

RISK AND OPPORTUNITIES CONNECTED TO THE ADOPTION OF INTERNET BANKING IN AN EMERGING MARKET

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Abstract

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This research investigate the adoption of Internet banking among Gaborone`s working class and university students. Internet banking comes with convenience and lower costs, which encourage customers to adopt it. Hindering factors to Internet banking adoption include lack of trust and awareness. The study is based on a quantitative research approach. The results suggest that Internet banking adoption is almost the same between the working class and university students. The main factors that support Internet banking adoption are perceived ease of use, perceived usefulness and compatibility. The study findings are consistent with previous studies done in other countries, which show same factors that promote and hinder internet banking adoption. The study therefore contributes to our understanding about factors that promote and hinder internet banking by customers. Furthermore studies may focus on the rate of internet adoption among age groups, income and social status.

Keywords: Internet Banking, Risk And Opportunities, Information Communication Technology, Technology Acceptance Model, Innovation Diffusion Theory

1. INTRODUCTION

Wide Internet availability has resulted in new service offerings in various business sectors and the financial sector has not been left behind. The transformation that the internet brings to the financial industry is considerably greater, considering that it depends on information that can be easily sent through the internet. The Internet is used in areas such as customer relationship marketing (CRM), offering products online and other internet banking services. Within the last decade banking services have become increasingly digitized, the term which refers to Internet banking services (Graupner, Melcher, Demers and Maedche, 2015). Aljaafreh and Al-Ani (2014) define Internet banking services as the ability of the bank to offer their services to customers through the Internet.

Internet banking services involve the use of technology by customers to make transactions and receive information from the financial institutions where their accounts are held. These services to individual customers and businesses include access to accounts, processing transactions, obtaining information on financial products and services

through a public or private network (Prakash and Malik, 2008). The range of services varies from bank to bank in different countries. In the developed world, countries have complete online banks, in which all transactions from opening an account, depositing, and making cash withdrawals can be done without walking into a bank branch (Bankwatch, 2006). Some countries have not progressed so well regarding Internet usage and have opted for a mixture of Internet and branch (brick and mortar) banking. This combined physical and internet banking is what is being practised in Botswana as well.

The shift from traditional physical to Internet banking services has been accelerated by customers' ability to access the Internet and has seen a reduction in the number of physical bank branches in many countries (Graupner et al., 2015). Some USA states require a minimum of one branch, so there are almost 500 banks with a single physical branch and the rest are online (Bankwatch, 2006). The shift to Internet banking services has many benefits to both customers and banks. Some of the associated customers' benefits include convenience, independence from time and space (anytime and anywhere) and cost savings (Koufaris & Hampton-

Sosa, 2004; Carter & Belanger, 2005; Aljaafreh et al., 2014). Internet banking benefits to the bank include: lower operational costs, improved banking services, retaining customers and expanding the customer base (Cheung, Chang & Lai, 2000). This in turn, increases profitability and customer loyalty. Internet banking has experienced huge growth and has transformed traditional banking practices which previously entailed the customer visiting a bank. However, previous studies have indicated that the adoption rate of Internet banking services is relatively low in developing countries compared to developed countries (Statista, 2012; Aljaafreh et al., 2014).

1.2. Background of the Study

Financial services form the backbone of a strong economy because they facilitate economic transactions, from individual, organizational, and national to international level. The advent of the Internet, and Internet banking in particular, and its exponential growth, means Botswana has to adopt Internet banking as well. Despite there being a good number of products or services that can be transacted via Internet banking, uptake appears to be low in Botswana. Not much study has been done with regard to the adoption of Internet banking in Gaborone. This study investigates the level of Internet banking adoption in Gaborone's working class and university students. The study seeks to understand factors that promote and hinder the adoption of internet banking in Gaborone. The results of the study are expected to assist in planning for Internet banking in the country. An understanding of factors affecting adoption may also help remedy challenges facing Internet banking in Botswana and other countries as well.

Although bank customers appreciate the benefits of Internet banking in terms of cost and convenience, there have been concerns about security and difficulty of use (Mavetera & Kesemoletse, 2007). This study seeks to understand whether the same factors apply to Botswana. For Botswana to make a regional and global economic impact, it needs to benchmark with other countries, so that it aligns its economic models with those of the best including financial services and Internet banking in particular. This research also helps to understand how Botswana differs from other countries in relation to Internet banking. This is important in order to institute appropriate remedies for the Botswana situation. The main research question for the study is therefore: **What are the main factors influencing and hindering customers' adoption of Internet banking in Gaborone?** This paper is organised as follows: - **Section 2** literature review, **Section 3** research methodology, **Section 4** results and **Section 5** discussions and conclusion. The next section discusses the literature pertaining to Internet banking.

2. LITERATURE REVIEW

Internet banking is the provision of banking products and services such as account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payments through the Internet (Oxford Online

dictionary, 2012). Internet banking includes systems (websites) that enable financial institution customers, both individuals and businesses, to access accounts, process transactions, or obtain information on financial products and services. This can be done through a public or private network, including the internet or mobile phone. Customers access Internet banking services using an intelligent electronic device, such as a personal computer (PC); personal digital assistant (PDA); automated teller machine (ATM); kiosk, or cell phone.

The emergence of Internet banking has seen many banks rethink their information technology (IT) strategies in competitive markets. The banks that fail to adopt Internet banking are likely to lose customers as the cost of offering Internet banking services is low compared to traditional branch banking. This is supported by a study done by Jasmuddin (2004) that examines the role of Internet banking services in Saudi Arabia. He suggests that if the Saudi Arabian banking industry wishes to be successful in the global economy, it needs to integrate Internet technology into its banking strategy. The success of Internet banking is generally dependent on bank and government support as well as acceptance by clients. Internet banking has high start-up costs and it requires many customers for there to be a reasonable return on investment. Government has to implement supportive legislation and help with the infrastructural setup. Internet banking acceptance is also important as the costly investments will go to waste if not used.

Acceptance of Internet banking services involves three main stages: infusion, diffusion and adoption. Infusion refers to Internet banking being put in place; diffusion is people being made aware of the services, and adoption is the actual uptake of the services (Online Oxford dictionary, 2012). In other words, the bank must first see to it that the Internet banking services are available and customers have to be made aware of them before they can actually use them. Banks adopted Internet banking to gain a competitive edge, improve customer services and reduce operational costs. Technological developments in computing and communications have catalysed the Internet banking adoption process (Jayawardhena & Foley, 2000). Customer demands have also risen and banks cannot afford to rest on their laurels.

Some new entrants into banking have embraced technology, so the traditional banks had to adjust quickly, otherwise they were set to lose market share (Jayawardhena et al., 2000). In other words, there is a need to satisfy customers, deal with increased competition, and address pressure on the supply chain to deliver services quickly and continuously develop new and innovative services for differentiation from competitors (Jayawardhena et al., 2000). Internet banking in developed markets is maturing and some emerging markets are adopting the western Internet banking models. Success is registered against the backdrop of continuous economic, legal, technological, political and banking reforms. With these reforms in place and strong information and communication technology (ICT) infrastructure, Internet banking will enable economic benefits to accrue within countries and globally (Simpson & Evans, 2003).

