Full Length Research Paper

E-banking adoption by customers in the rural milieus of South Africa: A case of Alice, Eastern Cape, South Africa

Reginald Masocha[1]*, Norman Chiliya[2] and Stanislous Zindiye

[1]University of Fort Hare, P. Bag X1314, Alice, South Africa.
[2]Monash University, South Africa.
[3]Rhodes University, South Africa.

The vitality of technology utilisation by banks in establishing competitiveness in rural areas is unarguable. The computer-mediated environment has profound implications particularly in the banking sector and it is widely acknowledged that customers increasingly require instant gratification through the use of new technologies. This paper provides primary information to guide banks in structuring their marketing strategies, quality improvements and business processes on the backdrop of rural milieus. A sample of 100 respondents from various banks found in Alice was utilised in the primary research surveys. Importantly, the majority of the respondents indicated that they were influenced to bank with a bank which uses advanced modern banking technologies. However, recent banking methods such as cellphone and internet banking reflected very low levels of usage by customers. The majority of respondents prefer modern banking methods to traditional methods unfortunately, there is a huge gap between ownership and usage of e-banking resources entailing that there is no effective utilisation of technologies owned by rural customers.

Key words: E-banking, rural markets, consumer perceptions.

INTRODUCTION

Banks are constantly searching for ways to improve profitability. On the face of the twenty first century global economy banks' service delivery practices are significantly changing to seize advantages encapsulated in the new technologies (Larpsiri and Speece, 2004:392; Durkin and Howcroft, 2003:61). Reedy and Schullo (2004:3) pointed that technological developments have thronged every aspect of the marketing process-internal and outside of the firm. However, the degree of e-banking proliferation in rural settings is unarguably under-researched to date. The contemporary market environments require the formulation of strategies which curtails and synthesises the reinforcement of all the accessible modern technologies available to the firm repudiating

traditional marketing strategies (Grewal et al., 2001:18; Brady et al., 2008:108). This paper aims to broaden understanding of how much financial institutions use technology to manipulate and influence their value offering in rural milieus. The paper reflects on the e-banking preferences, perceptions, attitudes and opinions of rural-based customers in the rapidly changing South African financial landscape.

LITERATURE REVIEW

Clearly, technology has aided businesses across all industries to successfully reduce costs through substantially improving efficiency. Consequently, because of such reasons, banks have outstandingly diverted their focus towards extensively computerising and electronising almost each and every aspect of their banking processes. Simultaneously, the availability and usage of

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*Corresponding author. E-mail: rmasocha@ufh.ac.za. Tel: 0406022272. Fax: 0406532041.

modest technological instruments which are fitting for e-commerce on the consumer's side has been escalating. For instance, ownership and awareness of the internet and computers is rampantly increasing amongst house-holds, businesses and government departments. With this proliferation of internet expansion and computers usage, the electronic delivery of banking service has become ideal for banks to meet customer's expectations (Wai Ching, 2008:59). Thus, undoubtedly e-banking is poised to overwhelm traditional banking (branch banking) in a few years to come. Kamel (2005:306), points that more and more developing nations have lately focused on developing their technological infrastructure with specific attention on e-banking, e-commerce and e-learning. Similarly, e-banking is a recent business practise in the South African financial milieu. The discussion as elucidates more on the e-banking concept.

E-banking concept

The arrival of the internet technology on the commercial panorama has generally changed the nature of contemporary banking. Indisputably, the trend is towards more of financial transactions migrating to online electronic systems using highly sophisticated computer machines. The impact of e-commerce has been more apparent in the financial and the banking sector when compared with other industries (Kannabiran and Narayan, 2005:366). Viatcheslav (2002:7), argues that in many industries technology is being implemented as a response to customers' demands, but the dynamism of innovation in the banking industry is subtler than this. Rapid technological developments in information collection, storage, processing and transmission have greatly affected the banking fraternity and continue to do so (Vesala, 2000:11). Generally, during the last two decades a number of changes have occurred in banking technologies which have greatly influenced the ways in which success is achieved by financial institutions. The adoption of e-banking has allowed banks to design delivery channels from a customer perspective and not only from their productivity oriented viewpoints. This has enabled the tailoring of banking services to client expectations in building close relationships with customers (Lamb et al., 2002:649).

