Mobile phone banking: Usage experiences in Kenya

By

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Abstract

The uptake of mobile phones in Kenya has been unprecedented. Of vital significance is the rapid absorption of mobile based banking services. This trend of continued reliance on mobile devices to execute monetary transactions is steadily gaining momentum. In an effort to gauge the implications of this mobile phone phenomena, this study set sets out to bring to light the critical issues arising from the emergent mobile technology innovations. This paper is structured to offer strategic insights into the current state of mobile phone banking service as well as a review of emerging service provider, customer traits as well as tactical and policy implications. Illuminative cases are also featured to drive home the fundamental paradigms of concern in this study. The paper is based on a study conducted on existing mobile banking services in Kenya alongside mobile banking experiences of different countries.

Key words: Mobile, mobile phone banking, M-banking

Introduction

The remarkable gains made towards mobile phone access have seen a steady progress in the scope of innovations emanating from exploitation of these fairly new technologies. What has characterized the Kenyan mobile landscape is a rapid uptake of various services key among them the mobile based products. Mobile banking is one innovation which has progressively rendered itself in pervasive ways cutting across numerous sectors of economy and industry.

An appropriate banking environment is considered a key pillar as well as an enabler of economic growth (Koivu 2002). With the continuously emerging wave of information driven economy, the banking industry in Kenya has inevitably found itself unable to resist technological indulgence. The need for convenient ways of accessing financial resources beyond the conventional norms has seen the recurrent expansion and modernization of banking patterns. And given the huge demand for finance oriented services, institutions beside the historical banks have joined the fray in an attempt to grab a piece of the perceived cake of opportunity within the banking industry.

According to Financial Sector Deepening Kenya (FSD Kenya), the most recent data in available indicates that only 19% of adult Kenyans reported having access to a formal, regulated financial institution while over a third (38%) indicated no access to even the most rudimentary form of informal financial service. This leaves a percentage of more than 80% outside the bracket of the reach of mainstream banking.

The pent up demand for an affordable and reliable way of holding funds while ensuing that risk levels are consigned to a minimum is consistently unfolding. A system with the potential to obliterate the historical hurdles of cost and free access which have for a long time stood in the way of willing partakers of banking services evokes immediate attention and interest. The unprecedented uptake of mobile phone banking services in Kenya is a testament to this fact.

Methodology

Discussions advanced in this paper are based on an analysis of the mobile phone based banking performance in terms of outlook and appropriation objectives. The study is informed by a quantitative survey on M-banking services and demand. Data on usage and exploitation patterns

was gathered through reliable cluster sampling techniques using comprehensive questionnaires. To enrich the study and address unexplained gaps in the quantitative survey, selected qualitative tools were methodically engaged to bring to light further information of pertinent nature. Mobile phone banking models from other countries served as controls for the Kenyan experience to help uncover aspects that would possibly be obscure. Key controls relied upon were the G-Cash of Philippines and Web-Money of Russia.

Mobile Phone Banking in Practice

The terms Mobile Phone banking and mobile banking (M-Banking) are used interchangeably. The term M-Banking is used to denote the access to banking services and facilities offered by financial institutions such as account-based savings, payment transactions and other products by use of an electronic mobile device. Mobile banking has yielded a multiple effect on the number of solutions available to clients. This is in addition to more efficient transactional environment and the high substitution of banking points.

Porteous (2006) distinguishes two aspects of mobile banking: Additive and transformational characteristics. *Additive aspects* are those in which the mobile phone is merely another channel to an existing bank account. Mobile banking is additive when it merely adds to the range of choices or enhances the convenience of existing customers of mainstream financial institutions. *Transformational characteristics* arise when the financial product linked to the use of the phone is targeted at persons who do not hold formal bank accounts with the conventional banking institutions.

Sarker and Wells (2003) assert that the only single access requirement or barrier to the resultant mobile banking will be the mobile phone. However, worldwide market penetration of affordable cellular devices and growing network service diffusion makes this intricacy almost fully resolved hence setting a firm pedestal for mobile banking escalation.

The effects of usage associated with mobile phone banking in Kenya are yet to be consolidated or quantified in a well documented fashion. With the dramatic adoption of mobile banking services this study seeks to extend its scope of analysis to indicators that reflect the nature of

usage. This ranges from overall patterns of use, access and provision strategies and consumption patterns.

The study provides a baseline against which to assess the usage patterns and characteristics, analyze the gains and challenges emanating from the mobile banking phenomenon.