2.1. Benefits of Internet Banking to the Customer

Despite the several challenges in the use of Internet banking, the benefits far outweigh the disadvantages; especially now that many people have good Internet connectivity. A customer can have all accounts aggregated, so that all accounts (current, savings, and mortgage accounts) will be presented on a single page. This enables customers to have a quick glance at their financial portfolios. In most cases, funds can be transferred from one account to another in the comfort of a customer's home anytime, anywhere where there is connectivity. Internet banking therefore brings convenience to banking anytime, anywhere which is very important for people with busy schedules. Now with Internet connectivity through mobile phones, banking transactions can be done while on the go. Internet banking makes it easy to open accounts and access other services online. Internet banking costs less than branch banking, since there are fewer buildings to maintain and less involvement of salaried employees. All these savings allow the bank to offer higher interest rates on savings and lower rates on lending. Some banks are now offering free bill-paying services to encourage customers to do their banking online.

With Internet banking customers can easily compare offers from several banks within a short time to get best deals, higher interest rates on savings and lower rates on lending. Other services which can be easily checked are availability of credit cards, loan terms and banks' own rating. Internet banking users can easily check their bank balances before writing cheques, so the number of refer-to-drawer cheques should decrease thus avoiding the penalty fees that banks charge. Bank reconciliations are made easier with Internet banking. Monthly statements can be downloaded and reconciliation done with just a few clicks. It is also easy for the customer to budget and track where the money has gone. Some banks have a facility that allows customers to view copies of the cheques they have written each month.

Ability to view accounts any time makes it easier to catch any fraudulent activities early. This is more so with accounts that send alerts each time a transaction takes place in an account. Unauthorised withdrawals can be detected immediately and appropriate remedies instituted rather than waiting for the monthly statement, which might be too late. These benefits have encouraged banks to provide an increasing range of easy-to-use services via the Internet. Customers cannot resist the convenience that Internet banking provides as it gives them convenience and better control over their money.

2.2. Benefits of Internet Banking for Banks

Internet banking has many benefits for the bank as well and profitability is one of the major benefits. Operations can be easily expanded without needing branch expansion. In other words there is avoidance of the huge costs which accompany managing branches, since there are lower infrastructure costs and fewer salaried employees. Banks will be able to reach customers in areas in which it is not feasible for them to set up a branch. Internet banking tends to attract high value customers who have potential

to promote the bank as well, such as young professionals, managers, executives and the elite who have access to Internet connectivity. These people have higher than average incomes and some have many sources of income. They are the ones who also tend to save or even just have large bank balances which boost a bank's credit creations. These customers tend to have a high demand for banking products. Most of these customers use online channels regularly for a variety of purposes, so they quickly adopt Internet banking (Berger & Gensler, 2007).

Increases in bank profitability, after adding Internet banking come mainly from increases in non-interest income from service charges on deposit (Young, Lang & Nolle, 2007). It is now also possible for banks to sell and manage services offered by other banks (often foreign banks). This promotes small banks with a limited product range (Young et al., 2007). Internet banking has resulted in increased credit card lending, since these transactional loans can easily be delivered over the internet and internet bill payment has also been rising rapidly (Young et al., 2007). These Internet banking related banking practices have rapidly expanded revenue streams. It has become easier for banks to expand with the advent of Internet banking since it bridges the high start-up and maintenance costs. Now a bank with a traditional customer base in one part of the country or world can attract customers from other parts, as most of the transactions do not require a physical presence.

2.3. Factors for Internet Banking Adoption

Previous research in this area suggests six main success factors for the adoption of Internet banking services: perceived ease of use; perceived usefulness, compatibility (similarity to what one is already doing); trialability (having a chance to test before use); trust (being sure that it is safe) and awareness (being informed of its existence) (Sohail & Shanmughan, 2003; Yu & Lo, 2007; Yiu, Grant & Edgar, 2007). Many of these studies have been done in developed western countries, the Middle East, Australia and Asia. Despite considerable diffusion and adoption of consumer Internet banking in many countries, banks still seek further market expansion. Market expansion is needed more in developing countries such as Botswana where the diffusion and adoption appears to be low. Ignoring technology is no longer an option for any organization and technology has to be fully exploited to achieve efficiency and survival. An essential role is played in automating business processes, finding networking business and providing information for management decision-making and planning. These changes are not leaving banking behind but will grow even faster considering that most banking services can easily be offered online. The next section discusses the theoretical framework underpinning the study.

2.4. Theoretical framework

This section helps to clarify the theoretical background of the research. It discusses the classical models that have been used in technology adoption and some of the modifications to the models. A couple of models in technology adoption are

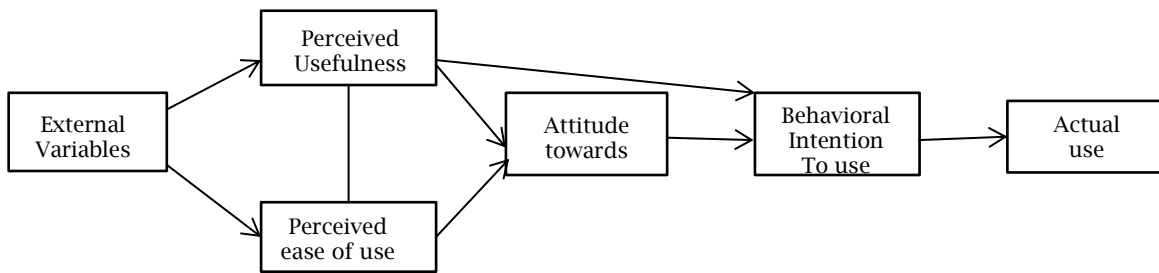
analysed and relevant constructs adopted to give the research framework. Common factors which promote and prohibit Internet banking adoption are examined in detail.

2.4.1. Technology Acceptance Model (TAM)

The Technology Acceptance Model is a widely used model in technology acceptance. It proposes that perceived ease of use and perceived usefulness of technology are predictors of user attitude towards using the technology, subsequent behavioural

intentions and actual usage. In this regard, the perception in turn influences the behaviour and the actual uptake. Perceived ease of use is also considered to influence perceived usefulness of technology (Davis, 1989). Fishbein and Ajzen, 1975 posit that TAM is derived from a theory of reasoned action (TRA), which proposes that individual behaviour is driven by behavioural intention where behavioural intention is a function of an individual's attitude toward the behaviour and subjective norms surrounding the performance of the behaviour.