The pace at which user adoption has been transpiring is unarguably a major drawback for e-banking to accomplish its successful potentials. This shortcoming is even more pronounced in the retail banking segment of rural backgrounds as reflected in the findings of this research. Unlike industrial markets (business or corporate banking per se), and regardless of the type of industry, the retail sector has experienced low existence of technological marketing such that most researchers and academics have seldom focused on this area.

Obviously, computer ownership and the required know-how and the subsequent adoption of e-banking amongst the public fall way-far-below that of businesses and government. Several scholars argue that the accessibility of e-banking in rural areas is hindered by a number of *inter alia,* poor internet penetration, customer inflexibility to new technology, low educational levels and computer literacy to broad based adoption and constructive use of internet services. Some of these characteristics include lack of information, motives and finance, for e-tail banking success (Cloete and Ramburn, 2006:4).

Technology use is paramount for banks to develop competitive strategies so as to gain competitive advantages. In the delivery of financial services e-banking provides useful information, expand choices, lowers costs, develops new services and streamlines purchasing processes to consumers (Hollensen, 2003:401). The growth and changes in consumer demand require gratification which is enhanced through the use of e-banking. The automation of basic operations in the provision of services has enabled banks to integrate their delivery channels with the aim of offering better services to customers, for example, the use of internet banking, ATMs and cell phone banking. Computer literacy among consumers, greater consumer awareness, the explosion in installed PCs, computer networking, internet and business analysis models are amongst new technologies which have fuelled e-banking. The following factors have enabled e-banking:

(i) Increasing numbers of internet users,
(ii) Affordability of high performance technologies and
(iii) Poverty of time and searching efforts.

The new E-banking client

The world of information has created a new customer on the marketing podium whose traits make it somewhat difficult to serve. This same consumer has been exposed ceaselessly to empowering technological advancements. The presence of the internet and mobile digital connectivity has eliminated the banking boundaries for clients. Banking customers are now global tyrants; they represent and possess the power of international connectivity. Other than acquiring banking services from banks in their countries of origin they are able to foster business with other banks in other countries (Reedy and Schullo, 2004:10). Customers generally have seized to be only the consumers of services and products. Out of the desire to obtain higher customer satisfaction levels, customers are collaborating with producers in the production of services/goods. More and more customers prefer different versions of the same product or service (Hollensen, 2003:398). Customisation favours modern technologies, and it is critical for firms to identify customer needs on an individual basis. Moreover, the internet offers marketers the potential to view customers

on a more personalised basis, and this enables customers to have products as per the order from across the globe. Increasingly banks should be tailoring products at different rates for different clients and bringing new competitive offerings to the market (Strasheim and Pitt, 2001:38).

Developments in technology have subsequently led to a more conscious customer. Interestingly internet enabled mobile devices are hurting and haemorrhaging specifically to banks which fail to adopt technology accordingly. Cellphone banking apart from internet banking, is currently the way of the future (Fisher-French, 2007:1), with a large number of South Africans owning cellphones plying the potential for further developing marketing opportunities. Generally, the ownership of home PCs is increasing and, overwhelmingly, the future of banking will be carried in-doors. What it means is that by ownership of modern technologies customers will continue determining the pace of doing business, and who to trade with. The old adage 'a customer is a king' has been increasingly fulfilled through the use of technology (Terbalanche, 2005:10). Customers have been made better-off by technology in several ways, that is, an increase of choice of banks and products which are easily accessible (Padachiet al., 2007:559). Further to this increased greater product depth, clients global reach coupled with increased mobility between the banks increase the switching ability of clients (Chalakravarty et al., 2004:516).

