Characterizing of internet banking users in Davao City Philippines

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ABSTRACT

This study was conducted to determine the factors that influence the adoption of internet banking in Davao City. Survey questionnaires were administered to 120 respondents represented by two groups, 60 users and 60 non-users. Four identified variables, demographic profile of respondents, perceived usefulness, perceived ease-of-use, and trust of bank customers towards banks are considered. Probit regression analysis revealed that age and income have strong influence to internet banking adoption. Usefulness and perceived ease-of-use were both found also a strong determinant of internet banking adoption.

Keywords: Internet Banking, Davao City, Probit.

INTRODUCTION

The advent of technologies in the 21st century paved way to bank's adoption to electronic banking or e-banking. The delivery of personal financial services is shifting and changing as dictated by fast changing technology particularly the internet. Evolution of e-banking include the rise of internet banking which is a type of banking that does not involve paper-based transactions and require different aspect of banking operations performed through the use of computers reducing the costs yet increases the speed of banking operations hence providing more convenience to customers. Baraghani (2007) considered this as a higher order and bigger platform of e-banking. Earlier versions include Automated Teller Machines (ATMs), wireless communication networks, and telephone banking (Salehi and Alipour, 2010). These earlier versions gave greater benefits to bank customers when making withdrawals, deposits, and bills payments more convenient.

The arrival of internet banking offered new venues of opportunities for bank customers which is not feasible for those earlier versions of e-banking. Internet banking surpasses the limitations of e-banking earlier versions as business transactions are made possible even without personally visiting the bank outlets or ATMs. With this, retail business establishments have started to embrace the

electronic commerce (e-commerce) transactions where goods and service are bought and sold via the internet (Revesencio, 2014).

Philippines is considered as the social media capital of the world (UM Wave7, 2014) enabling almost every Filipino consumers to be aware of the products sold on-line i.e. Lazada, OLX, etc. There is a growing number of Filipinos recently engage in online buy and selling and using internet banking for payments and other business transactions. Although majority of the Filipinos still wanted that products and services would be available locally since some are not well-verse with internet banking. Without the knowledge of internet banking, Filipinos cannot avail this business opportunity. Perhaps this would have an impact on the economy and in the global market.

Davao city is one of the fastest growing economies in the Philippines and the world (BSP, 2006; 2013). The local economy of the city has been steadily growing over the last 5 years. Based on income, Davao City is the biggest local economy in Southern Philippines and is consistently part of the top 5 local economies in the whole country, the only city outside of Metro Manila. With this is the rise of the number of banking institutions both from local investors i.e. BDO, Metrobank, etc. and abroad i.e. Maybank, Sterling Bank. Both of these banking institutions offers internet banking to better serve the needs of consumers. However we do not know yet how internet banking appeals to most Davaoenos. Hence, this study aimed to determine the factors that influence the adoption of internet banking and derive prediction on how likely demographic characteristics improve or reduce probability of internet banking in Davao City, Philippines

MATERIALS AND METHOD

This study made use of quantitative research methodology (Hopkins, 2008) using the causal design of investigation to delineate the causes of the problems. This design is the most appropriate for the investigation since this study aimed to determine the factors that influence attitude and adoption of bank customers towards internet banking (Black, 1999).

Equal set of number of respondents was maintained for each of group of respondents – user and non-user of internet banking in order to draw a solid and unbiased conclusion from the results of the research.   120 samples were selected as requirement for maximum likelihood estimation for probit

regression. The population is unknown since there is no data available for the number of users and non-users of internet banking in Davao City. Since the population is unknown the researchers uses the minimum sample size of 100 (MacCallum, et al. 1999; Gorsuch, 1983). Additional 20 respondents were included as buffer to the minimum sample size of 100. The 120 samples all living in Davao City were divided into two groups of respondents, 60 bank customers that use internet banking and 60 bank customers that do not use internet banking.

A combination of purposive and incidental type of non-probability sampling was employed for the selection of respondents. Purposive sampling was used since the respondents should be bank customers and incidental sampling was also employed since the first 60 internet banking user respondents were only considered in the data collection. Likewise, the first 60 non-user respondents were also only considered in the research.

The frequency and percentage was used to determine the distribution profile of respondents. Kaiser-Meyer-Olkin (KMO) was used following the recommended 0.50 level of sampling adequacy to ensure that the number of samples is sufficient (Nasri, 2011). Factor Analysis was used to identify the appropriate items for analysis. Probit regression was used to determine the likelihood of adoption of internet banking by bank customers and the factors that determine their adoption to internet banking.