Figure 1. Original TAM (Davis, 1989)

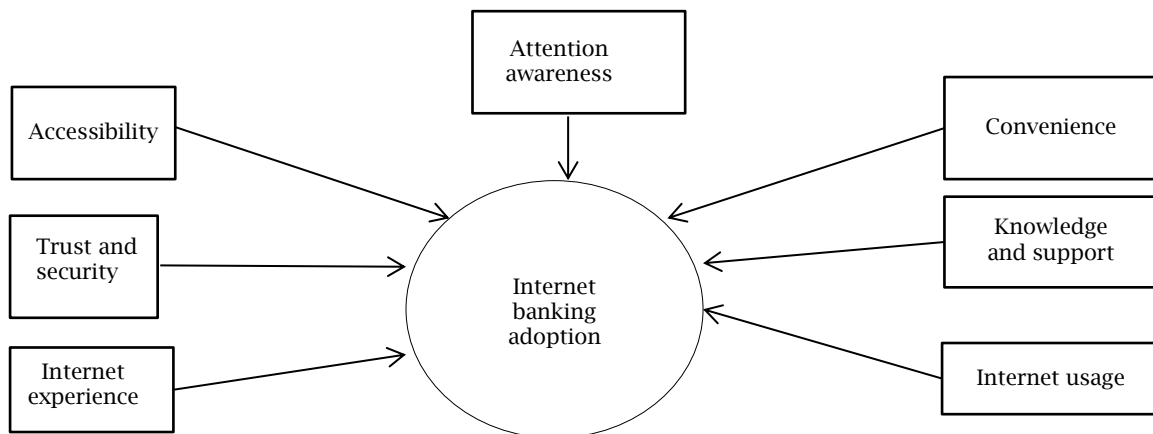


In TAM, perceived usefulness refers to the degree to which the user believes that using the technology will improve his or her work performance, while perceived ease of use refers to how effortless he or she perceives using the technology will be. Both are considered distinct factors influencing the user's attitude towards using the technology, though perceived ease of use is also hypothesized to influence perceived usefulness and attitude towards using the innovation (Davis, 1989). Over the years many researchers have modified TAM as they saw fit. Flavian, Guinalin & Torres (2006) modified TAM to suit Internet banking absorption by adding security and trust to the ease of use and perceived usefulness. The ease of use and usefulness aspects were further broken down into

perceived benefits in service, resistance to change, price, availability of technology, image, comparative advantage and compatibility (Flavian et al., 2006)

Hosein (2009) developed a generic framework on the key factors in Internet banking adoption. This framework contains aspects of TAM but it is now broken down and tailored to Internet banking adoption as shown in Figure 2 below. Internet experience, Internet usage, knowledge and support align well with the ease of use aspect in TAM. Convenience also accompanies the perceived usefulness. Attention awareness, which means being told of the availability of the service and the ability to access it, is also important for one to actually adopt Internet banking.

Figure 2. Consumer adoption of Internet banking, a generic theoretical framework (Hosein, 2009)



Other modifications to TAM include an extended TAM (Venkatesh & Davis, 2000; Wang et al., 2003). The Venkatesh and Davis (2000) modification adds the subjective norm construct and it is known

as TAM 2. These modifications help to tailor-make the models to the situations that will be in place, but the basics of perceived usefulness and ease of use seem to be upheld. TAM has been used in many

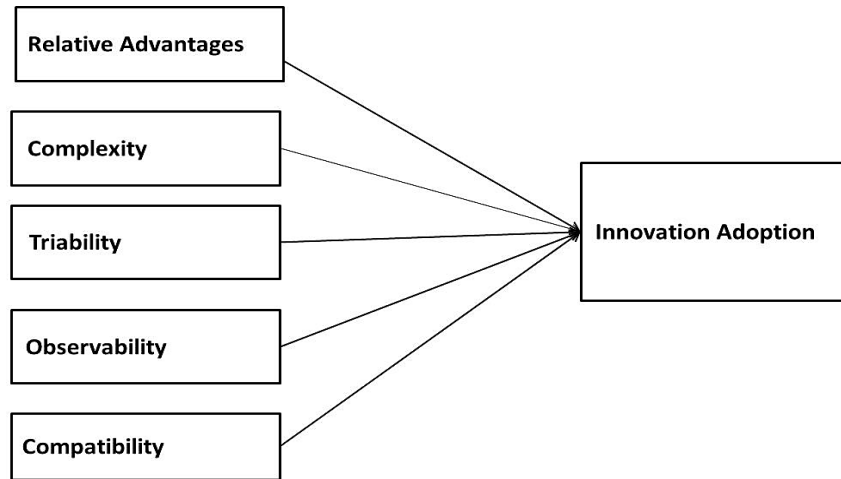
researches, mostly concerning technology adoption, like adoption of online learning, adoption of ATMs, and it has been the main model in Internet banking adoption. This is the main reason that TAM was adopted in this study, but with some modifications.

2.4.2. Innovation Diffusion Theory

The Innovation Diffusion Theory (IDT) has also been used in some research (Rogers, 1983; Tornatzky and Klein, 1982). The IDT model states that the

determinants of behavioural intention are; relative advantages (benefits), compatibility (similarity with what one uses), complexity (level of difficulty), observability (ability to see as one uses it) and trialability (time to test) (Rogers, 1983). Rogers' Innovation Theory has its own extensions and one was done by Moore and Benbasat (1991) who added constructs of image and voluntariness of use. These extensions bring in more clarity and explanatory power to the models (Cheng, Lam & Yeung, 2006).

Figure 3. Innovation Diffusion Theory (IDT), Rogers, 1983

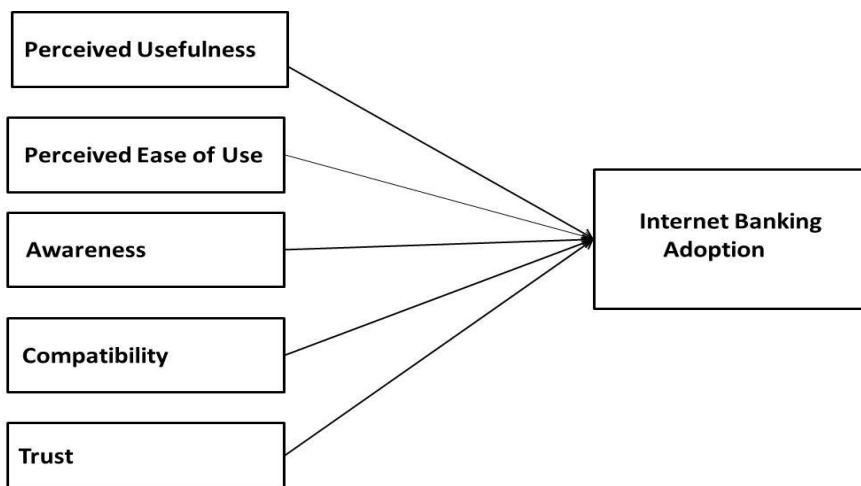


2.5. Adopted Research Framework

This research used a framework which combines constructs from TAM, perceived usefulness and

perceived ease of use with constructs from the IDT. There have been adjustments so that the framework is more specific to internet banking adoption.