In addition, banking clients enjoy doing banking twenty-four hours a day and seven days a week; low transaction costs because of highly sophisticated and cost saving technologies; more secure transactions as compared to traditional banking systems were passwords could be easily forged. Nowadays, authentication and authorisation security technologies offer the protection to clients. Among security measures which are used are: public-key cryptography, cipher text, symmetric encryption, digital signature, digital certificates, and spoofing. Firewalls, secure web servers, and virtual private networks reduce the risks of outside attack on the banking systems. E-banking enables customers to complete transactions faster and more conveniently. It further enables abundance of market information and knowledge and through online services customers can co-create value through knowledge, interactions and experiences. After focusing at the benefits to customers because of technology, focus should also be given to problems of technology to consumers. The following are the basic technological problems hindering e-banking growth:

(i) Technological developments prompt globalisation that results in different barriers in different countries, language barriers, cultural barriers, limited barriers, limited internet access, different legislation and logistical barriers;
(ii) Web technology may not be user-friendly;
(ii) Security fears increase;
(iii) E-commerce is not suitable for certain products and services, for instance were face-to-face communication is very vital this hinders e-banking; and
(iv) Information overload to consumers.

METHODOLOGY

Sample collection

A non probability sampling technique was employed in the study. Convenience sampling was adopted for the study because it was cheaper and quicker method to obtain data. The research was carried out in Alice Town in the Eastern Cape province of South Africa and it was directed at the various Banks located in this area. The target population of this study was the customers, and to the scale of this study, as in many cases, the actual population figure could not be obtained since it is usually difficult to specify the actual number of the population and specify the elements (Cant et al., 2005:178). A sample of 100 respondents was utilised in the primary research surveys. Castelloe (2010:3) argues that a sample size of 30 for each group would be sufficient to achieve 85% power.

Data collection

The research used self-administered questionnaires as the central mechanism through which primary data was collected. The questions contained in the questionnaire were mainly dichotomous questions, likert scale and checklist questions with a few open ended questions. The research applied personal interviews in the form of intercepts in the collection of data. These interviews were conducted in a structured form, and they were conducted with customers at designated points on the various banking sites and ATMs in the area of study.

Data analysis

The findings reported in this study were analysed using STATISTICA, Microsoft Excel and NCSS. The research primarily used descriptive statistics as well as, the chi-square and Pearson correlation coefficient was the only inferential statistics. The chi-square method was utilised to establish the significance of the results amongst the variables tested by the study and it was also used to test for association of variables. Table1 highlights on the p-values obtained after carrying the tests of associations.

The significance outcomes for testing of associations from the items measured by research instrument conclusively evidence a reasonable and concrete ground to accept that the questionnaire was a reliable measure of the objectives and test of hypotheses of the study. Much of variables tested by the questionnaire had significant relationships. Reliability was established through the pre-testing of the questionnaire amongst fifteen customers and Cronbach's α, respectively. The study principally hypothesised that the use of modern banking technology significantly impacted service delivery to clients by banks in Alice Town. To ascertain the conclusions to this hypothesis, the obtained data was analysed based on the objectives of this study which are outlined below.

Primary objective

To determine to what extent do banks in Alice Town implemented advanced banking technologies in marketing strategies and practices.

Table 1. P-values relating to the major variables.

Variable	P-value
Technology use and ranking of banks	0.0350
Technology use and customer partnership	0.0144
Technology use and user-friendliness of banking methods	0.0101
ATM usage and user-friendliness	0.0305
Gender and ownership of computers	0.0003
Computer banking by income group	0.0004
Computer banking by education	0.0386

Secondary objectives

(i) To determine the extent to which banks' marketing strategies employed technology in gaining a sustainable competitive advantage.
(ii) To determine the clients' perceptions on the level of satisfaction gained through the use of technology in transacting with their banks.
(iii) To ascertain to what extent customers utilised the various modern technologies of transacting with banks in Alice Town.
(iv) To outline technological characteristics that could be improved by banks in Alice in service delivery.

EMPIRICAL FINDINGS

Technology utilisation in service delivery and competitive advantage

The responses of customers were statistically weighted in order to attain a ranking criterion. While on average the results show that Standard Bank leads the market in technological adaptation, the results reveal that the bank's customers perceived it as second to ABSA in using modern and sophisticated technologies in marketing. This is reflected by the findings from the study where 41% of the participants ranked ABSA first, while 38% ranked Standard Bank. Both banks using the mode occupied the 1st rank as the leaders in technological utilisation with FNB occupying the 3rd rank and there was no bank ranked 2nd, finally Capitec was ranked last. Altogether 82.5% of the customers responded that they were influenced to bank with a bank which uses advanced modern banking technologies; with the remainder of the respondents indicating that their choice is not influenced by the bank's level of adoption of sophisticated technologies. It is highlighted that 100% of the employees agreed that Standard Bank regards the use of advanced technologies as a competitive marketing tool.

