

SOCIO-DEMOGRAPHIC FACTORS INFLUENCING ADOPTION OF INTERNET BANKING IN ZIMBABWE

Mutengezanwa Margaret and and Mauchi Fungai Ngoma

Bindura University of Science Education, Department of Banking and Finance

ABSTRACT

This paper reports on the findings of a research that was conducted in Harare to determine the socio-demographic factors that influence internet banking adoption. The study was triggered by the fact that most banks had introduced internet banking for the benefit of both the customers and the bank but adoption of the technology had remained low. It is worth noting that the adoption of internet banking and other technologies is paramount for sustainable economic growth and development of an economy. Whilst earlier researches established factors that influence internet adoption such as ease of use, security concerns, resistance to change and accessibility among others, there was need to factor in the effects of demographics in the study. The research hypothesised that there was a relationship between internet banking adoption and educational level, occupation, age and income. Data was collected from 335 commercial bank customers using questionnaires. Data was analysed using Chi square tests generated from SPSS version 12 and Microsoft excel. Findings of the research supported the hypotheses, supporting the view that indeed age, occupation, income, gender and educational level had positive relationships with internet banking adoption. The study recommended bankers to tailor make their marketing efforts towards the middle aged, high income earners, the educated and the employed.

Keywords: Internet banking, consumers, adoption, Zimbabwe, socio-demographic factors

INTRODUCTION

Technological progress in the sphere of information and communication is encouraging the use and development of new banking methods, leading to a rapid growth in internet banking as the individual can transact without having to travel to the brick and mortar bank. Technology is no longer an after- thought, in forming and shaping organization's strategy, but the actual cause and driver (Kalakota, Ravi and Marcia, 1999). The advent of information and communication technology has taken the business environment by storm, and in response retail and corporate players are accordingly adjusting their ways of conducting business so as to keep abreast with the current developments (Dube et al, 2011).

There seems to be a general agreement that internet banking offers advantages for both consumers and banks (Mols, 2000). As described by Jeon and Rice (1997) cited by Mols (2000), Internet banking makes it possible for banks to offer consumers a variety of services 24 hours a day. An Internet bank may offer general and customer-specific information, the ability to conduct transactions, access to a variety of interactive financial calculators and worksheets, customization of the content of the Internet bank and the messages sent from the bank, and finally it is possible to interact with a bank adviser, usually via e-mail, but video based advisory services via the Internet are also technically possible (Dannenberg and Kellner, 1998). In addition customers are no longer confined to the operating hours of banks, travel and waiting times are no longer necessary, and access to information regarding banking services are now easily available (Hamlet, 2000).

From the bank's perspective, e- banking has enabled banks to lower operational costs through the reduction of physical facilities and staffing required, reducing waiting times in branches (Sarel and Mamorstein, 2003). Mols (2000) notes, that through Internet banking, customers may themselves identify the topics that interest them, and the Internet technology also makes it possible to track actual individual usage patterns, making it easy to capture details about the customers. If all the information is gathered in an integrated database, it will be possible to understand the customers and what parts of the Internet bank they value the most and what their unique needs and wants are. This knowledge may be used for different kinds of direct marketing, e.g. generating, qualifying and tracking leads, and contacting customers and sending them relevant information by e-mail (Mols, 2000).

Studies have been conducted to determine the factors that influence the adoption of internet banking but the role of socio-demographic variables has been understudied. Previous research has found out that demographic characteristics such as education, age, and income are significantly associated with the usage rates of technological innovations (Dickerson and Gentry, 1983; Zeithaml and Gilly, 1987). This research sought to establish whether demographic factors influence adoption of internet banking in Zimbabwe. It is hoped that once the role of socio-demographic factors is exposed recommendations can be made to banks on the effective ways of encouraging adoption. By knowing their peculiarities, banks will be able to know which customers to approach in the first place, in order to achieve the migration of current customers from traditional to online banking channels and, in general, to direct channels. Therefore, it is necessary to gain insights into current adopters of e-banking services, who are relying on the Internet as the usual way to communicate with their banks.