Figure 4. Adopted Framework



2.5.1. Hypotheses review

This section outlines the hypotheses to be used in this study to test the link between independent variables (Perceived usefulness, Perceived ease of use, Awareness, Compatibility, Trust) and dependent variable (internet banking adoption).

- Perceived usefulness (PU)

Perceived usefulness is defined by Davis (1989) as “the degree to which an individual believes that using a particular system would enhance his or her job performance.” Many previous studies found positive significant linkages with Internet banking adoption (Eriksson, Kerem & Nilsson 2008; Yiu et al., 2007; Gounaris & Koritos, 2008; Ozdemir, Trott & Hoeicht, 2009). This study hypothesised positive linkage as follows:

H1: Perceived usefulness has a significant and positive influence on internet banking adoption (IBA)

- **Perceived Ease of Use (PEOU)**

This construct, adopted from TAM, is defined by Davis (1989) as “the degree to which an individual believes that using a particular system would be free of physical and mental effort”. In this study, this has been related to the use of the Internet in general and accessing the services on the bank’s website. Past studies have found a significant relationship of perceived ease of use and Internet banking adoption (Sohail et al., 2003; Yu et al., 2007; Yiu, et al., 2007; Gounaris et al., 2008; Ozdemir, et al. 2009). This study hypothesised positive linkage as follows:

H2: Perceived ease of use has a significant and positive influence on Internet banking adoption (IBA).

- **Compatibility**

Compatibility plays a big role in the diffusion of innovation. The study by Tornatzky et al., (1982) found that an innovation is more likely to be adopted when it is compatible with the individual’s job responsibilities and value system. Internet banking has been viewed as a delivery channel that is compatible with the profile of a modern-day banking client, who is likely to be computer literate and familiar with the Internet. Compatibility can even spread to group values and beliefs. This is evident in large numbers of US customers who shop online. Internet banking services are therefore very compatible for them. According to Rogers (1983), compatibility refers to “the extent to which the innovation is perceived as superior to all other options”. It has been found to be a determinant in technology adoption in general and Internet banking adoption specifically (Hernandez & Mazzon, 2007; Eriksson et al, 2008). Hence, the hypothesis:

H3: Compatibility has a significant and positive influence on IBA.

- **Trust in Internet Banking Services**

Trust is probably the most common factor which recurs in many researches on internet banking adoption. Several studies noted that trust play vital role in internet banking services adoption as it affects customers’ behaviour to adopt new technologies (Gefen et al., 2003; Kim et al., 2004). Customers fear that other people will gain access to their sensitive information and even take away their monies electronically (Alsajjan & Dennis, 2009; Suh & Han, 2002). Several studies find a strong relationship between trust and Internet banking adoption (Eriksson et al., 2005; Yu et al., 2007; Guerrero, 2007). This prompted to hypothesize positive linkage as follows:

H4: Trust has significant and positive influence on IBA.

- **Awareness of internet banking services**

People need to be aware of the availability of Internet banking services before they can start to use them. This was found to be a significant factor in studies done by Sohail et al., (2003). Lack of awareness was also found to be a main factor

leading to customers’ slow adoption of online banking (Sathye, 1999). These findings lead to discovering the relationship between awareness and IBA.

H5: Awareness has a significant and positive influence on IBA.

3. RESEARCH METHODOLOGY

This section outlines the process of how the sample was chosen, how data was collected and the validity of the data (Bryman, 2008). It goes to greater depth in clarifying the procedure, so that any other researcher can use the same tools in almost similar conditions and be able to come up with a comparable set of results.

3.1. Research design

This study was based on a cross-sectional quantitative research approach. The study explored factors affecting Internet banking adoption among the working class and the university students in Gaborone. The design was sufficient for the study because it examined only the current Internet adoption levels and reasons for adopting or not adopting Internet banking. The groups in this study consisted of tertiary education students and the working class (employers, employees and self-employed).

3.2. Target population and sample

Clear definition of the target population is very important in order to select a good sample and for accurate findings (Sullivan, 2001; Neuman, 2006). The target population was customers of retail banks of all races, residing in the greater Gaborone area. The participants were roughly from the ages of 18 to 65 years and included those who used Internet banking and those who did not. There are very few banked people below the age of 18 and over the age of 65 in Botswana, and this is why they were not targeted. The banked population in Botswana (i.e. those with bank accounts and access to banks as well) is 45% of the whole population, which translates to over 900 000 people.

3.3. Study Sample

A purposive (non-probability) sample was used in this study to ensure more focus on people who are banked, and likely to use the Internet for banking. A sample size of 100 was used for the study. The participants were mainly bank account holders between the ages of 20 and 50. There were 30 tertiary education students and 70 working class respondents from Gaborone. Large samples generate high accuracy and are important where there are many variables examined simultaneously in data analysis (Neuman, 2006). The majority of the participants came from those who still used traditional banking methods, but possibly used Internet banking as well. It was appropriate to find both. This stratum was conducive to obtaining a good mix for the study. It was very important to obtain the views of the students’ stratum, because they were generally knowledgeable about technology, so finding their Internet banking

adoption status would help in predicting the future. This would also help for comparative purposes in terms of age, income levels and internet usage.

There were some purely Internet bank users who visited the branch very rarely, so to get them, the appropriate way was to go into organizations and their work places. This was the main reason why some questionnaires were taken into organizations and small businesses. The composition of the sample was appropriate for finding Internet and non-Internet bank users. This ensured that all the research goals were met, since this group was technologically knowledgeable, and used the Internet a lot and most likely used Internet banking.

3.4. Data collection

There are three main universities in Gaborone (University of Botswana, Botho College and Limkokwin). Ten students from each of the three institutions were randomly given questionnaires during lunch time. Almost all employees in big organizations and all public servants in Botswana have bank accounts. Organizations were randomly chosen and not more than ten questionnaires were randomly distributed to the employees of each of the organizations depending on the size (number of people in an organization). This was done to cover as many organizations as possible.

A simple questionnaire was used in this study, consisting of five segments: demographic, internet usage, internet banking usage, perceptions and attitude on Internet banking and lastly the comments section. The demographic information section looked into age, gender and educational status, monthly earnings and occupation. The Internet usage section looked into knowledge about the Internet, accessibility and frequency of usage. The Internet banking usage section probed knowledge and usage of Internet banking. The perceptions and attitudes regarding Internet banking section dealt with security, convenience and general customer perceptions of Internet banking. A questionnaire was appropriate to simultaneously cater for different variables at a reasonable cost. The study had five independent variables and one dependent variable (Internet banking adoption). Each of the independent variables had items from the questionnaire that related to the descriptive statistics variables.

The questionnaires were pre-tested and corrections were done accordingly. Two research assistants were trained to help in the gathering of data. Students were given about 20 minutes to complete the questionnaire and return it. Those in the organizations were given the questionnaires which were collected the following day. This enhanced the return of completed papers. All 30 of the questionnaires given to students were returned but 9 of the 70 questionnaires given to the working class were not returned. Data collection took about a month to cover the respondents. The data was analysed using the Statistical Package for Social Sciences 21 (SPSS).