Evolution of Mobile Banking In Kenya

Mobile banking started with the creation of services by banks which could be accessed through the mobile phone. These facilities aimed to enable customers access information relating to their accounts. Subsequent innovations have seen the mobile banking phenomena continue to grow steadily. Mobile banking takes several dimensions of execution all representing a new distribution channel that allows financial institutions and other commercial actors to offer financial services outside traditional bank premises.

Infrastructure and service provision / providers

The transformational mobile banking is made available by mobile phone service providers as part of their value added services. It is embedded among other services within the service providers menu. The perceived difference between mobile service providers mainly lies on the pricing strategy, quality and scope of services as well as the pricing strategy.

The mobile banking services are available to mobile phone users of the two major mobile service providers namely Safaricom and Zain. Safaricom's service is branded "Mpesa" and Zains service goes by the "Zap" brand name. The latest entrants i.e. Orange / Telkom and Econet wireless are also expected to roll out their mobile banking services in the course of time.

While the fees charged for transactions are largely below those levied by traditional banks for similar services, low incomes amongst the vast proportions of the population tends to reduce the levels of affordability. But prices are expected to decline over time as competition intensifies. For instance the launch of Zap service at a flat rate of Kshs. 10 ($0.3) is expected to have a ripple effect on Mpesa whose average transaction charge stands at Kshs. 35 ($ 0.5).

The collective access points of mobile banking are numerous and widespread. The service vests a heavy reliance on airtime distributors who double as agents. It is these agents who decide on the most strategic points to locate their service outlets. This highly differs from the conventional banking systems whereby banks will only be located in major urban centers. Currently Safaricom has over 5,000 agents across the country; while Zain prides itself of having over 3,000 agency set ups in the short span it has operated the Zap service.

This translates to over 8.000 mobile banking outlets around the country within a span of three years since inception. A Central Bank of Kenya survey CBK (2008) sets the number of conventional branches at 876. In addition to these branches there are only 1424 ATM machines in total implying that within the short duration of operation the M-banking outlets have tripled that of traditional banks.

Mobile Banking Environment Characteristics

Porteous (2006) asserts that mobile banking has the potential to be transformational owing to various facts. First, it uses existing mobile communications infrastructure which already reaches unbanked persons. Secondly it may be driven by new players, such as mobile phone industry operators, with different target markets from traditional banks who are able to harness the power of new distribution networks for cash transactions. These include airtime merchants, who extend the reach beyond the conventional tellers or ATM networks of banks. In addition it may be cheaper than conventional banking, if the offering is competitive enough.

In tune with this understanding the various characteristics defining the Kenyan mobile banking environment can be analyzed as follows:

Competition

The Kenyan case offers sufficient evidence to the claim that competition triggers creativity and innovation. To survive in a competitive market firms must maintain new products. The sustained presence of mobile products being floated to customers on a consistent basis depicts high standards of innovativeness. Continuous innovation not only yields new products but rather

promotes efficiently in performance of activities. As a result the price for new services introduced to the market declines consistently.

Currently, the mobile banking market is held by Safaricom and Zain with the latter dominating due to the benefits of early entry. Once the remaining providers notably Orange/Telkom and Econet finalize their groundwork, it can be reasonably expected that the prices will sink further probably to settle within the average of Kshs. 5 ($ 0.05).

User capacity building and empowerment

Though not seriously impaired, the capacity of a wider population of Kenyan users is fairly curtailed by not being fully conversant with all that they can accomplish through the mobile. Deliberate interventions must be undertaken to successfully ensure that the targeted persons particularly the rural residents and females are empowered not only with technology but with skills and finance as well.

To prevent these communities from lagging behold they must be familiarized with the benefits and opportunities of mobile banking. Calculated strategies to overcome hindrances require exploration so that these groupings can be converted into meaningful participants who will utilize this technology for economic take off.

Literacy Levels

An interesting finding was in the form of a typical negative correlation between the levels of usage and the education background and scope. Observably population categories with lower levels of education happen to be the larger user category. What the study could not establish fully is whether the argument that academic exposure matters little when it comes to the use of technology based products is a valid one. This study therefore took the view that the capacity for unschooled and semi illiterate persons to quickly capture the skills of manipulating the considerably sophisticated mobile phone menu items is of a derived nature. It emanates from the motivation the facility provides in terms of real time monetary worth. And since the mobile phone is perceived to hold cash, users, their literacy level not withstanding inevitably acquaint

themselves with the monetary oriented menus, just like they would acquaint themselves with new currency.

