales terminals is the number one key challenge facing the system. This is supported by the response from GhIPSS, which indicate that the number one challenge anticipated prior to the implementation of the system is the accessibility and usability through efficient operations of the telecommunication systems and managerial and operational issues. This and other challenges identified are likely to affect the perceived ease of use and further discourage others from signing on to the e-zwich payment system.

Usability is linked to accessibility in many ways to present various key challenges to users. As well managerial and operational challenges including, non-availability and malfunctioning points of sale (POS) terminals as well as network connectivity issues have challenged users of the e-zwich payment system. It is believed that for electronic payment system (EPS) to thrive, telecommunication infrastructure is a primary requirement. The telecommunication services in Ghana are generally of poor quality, which retards the development of EPS. The frequent downtime, low speed and bad quality of the links all hinder the smooth operations of EPS in the country. This is usually worst outside the major cites of Accra and Kumasi. Interestingly, this issue of poor connectivity has been raised by researchers like Issahaku, (2012) and Konadu, (2011).

CONCLUSIONS

The outcome of the study shows that still a large proportion of transactions in Ghana are cash and paper-based. The introduction of e-zwich payment system by the bank of Ghana was an innovation in the financial sector and a good initiative to reduce the over reliance on cash and

paper-based payments. However, though significant progress has been made, there are still myriad of challenges to address. It is suggested that based on the this studies finding that, in order to realise the benefits anticipated prior to the implementation of the e-zwich payment system, the Bank of Ghana, GhIPSS and other stakeholders should invest a considerable amount of resources into comprehensive education, training and support, relevant and efficient regulatory apparatus as well as enact supporting legal policies to drive the operation of the e-zwich payment system. Effective stakeholder engagement, improvement in the telecommunications infrastructure and affordability of the system are all implied to ensure the successful operation of e-zwich Payment System in Ghana.

LIMITATIONS OF THE STUDY

This study may suffer from the limitation for using a non-probability sampling. The purposive sampling used to select respondents and bank officials from the participating banks are non-probabilistic. The selection criteria employed may have been subjective. The sample population used may not necessarily be entirely the population the study intended that to reach. With non-probability sampling, the general population may not have been sampled correctly and because the odds of a good representation of the population are not known, it may be harder to evaluate what has actually been achieved since purposive sampling can be so subjective. At least in this study, a sample size of 102 respondents was used. That may or may not have represented the population of the users of the e-zwich payment system well. But with purposive sampling it is difficult to know whether the population of users was well represented.

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