3.4. Validity and reliability

Validity pertains to correctness and accuracy, so that the instrument measures what it is supposed to

measure (Oppenheim, 1984; Peterson, 2000). Valid measures are believed to be free from error, which makes it critical for research. In this study, validity was ensured first by the alignment of the questionnaire with existing models, TAM and the innovation diffusion theory. These models have been used in previous studies of Internet banking adoption. The questionnaire items were also comparable to some TAM- based questionnaires and to the one used by Tan and Teo (2000) in their study on Internet adoption in Malaysia. Questionnaire items were been aligned with the research goals. Validity was also tested statistically as shown in the results section.

Reliability is concerned with consistency regarding obtaining the same results (Oppenheim, 1984; Peterson, 2000). If another researcher does the same study, he or she should arrive at reasonably similar results. Reliability is closely related to validity because if a measure is valid, it will give reliable results. This study used sets of questions to measure different aspects of the same concept. Litwin (1995) points out that using several items makes the data set richer and more reliable. The results of the pre-test and the actual study were consistent, which also aided the reliability. Internal consistency was also tested statistically by Cronbach`s coefficient alpha.

3.5. Ethical considerations

Social researchers are bound to ethical considerations in their studies (Sullivan, 2001). As the study was a simple social one without an invasive procedure or too sensitive information required, there was no need for a signed consent form. The participants had to freely agree to complete the questionnaires and no names were used apart from questionnaire numbers. Each questionnaire had a covering letter from the university to show that it was for academic purposes.

4. RESEARCH RESULTS

This section presents research results. The results pertain to the 85 valid questionnaires completed by the respondents. This section is organized as follows: the next sub-section presents the demographic characteristics of the respondents; sub-section 4.2 presents the frequencies of internet knowledge and access, sub-section 4.3 presents Internet banking, sub-section 4.4 presents reliability analysis, sub-section 4.5 presents correlation results and finally sub-section 4.6 presents multiple regression analysis.

4.1. Demographics

Of the 30 students, 28 (93.3%) were in the 20 to 25 years age group and only two (6.6%) were between the ages of 25 to 30. No students were older than 30. This is consistent with the ages of many university students. The working class respondents were mainly in the 26 to 35 age group. No participants were younger than 20 or older than 50. Only one student was Indian and the rest were black. The students` highest attained educational qualifications were as follows: 60% - 'O' Level, 23% -

diplomas and 17% - certificates. Most of the working class had a diploma or a degree as their highest qualification.

Table 1. Profile of respondents

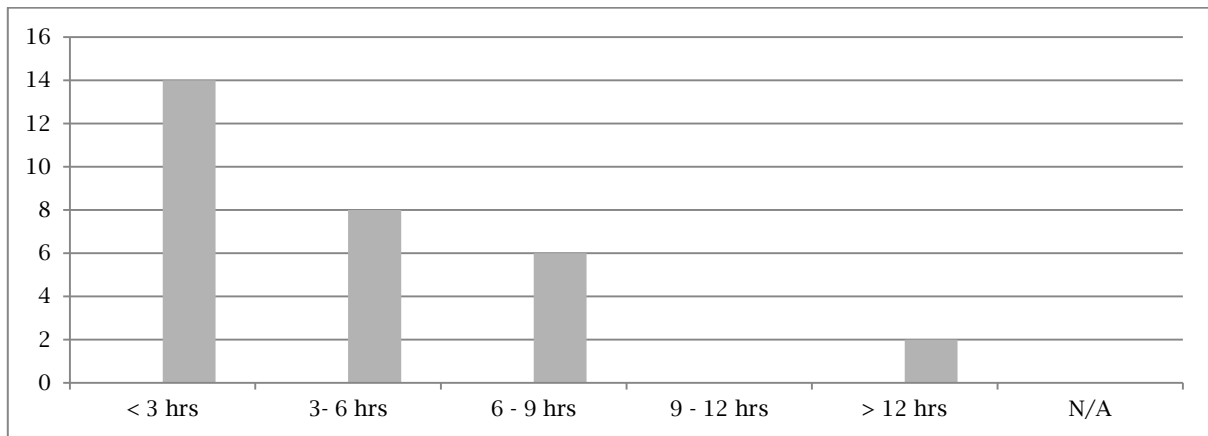
		Students		Working class	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	21	70,0	19	35,0
	Female	9	30,0	36	65,0
Age	20-25	28	93,3	17	28,7
	26-30	2	6,7	23	39,0
	31-35	0	0,0	15	25,4
	36-40	0	0,0	3	5,1
	41-45	0	0,0	4	6,7
	46-50	0	0,0	3	5,1
Race	Black	29	96,6	50	93,0
	Arab	0	0,0	1	2,0
	Indian	1	3,4	1	2,0
	Coloured	0	0,0	2	3,0
Monthly income	<P2 000	28	93,3	3	5,1
	2 001- 5 000	2	6,7	11	18,6
	5 001- 10 000	0	0,0	15	25,4
	10 001- 15 000	0	0,0	12	20,3
	15 001- 20 000	0	0,0	8	13,5
	>20 000	0	0,0	6	10,1
Highest educational qualification	Junior certificate	0	0,0	1	1,7
	'O' Level	18	60,0	5	8,5
	Certificate	5	1,7	6	10,1
	Diploma	7	2,3	16	27,0
	Degree	0	0,0	24	40,7
	Masters	0	0,0	3	5,0
Occupation	Labourer	0	0,0	6	10,2
	Professional	0	0,0	45	76,1
	Self employed	0	0,0	4	6,7
	Student	30	100	0	0,0

There were 11% with 'O' Levels and a certificate as highest qualification. Close to 82% of the working class were professionals, 10% were labourers and the remaining 8% were self-employed. The self-employed were mainly owners of small business organizations. More than 93% of the students had a monthly income below P2000, mainly from government allowances. The remaining 6.6% had monthly incomes between P2001- 5000. Probably these were students sponsored by their employers and they continued to receive salaries. The bulk of the working class (69%) earned between P2001 and P15 000. A quarter (25.5%) earned salaries over P15 000 and the remaining 5.5% had incomes below P2 000.

4.2. Internet Knowledge and Access

All the participants in this study knew, used and had access to the Internet. The numbers of participants who had access to the Internet using either wired or wireless devices, were almost equal, with a slight inclination towards wireless devices. A proportion of the working class (39%), had access to the Internet on both wired and wireless devices. The working class mainly had Internet access at work (60%); 58% accessed the internet through mobiles and only 20% at Internet cafés. Some participants had Internet access in more than one mode.