LITERATURE REVIEW

Internet banking defined

Several definitions of internet banking have been postulated by various authors. These cover areas such as the services provided, benefits of internet banking and the various levels of internet banking.

Henry (2000) cited by Dube et al (2009) defined internet banking as the systems that enable bank customers to get access to their accounts and general information on bank products and services through the use of the bank's website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations. With the exception of cash withdrawals, internet banking gives customers access to almost any type of banking transaction at the click of a mouse (De Young, 2001 cited by Padachi et al, 2008). Bradley and Stewart (2003) added on to this definition by saying that internet banking provides universal connection from any location worldwide and is universally accessible from any internet linked computer.

Chang (2003), Sullivan and Wang (2005) cited by Dube et al (2009) in agreement with the earlier authors view internet banking as a process innovation whereby customers handle their own banking transactions without visiting bank tellers. They further propound that it also allows non-customers to visit virtual banks via the public network while phone banking or PC banking provide only closed networks limited to the existing client.

Socio- demographic factors influencing internet banking adoption

According to Rogers (2003), the adopter of a new technology is typically younger, has a good income and appropriate level of education and more reactive to new innovation than the non-adopter. Rogers (2003) also indicates that innovative individuals have positive attitudes, ability to communicate with others and a high level of social participation. This trend has been confirmed by many researchers such as Madden and Savage (2000), Dobbins (2002), Mason and Hacker (2003), Chinn and Fairlie (2004), Choudrie and Dwivedi (2005) and Marchionni & Ritchie (2007) who concluded that adopters are younger, wealthy, usually have a good level of education, and possess more social mobility than those who adopt innovations later.

There is a general consensus among researchers that demographics play a significant role in determining internet banking behaviour. High income, relatively young age and good education have been singled out as explaining the acceptance of internet banking. In addition, a typical internet banking user has been identified as a high involvement person or, in parts, as a member of the career oriented upper class (Jayawadhera and Forley, 2000). Gender has been suggested as a factor influencing internet banking adoption, whilst some studies argue that the internet is male dominated (Venkatesh and Morris, 2000). Thus this research sought to examine the influence of the key socio-demographic characteristics which are age, income, occupation, gender and educational level.

Age

Literature suggests that there is a strong relationship between age and the acceptance of new technologies (Al Somali et al. 2009, Gattiker, 1992, Harrison et al 1992). Older customers are found to have negative attitudes towards technology whilst the younger adults are seen to be more interested in using technology and innovation. Age differences have been identified, suggesting that people's needs and preferences follow a life-cycle orientation. Age is argued to be negatively

related to technology use and usefulness perceptions, and positively related to perceived difficulty (Venkatesh and Morris, 2000). According to, Guerrero et al (n.d) attitudinal factors determine technology adoption by younger individuals to a higher extent. On the other hand, social influence factors are more relevant for older individuals. According to Lemaitre (1997) cited by Guerrero et al (n.d), young individuals between 18 and 35 years old will be the future customers of direct distribution channels, as these people tend to be more open towards newer technologies. Conversely, adult individuals are less interested in online and direct channels, as they manifest stronger desires for social interactions, and are less receptive to use technological innovations.

Wang et al (2003) found out that age has a significant influence of user acceptance of internet banking. Generally, Harrison and Rainer (1992) suggest that there is a strong relationship between age and the acceptance of innovation where he found that older customers are found to hold more negative attitudes towards new technologies. A study by Barret (1997) found out that generally the younger the customers are, the more comfortable they are utilising non branch service delivery systems, conversely the older the customers are, the more attached they are to the traditional branch system. Thus the first hypothesis of this study was:

H1: There is a relationship between age and the adoption of internet banking

Income

Dickson, (2000) suggests that income and education levels are especially relevant in explaining the use of Internet services and other technological devices For instance, the adoption of home Internet services involves several costs, both in terms of the financial resources and skills needed for the use of new technologies. Moreover, a study by Trocchia and Janda (2000) revealed that income and education tend to be positively related to innovation approval. Older individuals between 26 and 45 years of age are overrepresented in categories of higher income, higher occupational positions and higher educational qualifications (Venkatesh and Morris, 2000). Rogers (2003) showed that demographic attributes play an important role in predicting adoption and that economic status (income) is highly correlated to initial adoption. Rogers, in his Diffusion of Innovation (DOI) theory proposes that new technologies are initially adopted by those who have more resources. Choudrie and Dwivedi (2005) confirmed that the economic status for individuals influences their ability to own and then use a technology. Thus this research hypothesised that:

H2: There is a relationship between income and the adoption of internet banking

Educational level

Adoption of electronic financial services has also been studied from the perspective of innovation adoption (Black et al., 2001). Burke, (2002) suggests that education is positively related to an individual's level of internet literacy. People who buy financial services over the internet have higher incomes and greater ICT use than those who do not. This means therefore that income, educational level and e-banking adoption have a positive relationship. Thus the third hypothesis was:

H3: There is a relationship between education and the adoption of internet banking

Occupation

Previous studies (Karjatuolo et al 2002, Mattila et al 2003, Sathye, 1999) show that those who belong to upper and middle class and have high level occupations are more likely to use internet banking. Thus the fourth hypothesis of the study was:

H4: There is a relationship between occupation and internet banking adoption

Gender

In extensions of Technology Acceptance Model (TAM), demographic factors such as gender and age have also provided significant effects on technology use. Gender is a significant moderator of the relationship between TAM's constructs (perceived usefulness, perceived ease of use, and subjective norm) and the intention to use a technological innovation (Venkatesh and Morris, 2000; Venkatesh, Morris and Ackerman, 2000). The decisions to adopt technology by men are mainly determined by the perceived usefulness of technology use, whereas women, in contrast, are more influenced by their perceptions about a system's ease of use and social influences (Venkatesh and Morris, 2000).

Chen & Wellman (2004) cited by Ghaithy et al (2010) in a study which focused on Internet usage in China, Germany, Korea, Italy, Japan, Mexico, UK, and USA found that men were more likely than women to use the Internet and the rate of adoption was high for young people who understand English and live in urbanised environments.

MacGregor and Vrazalic (2006) conducted a study on e-Commerce adoption barriers in small businesses and the differential effects of gender. The results showed that "females were more concerned about e-commerce being unsuitable for their business, while males expressed more concern about the difficulty of implementing e-commerce". In another study by Korgaonkar and Wolin, (1999) cited by Guerrero (n.d.) web-users were characterized as male, highly-educated, with an average income, and middle-aged or young. Thus this research hypothesised that:

H5: There is a relationship between gender and internet banking adoption

Nevertheless, there is also conflicting evidence with regard to the influence of socio-demographic factors. Other researchers did not find significant differences in internet usage based on age or educational level, and the use of several Internet services (i.e., messaging, browsing, downloading, and purchasing services) did not show uniform relationships with demographic factors (i.e., gender, age, and educational level). In this sense, Sathye (1999) could not find correlations between demographic traits and the use of online banking services. No significant relationships were found between personal respondents' demographic traits and their tendency to use Internet banking services.

A research carried out by Padachi et al (2008) revealed that there were no significant differences between adopters and non adopters in terms of demographic variables. Alternatively Wang et al (2009) found out that males have higher specific trust and higher perceived risk than females towards e-banking. He discovered that people aged between 29 and below were more willing to use e-banking as opposed to those who are above 50 years. Respondents with a post graduate qualification and higher income levels are more willing to use internet banking.

RESEARCH METHODOLOGY

The study took a descriptive approach where the research population constituted commercial bank customers. The study was conducted in the capital city of Harare where use of the internet to conduct bank transactions was likely to be concentrated and also where a large number of people live in. Data was collected using questionnaires which were randomly distributed to customers in the central business district of Harare. Respondents were requested to complete the questionnaires and immediately return them to the researcher. A sample of 335 bank customers responded to the questionnaires. After data was collected, it was edited and organized in the form of tables, charts and graphs using SPSS version 12 and Ms Excel and analysed using Chi square tests.