Client's satisfaction gained from using advanced technology

The researchers mainly used loyalty constructs to measure the satisfaction of customers and to determine the extent to which customers were attached and loyal to the technological facilities. It is envisaged that satisfied

customers are retained customers; consequently, satisfaction is strongly correlated to long-term relationships (Fang, 2004:19). Altogether 71% of the customers interviewed noted banks' technological facilities as user-friendly. 90% of the customers responded that they would encourage others to use e-banking services and the remainder said they would not encourage friends or relatives. This reflects high customer loyalty. Also, respondents were asked to rate their perceptions of self service technologies used by banks in terms of convenience, user friendliness, cost efficiency and reliability. The majority of the respondents indicated positive ratings thus; 83% of the respondents reported high perceptions of convenience, 79% of the respondents indicated high perceptions of reliability and (61%) of the respondents had high perceptions of cost efficiency. In service sectors, efficient service delivery emanates from the use of modern technology targeted at improving the welfare of customers (Bankley et al., 2006:283).

The items in the questionnaire addressing this concept were investigated at the hand of three variables, namely, satisfaction, service quality and client loyalty. As the correlation matrix for these variables depicts (Table 2), there is a statistically significant and positive correlation of all the items measuring the client perception construct. However, there is a weak though positive relationship ($r=0.201$: $p=0.061$) between the impact of technology on clients' sense of belongingness to the bank and their perceptions on e-banking being superb. Likewise, correlation analysis findings highlight that, statistically a slightly weak and positive correlation ($r=0.173$: $p=0.014$) exists between the propensity of clients to stay in a relationship with a bank and their sense of belongingness to the bank in the presence of e-banking. Furthermore, for e-banking, the analysis highlights that extremely significant and excellent correlations exist between:

(i) Clients satisfaction levels and their propensity to advocate for the bank ($r=0.551$: $p=<.0001$)
(ii) Perceived increase of satisfaction and perceived increasing service quality ($r=0.575$: $p=<.0001$)
(iii) Perceptions on technology superiority and increasing clients propensity to advocate for the bank ($r=0.459$: $p=<0.0001$)
(iv) Perceived increase of satisfaction and actual satisfaction

Table 2. Correlation matrix and Cronbachs alpha

	Cr to Total	Alpha (α)	Satsf[1]	Satsf[2]	Ebrps[2]	Tel[1]	Ebrps[2]	Tchqua
Satsf[1]	0.400	0.815	1					
Satsf[2]	0.534	0.812	0.448**	1				
Ebrps[1]	0.271	0.845	0.372**	0.325*	1			
Tel[1]	0.021	0.822	0.240**	0.551*	0.209**	1		
Ebrps[2]	0.358	0.816	0.373**	0.310*	0.173*	0.131**	1	
Srvqua	0.455	0.813	0.575**	0.384*	0.232**	0.291**	0.334**	1
Tchqua	0.259	0.817	0.256**	0.343*	0.267**	0.459**	0.201	0.364**
		Cronbach's α= 0.6879		Standardised Cronbach=0.8193				

Satsf[1] -Increase Satisfaction; Satsf[2] -Satisfaction level; Ebrlsps[1]-E-bank long relationships; Tel[1] -Tell Others; Ebrlsps[2]-E-bank belongingness; srvqua -E-bank service quality; Tchqua -technology quality. **. Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed), * correlation is significant at the 0.05 level (2-tailed).

obtained (r=0.448: p=<.0001).

In Table 2, the construct Cronbachs alpha of 0.69 is also shown though slightly lower than the threshold alpha value in this research which is 0.7. However, this value is still within the acceptable range cited in other studies, (Wang, 2004:57).

Utilisation of advanced banking technologies by customers

The researchers required customers to rank their preferences of the banking methods. The results were analysed as weighted averages and the weights are as follows: 1 =5 points, 2 = 4 points, and 3 = 3 points, 4 = 2 points, 5 = 1 point. The information shows that on average most customers prefer banking through ATMs followed by cellphones, and the least preferred method is telephone banking. Consistently, on average 39% of the respondents have been using the noted recently developed banking methods. In the presence of a multi-channel distribution system in the banking sector, this percentage reflects a significant representation. A sound basis to make conclusions on the significance of modern banking technology is also cited by the results on banking methods preferences by customers, where on average customers gave 41% rating over the recently developed banking methods. Conclusively, the majority of the clients perceived the use of sophisticated banking facilities by banks as a means of transacting and as an essential aspect in service delivery.