Figure 5. Duration on internet per day (students)



More than half (63%) of the students accessed the Internet through their mobiles (laptops, phones and tablets) mostly using a university wi-fi system; 23% had Internet access at home and only 6% accessed the Internet at their work places. Probably they were part-time students. There were overlaps as well, as some could access the Internet in more than one mode. Among the working class participants, Internet usage was as follows; 23.7% used it for business; 91.5% for entertainment; 45.8% for study and 3.7% for banking. Among the students, 6.6% used the Internet for business; 83.3% for entertainment, 86.6% for study and 33.33% for banking. Overlapping occurred in usage in both working class and tertiary education students. Almost half of the students (46.6%) accessed the Internet fewer than three hours per day; 26.6% between three and six hours and 20% for six to nine hours. The remaining 6.6% spent more than 12 hours on the internet. The working class spent up to six hours on the internet, with very few spending more than nine hours.

4.3. Internet Banking

A high proportion (84.7%) of the working class participants expressed knowledge about Internet

banking while 15.3% had no idea. 66.6% of tertiary education students knew about Internet banking and the remaining 33.4% did not know. The sources of knowledge about Internet banking among working class participants were as follows: 44% from banking staff; 18.6% recommendations from others; 35.6% advertisements and 6.7% from the Internet among working class colleagues. The students' main source of knowledge was advertisements (56.6%), followed by the Internet (33.3%), banking staff (20%) and recommendations from others (6.6%).

Of the tertiary education students, 33.33%, and of the working class respondents, 32.7% used Internet banking. Almost all non-users intended to use Internet banking except for 6.7% from the working class who indicated that they did not want to use Internet banking. All Internet banking users among both the working class and the students used it for checking balances. 60% of the working class respondents and 50% of the students use it for bank statements and transfers. No one used Internet banking for cheque requests. 40% of the working class participants and no students used it for online buying.

4.4. Reliability Analysis

Table 2. Reliability Analysis

Variable	Code	No. items	Mean	Cronbach`s alpha
Perceived ease of use	PEOU	2	2,124	0,781
Perceived usefulness	PU	4	2,204	0,823
Compatibility	COM	4	2,052	0,814
Trust	TRUST	4	3,524	0,852
Awareness	AWARE	3	3,423	0,782

Cronbach`s alpha was used to assess the reliability of the measures. It evaluates the degree of variance attributable to the true score of the variables to be measured. Reliability focuses on the instrument used in the study, by showing consistency of the measure. It is recommended that Cronbach`s alpha should be over 0.5 but there is more reliability if it is over 0.7. The reliability for this study is shown in the table above and all the variables have values over 0.7, which shows that they have sufficient reliability.

4.5. Correlation Matrix

Table 3. Correlation matrix

	PEOU	PU	COM	TRUST	AWARE
PEOU	1	0,345	0,231	0,123	0,211
PU		1	0,430	0,324	0,362
COM			1	0,311	0,234
TRUST				1	0,341
AWARE					1

The correlation matrix shows whether there are relationships between the independent variables,

since they are supposed to be independent of one other. This is very important to do when a construct has multiple items. The correlation coefficient should not go beyond 0.8 to avoid multicollinearity (Field, 2005). The highest correlation coefficient in this study is 0.430, which is far below 0.8, so there was no multicollinearity among the independent variables.

4.6. Multiple Regression Analysis

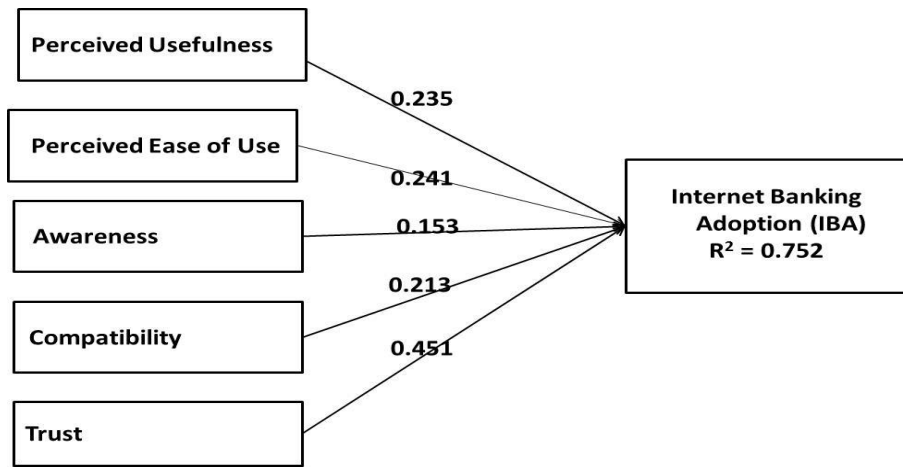
Multiple regression analysis was used to test the hypotheses. This was the most appropriate method since there was a need to analyse the relationship between a single dependent variable and several independent variables. The table above shows the

standardised regression coefficients results (β) which will be on the “path”. These values are very important in confirming or rejecting the hypotheses. All the hypotheses were supported. R^2 for internet banking absorption was found to be 0.752, which shows a strong relationship between the independent variables and the dependent variable.

Table 4. Multiple regression analysis

Model	Beta	Error	Sig
PEOU	0,235	0,045	< 0,05
PU	0,241	0,051	< 0,05
COM	0,213	0,055	< 0,05
TRUST	0,451	0,062	< 0,05
AWARE	0,153	0,060	< 0,05

Figure 6. Frame hypotheses results



The figure above shows that all the hypotheses were supported through the positive β values on the paths from independent variables to the dependent variable. R^2 of 0.752 (75.2%) also shows that IBA is explained mainly by the five variables; only about 24.8% will be explained or related to other variables which are out of these five.

5. DISCUSSION

This section discusses the results of the study, from profiles of the respondents, descriptive statistical analysis, to the support or non-support of the hypotheses. The implications of the findings were weighed up as well. The interpretation was done in relation to the theory and other previous studies. Limitations of the study are acknowledged and suggestions for future research pointed out.

5.1. Confirmation or rejection of hypotheses

The study results showed that all five variables were significant at 0.05 significance level β PEOU was 0.230; β PU was 0.241; β COM was 0.213; β TRUST was 0.451; and β AWARE was 0.153. This therefore showed that the independent variables: perceived ease of use; perceived usefulness; compatibility; trust and awareness, had a positive influence on Internet banking adoption. At R^2 of 0.752 (75.2%),

Internet banking adoption was highly explained by these five variables. The next sub-sections focus on answering the research questions.

5.2.1. Internet Banking Adoption

The results from the study indicate that Internet banking adoption among the working class respondents was 32% and among university students, 33%, in Gaborone. Almost all non-users indicated that they intended to use Internet banking, except 6.7% of the working class respondents who indicated that they did not want to use Internet banking. This is very reasonable for a developing country but there is still room to increase that adoption level. Internet connectivity in Gaborone is very high and almost all participants had access to and made use of the Internet. This creates a good platform for Internet banking.