Mobile phone penetration

The number of enlisted mobile phone service users imposes a ceiling on the possible user of M-banking Auxiliary services availability in the form and time vendors are also a factor of concern, this is so because mobile banking services largely ride on the back of other services of mobile operators. Most agents happen to be air time distributors or retail outlets for handsets. Where network coverage is inexistent or poorly established it then follows that mobile banking implementation is low in form.

CCK puts the current mobile phone penetration at 39% of the populace. Sharp concentrations of those with accesss are within urban areas (75%). This reveals a spectacular mobile banking divide highly skewed against the rural population.

Income levels and mobile banking use

A clear majority of regular M-banking users are low and average income earners. These categories also happen to hold the higher percentage of people without possession of traditional bank accounts. On this account users perceive the M-banking service as a complete substitute to bank accounts as previously held. This negates the argument of mobile service providers, who in an effort to circumvent certain regulatory requirements front these facilities as “Money transfer services” rather than “Mobile banking services.

Though the average mobile phone balances may be seen as low, the fact that there are balances is sufficient to prove the case that there’s storage. This can be perceived as acceptance of deposits, a domain of legally established banks. Overally there’s a significant indication of the high value placed on the convenience associated with the use of mobile money services.

Urban Rural Access

Concentration of M-banking is evidently heavier in urban settings. Universal access in rural areas is faced with numerous challenges including how to manage the float (Cash) in light of

prospected demand. Access becomes a serious issue of concern in some other underdeveloped regions where network signals are extremely sparse. Operators have tended to focus mainly on the densely populated economic zones. With the latest government move to encourage operators to develop services in the rural areas, with promises to support these efforts it is reasonable to expect a better environment for mobile activities.

Drivers and Constraints of M-Banking

The field of M-Banking is fairly new and fast evolving. It also rests at the overlap of several domains including those of banking, telecommunications and security. The overlap substantially raises issues of operational or regulatory concern. The compelling drivers for M-Banking as well as significant constraints that could restrict its growth can be summarized as shown in Fig 1

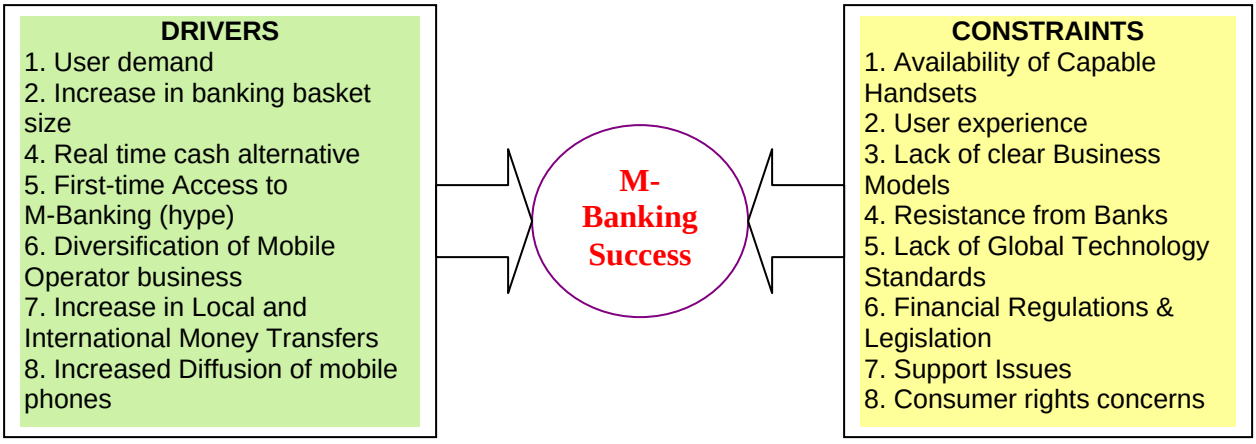

Fig 1

Analysis of Usage patterns

The data collected from this study has been evaluated and analyzed to give the relative importance of the various variables of this study.

Table 1.0 lists results of the top issues that rank as implications of mobile banking in Kenya. The results are listed alongside their weighted mean which lie between 0 and 1. It's worth noting that the ranked list represent issues that respondents regard as important and not necessarily problematical.

The summary data presented below is employed as an evidential base to anchor the ensuing discussions and subsequent conclusions.