All in all, 60% of the respondents reported that modern technology usage by banks in rural areas had improved the provision of services, 10% disagreed while the remaining 29% remained neutral. This information evaluates consumer satisfaction on service provision. The overall satisfaction with a particular service provider emanates from a customer's evaluation of a total set of experiences (Crosby, 1979: 210). The respondents indicated that the usefulness of technology is important in the provision of banking services based on satisfaction with quality services incorporating technology usage. Overall, the findings indicate that the e-banking method is regarded as more important than branch banking. The contrary is also supported. The contrast ratings of the likert scale consistently review that e-banking is more important than branch banking to respondents when they are conducting their personal banking. Marginally, only 7% of the respondents negatively connoted e-banking as compared to 24% who did so, for branch banking. Amongst 74% of the respondents who highlighted that e-banking was important in conducting their personal banking, 40% of them specifically considered it as extremely important. Whereas, of the 60% respondents who held branch banking as important specifically 34% pointed that branch banking was extremely important. Figure 1 shows the diagrammatic illustration of these findings.

Suggestions and areas of improvements

The final question of the questionnaires required the respondents to make suggestions to the management in order to improve the use of technology in service delivery. Most respondents were reluctant to answer this question. In most cases it was left unanswered and those who attempted it, the majority of the answers were not comprehensive. However, the main suggestions from respondents are outlined below from the most said to the least said:

(i) Banks should implement awareness programs to customers on how to use the modern advanced banking technologies;
(ii) The effects of the advanced banking methods should be more visible to customers in form of lower service charges;
(iii) The banks should train their employees to be more effective and eliminate problems at banking points;
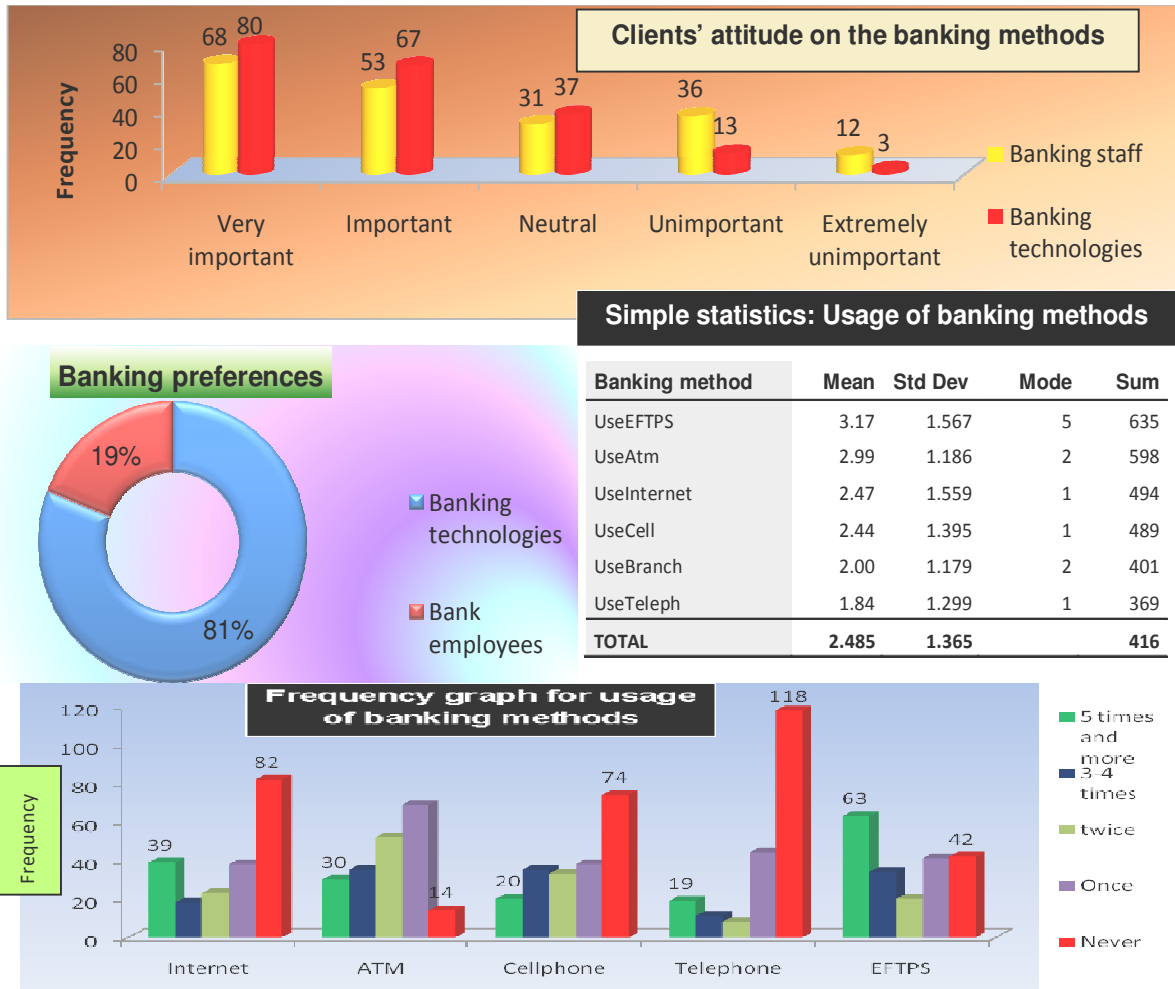(iv) The banks should focus at improving security