DATA PRESENTATION AND DISCUSSION

Respondents Demographics Characteristics

A total of 335 questionnaires were distributed and the profile of the respondents is shown below in Table 1:

Table 1: Consolidated Contingent Table

FACTOR	VARIABLE	ADOPTERS	NON- ADOPTERS
Age	18-25	57	9
	26-35	86	43
	36-45	75	25
	Above 45	13	7
Gender	Males	187	34
	Females	44	50
Education	High School	71	22
	Diploma	84	29
	Undergraduate	48	21
	Postgraduate	27	12
Occupation	Employed	202	62
	Unemployment	15	9
	Self employment	13	13
Income Level	No Income	17	11
	Below 200	57	13
	201-600	47	32
	601-1000	58	17
	1001-1500	37	6
	Above 1501	14	5

Source: SPSS analysis of Primary Data

A majority of the respondents reside in the high density suburbs, are aged between 18 -45 and hold a diploma as a qualification. Most of the respondents were employed (85%) and earn an income of between 200 – 600 (26%). Of the total respondents 66% were male and 34% were female. Those who were not employed and did not have an income cited that it was not important to hold a bank account in the first instance as conditions to account opening were stringent and rather prohibitive.

Adoption of internet banking

Table 2 below shows the statistics of those who were using internet and those who were not.

Table 2: Adoption of Internet banking

		Frequency	%	Valid %	Cumulative %
Valid	Yes	231	69	73	73
	No	84	25	26	100
	Total	315	94	100	
Missing	System	20	6		
Total		335	100		

Source: SPSS analysis of Primary data

The findings of the research established that 69% of the respondents were using internet banking, whilst 25% of the respondents were not. Of the respondents 6% did not indicate on the questionnaire whether they were using or not. It was found out that they had previously indicated having no bank accounts at all. This statistic shows that a majority of people had already adapted to the new technology in line with global trends. This could be mainly because of the need to conduct bank transactions across the globe.

Socio demographic factors influencing internet banking adoption

The main purpose of this research was to determine whether socio demographic factors had an influence on internet banking adoption. Table 3 below shows the chi-square values for the socio demographic factors that were measured at 0, 05% level of significance.

Table 3: Test Statistic

FACTOR	ADOPTION	CHI-SQUARE	ASYMP.SIG
Gross Income	68.6	73,94	.000
Education	68.6	38,736	.000
Age	68.6	94,303	.000
Occupation	68.6	63,11	.000
Gender	68.6	65,23	.000

Source: SPSS analysis of Primary Data

H1 postulated that there is a relationship between age and the adoption of internet banking. This hypothesis was supported as is evidenced by a Chi square value of 94,303 which was significant at p-value of .000. This therefore implies that those who are aged between 26 and 45 are more likely to adopt internet banking. Results showed that technology is much easier to be accepted by the younger generation than the elderly. These findings were consistent with those of Gattiker (1992), Vankatesh and Morris (2000), Harrison and Reiner (1992) showing general uniformity in the

age groups that are early adopters of technology. For management these findings point to the need to focus growth strategies on the younger generation as they seem to be early adopters of technology.

The second hypothesis postulated that there is a relationship between education levels attained by an individual and internet banking adoption. This hypothesis was substantiated by a Chi-square value of 38,74 which was significant at p-value of .000. In Zimbabwe the need to conduct banking transactions across the globe has been necessitated by the young and educated who have migrated to other countries in search of greener pastures. These results were consistent with those of Burke (2000), Trocchia and Janda (2000) who established a positive relationship between educational level and internet literacy.