Table 1.0

Summary of Key transactions and resultant issues				
Banking Transactions			**Additional Aspects Investigated**	
Transactions using M-Banking(Mobile Phone)	**Mean of transactions**		**Resultant issues from the users' perspective**	**Mean Score**
a) Balance Enquiry	0.42		a) Reduced transactional costs	0.88
b) Pay store Account	0.96		b) Increased convenience	0.91
c) Bill payment	0.33		c) High Reliability	0.75
d) Money Transfer	1.00		d) Low entry costs	0.97
e) Cash Deposit	0.90		e) Ease to subscribe	0.91
f) Cash withdrawal	0.87		f) Multiple access points	0.94
g) Airtime purchase	0.78		g) Cashless transactions	0.79

Source: Author

Discussion of Findings

The key issues emerging from the survey are analyzed and discussed in detail below.

M-banking dramatically reduces the cost of delivering financial services.

This is aptly demonstrated by the 85% score of M-baking customers who have registered lower transactional costs. CBK (2007) statistics put the average monthly cost of operating a current account with a Kenyan commercial bank at over Ksh 900 ($13). M-banking reduces the cost of basic banking services to customers with over 60 percent from what it would cost through traditional channels. The electronically managed transactions result in huge cost savings, the benefits of which are transferred to the users.

M-Banking resolves the issues of access to finance.

This is due to the lower costs of roll-out and the economies of handling low-value transactions realized by leveraging networks of existing third-party agents. Cash transactions, account opening and other transactions can be conducted online. This makes it easy to subscribe and accounts for the high customer concurrence of 91%. Ultimately transformational banking boosts access to formal finance particularly, in rural areas where many poor people live. Of the total 876 branches operated by financial institutions in Kenya 314 are in Nairobi. M_banking has opened a different access door for the unbanked.

M-Banking is efficient with respect to entry costs

A fact attested to by 97% of the respondents. This is explained by the absence of charges are at the time of registration. It can be deduced that majority of persons seeking M-Banking customer attach a high consideration to the monetary consequence of enrolling into a banking facility. Thus the absence of opening account balance boosts their preference for the service.

The use of agents and air time distributors as sevice points has yielded much in terms of convenience

This is potrayed by the 91% response. Availabilty of multiple outlets across the country implies more points of contact with customers as opposed to the traditional banking hall set up. Additionally, the flexible operating hours of the M-Banking agents leaves them with greater opportunities to satisfy banking requirements that may arise at any time. On the contrary Kenyan banks operate for an average of seven hours per day. The supplementary Automated Teller Machines (ATMs) do not have a sufficient outreach since they are only available in major towns. This is affirmed by 94% of the respondents.

Mobile phone banking is mainly used for money transfer

The 100% consensus in response expresses this reality. A further 90% uses the facility for cash deposits and 87% for withdrawals. Transformational M-Banking service users revealed that they typically time their deposits to coincide with bill payments or cash withdrawals. The 52% and 49% relying on traditional banking while still embracing the transformational banking implies a level of caution on the part of users. Likewise it can be explained by the perceived loss of human touch that comes with technology since some individuals derive higher satisfaction and attach more confidence to service by fellow human beings as compared to technology.

Heavy reliance on M-Banking service for funds storage

Contrary to the popular wisdom that mobile phone money services are meant for funds transfer and remittance, 96% of the respondents use the service as a savings store. Consequently the visits to the bank only involve those amounts that can not be effectively undertaken within the deposit and withdrawal limits provided by the service operators. Users indicated that they use the facility as a savings account despite the fact that no interest is earned. The reprieve is that no

ledger fees are levied on the accounts hence striking a rational symbiotic equilibrium between the user and the service provider.

International remittances are more sought after from the traditional banks in comparison to cash transfers.

Most transfers undertaken by respondents happen to be local. This probably explains the low percentage (36%) seeking international transfer services. With the rolling out of international mobile transfer systems like the one jointly launched recently by Maxis Company of Malaysia and Globe Telecom of the Philippines, the number of individuals relying on banks for the service may decline as customers switch to the an international online M-Banking option.

Use of M-banking to pay bills still remains low

This is represented by a figure of 33%. The main instances of bill payment are interpersonal settlements and welfare payments. Probably the usage might increase as users acquire confidence and precision of utilizing the service.

Further Issues emerging from the respondents

Besides the issues discussed above respondents were asked to add any other issue that they deemed fundamental. While many of the issues listed were closely linked to the issues provided for rating, certain issues beginning to manifest featured prominently and warrant attention.