Figure 1. Respondents usage of and preferences for banking methods. Note: Usage of banking methods was measured as times in a typical week. Never was rated as 1; once as 2, twice as 3; 3- 4 times as 4; and 5 times or more as 5.

especially to eliminate threats at ATMs and internet banking;

(v) Banks should increase the distribution of ATMs and make them more universally accessible to customers;

(vi) Improve and promote cellphone banking through communication mediums such as TVs, radios, and the internet;

(vii) The banks should attempt to use more simple and accessible banking methods while also reducing functionality problems of ATMs and

(viii) Expand point-of-sale to small shops.

DISCUSSION AND CONCLUSIONS

Practical implications

It was anticipated that banks should find answers to the following questions from a technological perspective (Gates, 1999:1-2): what do customers think about their products/services; what problems do they want them to fix; what new features do they want added; in which areas are competitors winning business from them; will changing client demands/needs require banks to develop new capabilities?; and what new markets are emerging that banks can enter. With regards to client satisfaction, the majority of clients agree that e-banking and the associated technologies increase client satisfaction and always provide a high degree of client satisfaction. Consistently, for client loyalty, e-banking does not diminish the belongingness of most clients to the bank, their propensity to advocate for their banks to others as well as their willingness for long-term relationships. Finally, for relationship quality, e-banking increases the quality of service and does not demise the clients' preparedness to confirm the superiority of e-bank facilities.

Limitations

The present study has covered only one area and the banks located therein. It would be more worthwhile to

make a large-scale study on a national scale to determine the trend and effects of e-banking in rural areas. Broadly, the research and conclusions attained are based on the assumption that the Alice population is a fair representation of the South African rural retail banking market. Thus, for as long the sample elements selection adhered to the parameters stated in the racial demographic structures, the representation requirement should be automatically addressed. There were some slight demise in terms of demographic representativeness, however, this ought not to impel the generalisability of the findings greatly. The usefulness and significance of conducting the research still transcends the drawback posed by this setting.

Furthermore, another significant drawback emanates from the technicality nature of the research subject. A couple of limitations and assumptions emanate thereabout. Foremost, the survey was conducted under the auspices of a twenty-first century bank clients who were aware of the banking options at their disposal. Thus, there are high possibilities of misinterpretations of the contents and purpose of the research. Unarguably, technological competence and awareness amongst the general public is significantly acclimatised to personal well-being and egoism. For this reason, the rejection of the hypothesis is significantly deterred by this egoism factor whereby most respondents might have wrongly misrepresented facts and responded that they are familiar and conversant with e-banking, whence, the opposite would be true.

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