This research also hypothesised that a relationship exists between the level of income and internet banking adoption. Results support the hypothesis as measured by a Chi square value of 73,94 which is significant at p-value of .000 (see table 3). These results indicate that those who earn above \$601, i.e. the middle and high income earners are more likely to adopt internet banking.

The research sought to establish whether there is a relationship between occupation and adoption of internet banking. Findings of the research established that there was a relationship as measured by a chi-square value of 63.11 which is significant at p-value of .000. This means that those who are employed and have better jobs are more likely to adopt internet banking. These results concur with those of Karjaluoto et al (2002) and Mattila et al (2003).

Gender was also examined to find out whether an association exists with internet banking adoption. The test statistic showed a positive association between gender and internet banking adoption. A Chi square test result of 65.23 supported the hypothesis with a p-value of .000. Males considered technology a symbol of status thus men used technology more than females. For management, males are a target group as they use technology more than their female counterparts.

CONCLUSION

The main purpose of this research was to establish whether there is a relationship between the socio-demographic characteristics of consumers and internet banking adoption. Generally the findings support the view that a positive relationship exists between internet banking adoption and educational level, income, age, gender and occupation. The results present important lessons for bank managers. Marketing campaigns should be gender sensitive and appeal to the right age. The young generation tend to be the early adopters whilst the aged tend to be the laggards hence marketing to the aged should be aimed at creating awareness. For the affluent that are quick to adapt to new technology marketing campaigns should be centred on maintaining interest. The study recommends that further study be carried out to determine the impact of internet banking on service quality and customer retention in light of the intense competition in the industry.

ACKNOWLEDGEMENTS:

The authors would like to acknowledge the valuable contributions of Mr Paul Mukucha and Mr Thulani Dube.

REFERENCE

- Al-Ghaith, W. Sanzogni L. and Sandhu, K. (2010), Factors influencing the adoption and usage of online services in Saudi Arabia, *The Electronic Journal on Information Systems in developing countries*, Issue 40, Vol 1, pp 1-32.
- Al- Somali S., A., Gholami, R., Clegg, B., (2009), An investigation into the acceptance of online banking in Saudi Arabia, *Technovatic* 29, pp 130-141.
- Barret, M. (1997) Playing the right paradigm, *Journal of Bank Marketing*, Vol 29, N0 9, pp 32-39
- Black, N.J., Lockett, A., Winklhofer, H. and Ennew, C. (2001), "The adoption of internet financial services: a qualitative study", *International Journal of Retail & Distribution Management*, Vol. 29 No. 8, pp. 390-8.
- Bradley, L. And Stewart, K., (2003), A Delphi Study of the drivers and inhibitors of Internet banking, *International Journal of Bank marketing* Vol.20 (6), pp 250-260
- Burke. R., R., (2002), Technology and the Customer Interface What consumers want in the Physical and Virtual store. *Journal of the Academy of Marketing Science*, Vol. 30, No4, pp411-432
- Dannenber, M. and Kellner, D. (1998), "The bank of tomorrow with today's technology", *International Journal of Bank Marketing*, Vol. 16 No. 2, pp. 90-7.
- Dickerson, M. D. and Gentry, J. W. (1983). "Characteristics of Adopters and Non-Adopters of Home Computers." *Journal of Consumer Research*, 10 (2): 225-235.
- Dickson, P. R. (2000). "Understanding the Trade Winds: The Global Evolution of Production, Consumption, and the Internet." *Journal of Consumer Research*, 27(1): 115-122.
- Dube T, Chitura T, and Runyowa L, (2009), "Adoption and use of internet Banking in Zimbabwe": An Exploratory Study, *Journal of Internet Banking and Commerce*, Vol 14, No1, pp 1-13.
- Dube T, Njanike K., Manomano C., Chiriseri L., (2011), Adoption and use of SMS/Mobile banking services in Zimbabwe, An Exploratory Study, *Journal of Internet Banking and Commerce*, Vol 16, No2, pp 1-15.
- Gattiker, U.E., Perlusz, S., & Bohmann, K. (2000). Using the Internet for B2B activities: A review and future directions for research. *Internet Research: Electronic Networking Applications and Policy*, Vol. 10 No.2, pp.126-
- Guerrero M.M., Egea J.,M.,O., Gonzalez M.,V.,R., profiling the adoption of Online Banking Services in the European Union, Research paper, University of Almeria, Spain, Department of Business Administration
- Hamlet, C & Strube, M., (2000), Community banks on line, *ABA banking Journal's 2000 White paper/ banking on the Internet*, March, pp 61-65
- Harrison, A., W., Rainer, R., K., (1992), The influence of individual differences on skill in end user computing, *Journal of management Information System*, Vol. 9 No1, pp 93-111
- Harrison, T. (2000). *Financial services marketing*. Wiltshire: Prentice Hall.
- Jayawardhera C. and Foley P. (2000), Changes in the banking sector- the case of internet banking in the UK, *Electronic Networking Application and Policy* Vol. 10, No.1, pp.19-30, MCB UP.
- Kalakota, Ravi and Marcia Robinson (1999), *E-Business: Roadmap for success*, Reading; MA: Addison-Wesley
- Karjaluoto, H., Mattila, M., Pentto, T., (2002), Factors underlying attitude formation towards online banking in Finland, *International Journal of Bank Marketing*, Vol 20, No 6, pp261-272.