5.2.2. Factors That Promote Internet Banking

This sub-section discusses study results with regard to factors promoting Internet banking adoption in Gaborone. The main focus is on factors that promote Internet banking adoption; in other words, the factors that help to draw people into using Internet banking.

- **Perceived ease of use**

Perceived ease of use was confirmed in the hypothesis as having a positive impact on Internet banking adoption with a β of 0.23. This is consistent with studies conducted by Davis (1989) and Vankatesh and Davis (1996). The perceived ease of use construct had ease of Internet use and ease of website navigation as items. The implication is that those who found the Internet easy to use would most likely adopt Internet banking. Ease of website navigation was also considered very important for people wishing to make use of the website. This is important for banks to take note of, so that they make the website user friendly. Clients should find it easy to open and perform their transaction on the website. The website must simulate the interaction offered in the physical branch as much as is possible to encourage clients to use it for most of their banking needs.

- **Perceived usefulness**

The perceived usefulness construct had necessity of Internet and Internet banking, convenience and cost effectiveness as items. The hypothesis was supported with a β of 0.241; which was consistent with studies by Tan and Teo (2000): relative advantages would draw people to adopt Internet banking. Perceived usefulness was found to have positively influenced the consumers' behavioural intention to use computer systems (Hsu, Wang & Chiu, 2009). Convenience was found to be important as well in studies by Nielsen (2005) and Munene et al. (2002). It is important for one to realise the importance of Internet banking before one can actually adopt it; this is driven by the difference that Internet banking will bring into one's life. Convenience and cost were also seen as critical for one to adopt Internet banking. The cost saving comes in lower bank charges, transport and time and it is also a huge saving to the bank in overheads and expansion costs.

- **Compatibility**

Compatibility construct items included knowledge and access to the Internet, frequency of access and time spent on the Internet each day. A person who knows and uses the Internet often and for a long time, will not find Internet banking adoption to be very difficult, since Internet banking uses almost the same tools. The hypothesis was supported with a β of 0.213. Previous researches suggested that past experiences and values of consumers had a significant impact on their willingness to adopt Internet banking. This was probably the reason for there being an almost equal number of university students and working class participants using Internet banking despite students having very low incomes. Students make use of the Internet very often in their school work and for entertainment purposes, so they could easily transfer these skills to Internet banking.

5.3. Factors That Hinder Internet Banking Adoption

This section discusses factors that hinder Internet banking adoption and relates them to previous

studies. These factors are trust and awareness of internet banking.

- **Trust**

Trust has been confirmed as being positively linked with Internet banking adoption with a β of 0.451. The trust items include security of Internet banking, confidence that transactions will be completed and recommendations of Internet banking to others. This was consistent with studies by Sathye (1999). Security, privacy and trust concerns appeared to be the main hindering factors to Internet banking adoption. Security issues caused many people to doubt the safety of Internet banking and stop them from using it. Confidence in completion of transactions would make people trust the service and later recommend it to others. Lack of this trust would hinder many people from adopting Internet banking. Banks should continue to improve their security and privacy measure and keep reassuring both Internet banking users and non-users. This is very important since Internet security is challenged time and again and there is need to keep upgrading in order to maintain total security.

- **Awareness**

The awareness construct includes knowledge about Internet banking; intention to use it; perception on the level of advertisement and making people aware of Internet banking. The hypothesis for this variable was supported with a β of 0.153; which shows its importance in Internet banking adoption. This was consistent with the studies done by Sohail et al., (2003) and Sathye, (1999). Customers therefore need to be fully aware of what Internet banking is all about. Promulgation of knowledge has to go further than just an advertisement on a billboard or simply brochures. Banks have to realise that there are some hindrance factors which need to be dispelled by providing clients with full explanations, rather than waiting for them to enquire.

6. CONCLUSION

The internet banking adoption by the working class and tertiary students in Gaborone is very reasonable at over 32%, especially for a developing country. This is mainly due to the availability of Internet connectivity in the city and more specifically for these two strata. The working class respondents and the students also made use of the Internet in their everyday lives, so they were well used to the technology involved. The banking staff also educated them about Internet banking, since they were the most likely to make use of it. Internet is part and parcel of modern life and it brings efficiency and simplicity as part of other benefits. Internet banking enjoys some of these benefits, but not everyone is taking advantage of them. This study's main purpose was to look at the adoption of Internet banking among Gaborone's working class and university students. Internet adoption was found to be almost the same between the working class and university students. The main factors which were found to support Internet banking were perceived ease of use, perceived usefulness and compatibility.

As Internet banking uses almost the same platform as general Internet usage, and this target group has high internet access and usage, it was possible for them easily to adopt Internet banking. Internet banking comes with convenience and lower costs, which also encourages people to adopt it. Hindering factors to Internet banking adoption were lack of trust and awareness. Internet banking was not fully trusted regarding security of personal information and the ability to complete a transaction without problems. Many people are adopting a wait-and-see attitude. If the current adopters do not experience problems, they will also try Internet banking. Awareness programmes of Internet banking were limited to advertisements and did not broadcast a wide range of products and benefits. Banks have a lot of work to do in dispelling the fears and making people aware of Internet banking. This will eventually benefit the banks as well. Banks have a huge opportunity to tap into.

These findings were consistent with previous studies done in Malaysia, Australia, and South Africa to name a few, which show that measures to address the low adoption rate are similar. There should be some similarities in the same target population in cities and towns with the same conditions as in Gaborone. Some differences will emerge if the same study is conducted with full representation of the whole country. The limitation of the study was that it was confined to university students and working class participants, who had a high degree of Internet access and formed the banked component of the society. It was also conducted only in Gaborone, so it cannot be generalised to the whole country, since the conditions may be different. In order for the study to be representative it needs to cover larger areas in the whole country. This therefore offers an opportunity for further study with full a representation sample of the whole country. Furthermore, studies can also be conducted on the rate of Internet adoption among groups according to age, income and social status.

REFERENCES:

- Graupner, E.; Melcher, F.; Demers, D. and Maedche, A. (2015). Customers' Intention to Use Digital Services in Retail Banking - An Information Processing Perspective. European Conference in Information Systems (ECIS 2015) Completed Research Papers. Paper 61
- Carter, L. and Bélanger F. (2005). The Utilization of E-Government Services: Citizen Trust, Innovation and Acceptance Factors. *Information Systems Journal*, 15 (1), 5-25
- Aljaafreh, A. and Al-Ani, A. (2014). Conceptualizing Initial Trust in Internet Banking Services: A Pilot Study. In V. Strahonja, N. Vrček., D. Plantak Vukovac, C. Barry, M. Lang, H. Linger, & C. Schneider (Eds.), *Information Systems Development: Transforming Organizations and Society through Information Systems (ISD2014 Proceedings)*. Varadin, Croatia
- Gefen, D.; Karahanna, E. and Straub, D.W. (2003). Trust and TAM in Online Shopping: an Integrated Model. *MIS quarterly*, 27 (1), 51-90.
- Kim, K. K. and Prabhakar, B. (2004) Initial Trust and the Adoption of B2C E-Commerce: The Case of Internet Banking. *ACM Sigmis Database*, 135 (2), 50-64
- Koufaris, M. and Hampton-Sosa, W. (2004). The Development of Initial Trust in an Online Company by New Customers. *Journal of Information Management*, 41 (3), 377-397.
- Alsajjan, B. and Dennis, C. (2009). Internet banking acceptance model: cross-market examination. *Journal of Business Research*, 5 (5), 257-272.
- Bank watch, (2006). Online only Banks (branchless Banks); <http://thebankwatch.com/2006/11/30/online-only-banks-branchless-banks> accessed 20/09/12
- Basel Committee Report (1998) on Banking Supervision Risk management for electronic banking and electronic money activities, Switzerland: Bank of International Settlements
- Berger, S. C. and Gensler, S. (2007). Online Banking Customers: Insights from Germany. *Journal of Internet Banking and Commerce*, 12 (1).
- Bryman, A. (2008). *Social research methods* (3rd Ed.). Oxford: Oxford University Press.
- Cheung, W.; Chang, M. K. and Lai, V. S. (2000). Prediction of Internet and World Wide Web usage at work: a test of an extended Triandis model. *Decisions Support System*, 30, 83-100.
- Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 13 (3), 319-340.
- Eriksson, K.; Kerem, K. and Nilsson, D. (2008). The adoption of commercial innovations in the former Central and Eastern European markets. The case of internet banking in Estonia", *International Journal of Bank Marketing*, 26 (3), 154-169.
- Field, A. (2005). *Discovering Statistics Using SPSS*, 2nd Ed., London: Sage
- Fishbein, M. and Ajzen, I. (1975). *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*, Reading, MA: Addison-Wesley.
- Gounaris, S. and Koritos, C. (2008). Investigating the drivers of internet banking adoption decision", *International Journal of Bank Marketing*, 26 (5).
- Guerrero, M. (2007). Application of the latent class regression methodology to the analysis of Internet use for banking transactions in the European Union. *Journal of Business Research*, 60 (2), 137-145.
- Hernandez, J. M. C. and Mazzon J. A. (2000). Adoption of internet banking: proposition and implementation of an integrated methodology approach. *International Journal of Bank Marketing*, 25 (2), 72-88.
- Hosein, N. Z. (2009). Internet Banking: An Empirical Study Of Adoption Rates Among Midwest Community Banks. *Journal of Business & Economics Research*, 7 (11), 51.
- Jayawardhena C. and Foley P. (2000). Changes in the banking sector-the case of internet banking in the UK. *Internet Research: Electronic Networking Applications and Policy*, 10 (1), 19-30.
- King, W. R. and He J. (2006). A meta-analysis of the technology acceptance model. *Journal of Information and Management*, 43 (6), 740-755.
- Larsen, L. B. (2004). The automatic pool trainer - a platform for experiments with multi modal user interaction. *Proceedings of the Fourth Danish HCI Research Symposium*, Aalborg University, Denmark.
- Litwin, M. S. (1995). *How to Measure Survey Reliability and Validity*. London: Sage
- Moore, G. C. and Benbasat, I (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. *Information Systems Research*, 2 (3), 192-222.

26. Mavetera, N and Kesimolotse, M.G. (2007). Issues Affecting the Adoption and Continual Usage of Internet Banking Services in South Africa”, In *Managing Worldwide Operations and Communications with Information Technology*, Proceedings of 2007 Information Resources Management Association, International Conference, Vancouver, British Columbia, Canada, May 19-23, 2007, edited by M. Khosrow-Pour. CD ISBN: 978-159904930-4.
27. Munene, C.; Mizerski, K. and Pettigrew, S. (2002). Online Banking and Perceived Risk. In Proceedings of ANZMAC 2002.
28. Neuman, W. L. (2006). *Social Research Methods: Qualitative and Quantitative Approaches*. Toronto: Pearson.
29. Nielsen A. C. (2005). Online banking continues despite security concerns, <http://www.acnielsen.com.au/news.asp?newsID=301> Accessed 10/10/12.
30. Oxford`s advanced learners` dictionary, 2012; <http://oald8.oxfordlearnersdictionaries.com/dictionary> accessed 15/05/2012
31. Oppenheim, A. N. (1984). *Questionnaire Design and Attitude Measurement*, Surrey: Biddles Ltd.
32. Ozdemir, S; Trott, P and Hoecht, A. H. (2008). Segmenting internet banking adopter and non-adopters in the Turkish retail banking sector. *International Journal of Bank Marketing*, 26 (4), 212-236.
33. Peterson, R. A. (2000). *Constructing Effective Questionnaires*. London: Sage Publications.
34. Prakash, A. and Malik, G. (2008). Empirical Study of Internet Banking in India. *Internet research*, 12 (5), 83-92.
35. Rogers, E. (1983). *Diffusion of innovations*, New York: The Free Press.
36. Sathye, M., (1999). Adoption of Internet banking by Australian consumers: an empirical Investigation. *International Journal of Bank Marketing*, 17 (7), 324-334.
37. Simpson, J. L. and Evans, J. P. (2003). Benchmarking of economic and regulatory capital for international banking systems: A theoretical discussion. University of Wollongong in Dubai Working Paper (1-2003. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=443242.
38. Sohail, M. S. and Shanmugham, B. (2003). Internet banking and customer preferences in Malaysia: An empirical investigation. *Information Sciences*, 150 (4), 207-217.
39. Suh, B. and Han, I. (2002). Effect of trust on customer acceptance of Internet banking. *Electronic Commerce Research and Applications*, 1, 247-261.
40. Sullivan T. J. (2001). *Methods of Social Research*. Orlando, FL: Harcourt College Publishers.
41. Tan, M. and Teo, T. S. H. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for information Systems*, 1 (5), 1-42.
42. Tornatzky L. G. and Klein K. J. (1982). Innovation characteristics and innovation adoption implementation: A meta-analysis of findings. *IEEE Transaction on Engineering Management*, 29, 28-45
43. Venkatesh, V. and Davis, D. F. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46 (2), 186-204.
44. Wang, Y-S.; Wang, Y-M.; Lin, H. H. and T-I. Tang (2003). Determinants of user acceptance of Internet banking: an empirical study. *International Journal of Service Industry Management*, 14 (5), 501-519.
45. Yiu, C.; Grant, K. and Edgar, D. (2007). Factors affecting the adoption of Internet Banking in Hong Kong-implications for the banking sector. *International Journal of Information Management*, 27 (5), 336-351.
46. Young, R. D.; Lang, W. W. and Nolle, D. L. (2007). How the Internet affects output and performance at community banks. *Journal of Banking & Finance*, 31, 1033-1060.
47. Yu, C. S. and Lo, Y. F. (2007). Factors encouraging people to adopt online banking and discouraging adopters to use online banking services. Proceeding of Business and Information. International Conference on Business and Information, Tokyo, Japan.