1. The low and middle income groups together with unbanked people are the biggest beneficiaries of the transformational M-Banking. 46 percent of the M- banking service users surveyed are new to banking having no previous bank accounts. The dominance of these groups as the key users can be provided for by the cash transaction limits set by the service providers in line with Central Bank's requirements. The current maximum transaction value allowed at a time is Ksh 35,000. With expected upward review of the limits it's likely that the service will open its catchments to higher income clusters.

2. Though the Mobile phone banking idea was initially born out of the intention to reach the unbanked poor, (Porteous, 2006) it has stretched its tentacles far and wide to captivate the interest of unimagined client segments. Even the prudential banks have joined the fray and are now acting as agents and outlets of Mobile service provider banking services. This could have come as a realization on the part of the traditional banks of the maxim that “if you can’t beat them; join them.”

3. There is need to balance technology with a reasonable human interface. These findings coincide with those of Lyman et al. (2008) which assert that low income and education individuals attach a high premium to interaction and interpersonal relationships. 73 percent of non users and infrequent users of M-banking prefer face to face financial dealings rather than electronic devices even though the devices are faster and convenient.

4. Efficiency of service and reliability assurance. Transformational M-Banking raises concerns pertaining to efficiency and customer convenience. Agents are having trouble with float management especially adequacy of cash reserves to finance withdrawals. A cashless economy built entirely on phone credits where these could be exchanged via the mobile would greatly ease the flow of currency and rid inefficiencies in the system. Another aspect that warrants perfective attention is the network stream to ensure stability and extinguish down times that occasion service failure.

5. Adequacy of Consumer protection. Appropriate consumer protection against risks of fraud, loss of privacy and even loss of service is extremely critical for growth of m-banking. Risks proliferate further when agents are involved and reach to a maximum. Since a large number of transformational M-Banking clients are first time customers with low financial literacy, the risks become even higher. These risks can be mitigated by entering into mobile banking activities through known and meticulously regulated players and agents. Guidelines regarding privacy protection, network security and complaint redress mechanisms are fundamental as the uptake of M-Banking goes to scale.

Vital Lessons from Kenyan M-Banking Experience

Kenyan consumption is characterized by multiple strategies, implying that M banking service will be utilized for any need depending on the ability to pay at a given instance. To realize the full benefits afforded by M-banking it's imperative to move beyond the traditional and limited approaches and instead explore innovative and value oriented application. Focus should be on patterns that play a role towards economic advancement of users.

Mobile banking provides a ray of hope for the unbanked. The rapid uptake has systematically ensured that the critical mass required as a threshold for sustainable expansion is reached. With the potential outburst of M- banking showing signs of reaching the wider population segment, the mobile banking divide (gap between those with access and those without enhanced banking services) can be expected to gradually diminish. Sustained introduction of new mobile based banking services, tend to complement existing services thus those without access to the original services are actually thrust into a further distance from access.

Cost of phones and services also remains a significant drawback. The fact that a vast proportion of the population still relies on pay phones is an indicator of the financial challenges faced by many potential users of the new banking system. The distribution of mobile phones and consequently ability of service use can also be regarded as inequitable. More men have phones than women, thereby indicating a dominance of ownership and consequently the access.

Conclusion

The findings validate the view that the Kenyan mobile banking sector presents a delightful outlook of exploitation. Most individuals acknowledge the importance of the mobile based banking service in a myriad of their daily activities. Usage patterns appear to be largely driven by personal missions and marketing strategies of service providers. Depending on the nature of activities and requisite levels of expediency users will employ M-banking in variable ways. In addition there is a dimension of use attributable to the "hype factor". Certain users have boarded the usage train out of the excitement and image believed to originate from the M-banking utilization atmosphere.

Though M- banking seems to cut across all groups, usage is more pronounced among younger age groups. With reference to income opinion is divided as appertains to the thresholds that trigger entry into M-banking. Some users with no specific income sources were identified as regular users implying a huge possibility that they rely on income of others. What this signifies is the fact that M-banking has created a formidable avenue for income redistribution.

In summary the demands of vibrant M-banking implementations revolve around improved network coverage, quality connections besides reduced costs to ensure affordability to all prospective partakers. Service providers might be better of availing the service at lower costs to net more users rather than insisting on high levies which frighten off some possible participants. By so doing they will be able to boost their revenue streams by promoting the volume of transactions. On the policy front, there is an urgent need to device policies and strategies to reverse gaps in terms of gender, income levels and rural - urban demographics

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