Karjaluoto, H., Mattila, M. and Pento, T. (2002a). "Electronic banking in Finland: Consumer beliefs and reactions to a new delivery channel." *Journal of Financial Services Marketing*, 6 (4): 346-361.

Karjaluoto, H., Mattila, M. and Pento, T. (2002b). "Factors underlying attitude formation towards online banking in Finland." *International Journal of Bank Marketing*, 20 (6): 261-272.

MacGregor, R.C. & Vrazalic, L. (2006) E-Commerce Adoption Barriers in Small Businesses and the Differential Effects of Gender, *Journal of Electronic Commerce in Organizations*, 4, 2, 1-24.

Matilla, M., Karjaluoto H., Pento T., (2003) Internet banking adoption among mature customers early majority or laggards, *Journal of Services Marketing* Vol. 17, No.5, pp 514-528

Mols P., N., (2000), The Internet and service Marketing – The case of Danish retail banking, *Internet Research*, Vol 10, Issue 1, pp7-18.

Padachi K., Rojid S., Seetanah B., (2008), Investigating into the factors that influence the adoption of internet banking in Mauritius, *Journal of Internet Business*, Vol 5 pp99-116.

Rogers, E.M. (2003) *Diffusion of innovations*. New York; London: Free Press.

Sarel, D, Marmorstein H (2003). "Marketing online banking services: the voice of the customer", *Journal of Financial Services Marketing*, Vol. 8 No. 2, pp. 106-18.

Sathye M.(1999), Adoption of internet banking by Australian consumers: and empirical Investigation, *International Journal of Bank Marketing* Vol. 17, No. 7, pp. 324-334, MCB University Press.

Trocchia, P.J. and Janda, S. (2000). A Phenomenological Investigation of Internet Usage Among Older Individuals, *Journal of Consumer Marketing*, 17(7), 605-616.

Venkatesh, V. and Morris, M. G. (2000). "Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior." *MIS Quarterly*, 24 (1): 115-139.

Zeithaml, V. A. and Gilly, M. C. (1987). "Characteristics Affecting the Acceptance of Retailing Technologies: A Comparison of Elderly and Non elderly Consumers." *Journal of Retailing*, 63 (1): 49-68.

Wang, Y., Wang, Y., Lin, H., Tang, T., (2003), Determinants of user's acceptance of internet banking, An empirical Study, *International journal of Service Industry Management*, Vol 14, No 5, pp501-519.

ABOUT THE AUTHORS:

Mutengezanwa Margaret, Lecturer, Bindura University of Science Education, Department of Banking and Finance

Mauchi Fungai Ngoma, Chairperson, Bindura University of Science Education, Department of Banking and Finance