RESULTS AND DISCUSSION

The respondents were mostly single females, earned a college degree who are either in the rank-and-file to supervisory positions. In addition 73% of the respondents were earning between Php21,000 to Php40,000 a month mostly young professionals ages between 21 to 30 years old (84%).

Table 1 shows the test of sampling adequacy and sphericit. Factor analysis was employed to extract constructs of attributes of internet banking. The Kaiser-Meyer-Olkin (KMO) revealed a statistically fit value, $(KMO > 0.5, t^2 = 1468)$ (Nasri, 2011). The Bartlett's test revealed expressions of the respondents are uniquely constructed from each other which indicate a statistically significant value $(p < 0.05)$.

Table 1 Test of sampling adequacy and sphericity

Measurement		Coeff
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.92
Bartlett's Test of Sphericity	Approx. Chi-Square	1468
	Df	78.00
	p-value	0.00

Construct of internet banking preference
Using the varimax technique, two constructs were determined from the latent expressions of the respondents. The constructs are convenience and banking services. Convenience construct includes hassle-free transactions, more time being saved in transactions, effective financial management, fitness of financial management, more advantageous than traditional banking, banking activity anytime and anywhere, resources are available for internet banking. The convenience construct represents the two of the three other determinants of the conceptual framework of this study – the perceived usefulness and perceived ease-of-use.

The banking services construct includes trust on the security of information, ability to deliver expectations of customers, depositors' information are kept private, and confidential. The banking services construct represent the other determinant which is the trust of bank customers towards banks. Factors that are latently describing preference of internet banking are largely grouped to two categories: the personal experience ("convenience"); and, expectations of confidentiality of information ("banking services").

Likelihood of usage of internet banking
As presented in Table 2 Probit estimates revealed that three variables influence probability of using internet-banking. Two of the three variables were demographics, while the other is a latent variable. Age and income were found to show statistical influence on becoming an internet-banker, yet an increase in age reduces chances of becoming an internet user in banking. Meanwhile, income determined chances of making a depositor become an internet-user in banking transactions. It was also found that an increase in income also increases the chances of becoming an internet-user in banking. Finally, convenience afforded by a bank will entice depositors to avail services of internet-based banking.

Table 2 Parametric estimation of likelihood to use internet-banking
of depositors using Probit regression

Variables	Coefficient	Std. Error	Z	p-value	
Const	-5.11574	1.66043	-3.0810	0.00206	***
Age	-0.0923293	0.0427695	-2.1588	0.03087	**
Sex	0.500159	0.359355	1.3918	0.16398	
Cstatus	0.646502	0.405065	1.5960	0.11048	
Educ	-0.0421822	0.318107	-0.1326	0.89451	
Rank	-0.00359616	0.157378	-0.0229	0.98177	
Income	0.679026	0.195759	3.4687	0.00052	***
Convenience	1.03405	0.285845	3.6175	0.00030	***
Banking services	-0.252496	0.252064	-1.0017	0.31648	

Probability estimation reveals that a depositor ages 30 years old, with monthly income of P30,000, and expresses high degree of convenience on the services of a bank has 19% probability of becoming an internet-banking user; while a 35-year old depositor with income of P40,000 and has high convenience on the services of the bank has 23% probability of using internet-banking.

On demographic factors, only age and income stood out of the seven different variables of demographic profiles. Age and income showed the strongest link to internet banking adoption. Decrease of chance of using internet banking happens when age increase. This can be attributed primarily to difficulty in attracting older generation to accept new technology. This conform to claim of Munusmy and De Run (2012) that younger generation tends to be more flexible and technology savvy, hence using internet banking is not an issue. Same findings were noted by Onyia and Tagg (2011) and Chan, et al. (2004) that most internet banking users are relatively younger.

Individuals with higher level of income are more likely to use internet banking compared to those with lower level of income. As Kolodinsky et al (2004) argued that this reasoning can be attributed to a person with higher income can afford the cost of internet banking connection and eventually internet banking service. Higher level of income would also mean more money buffer, more banking transactions, and more expenses to manage.

Convenience construct proved to have the strongest link to internet banking adoption. The relationship between the components of convenience construct such as hassle-free transactions including conduct of banking anytime and anywhere, more time being saved in transactions, effective financial management, fitness of financial management, advantageous banking approach, and resources available for internet banking, are all found to be significant in internet banking adoption. This finding coincide with Technology Acceptance Model (TAM) basis that an individual will accept new technology if he perceived the system to be useful and easy to use. Hence there is significant relationship between perceived usefulness and perceived ease of use to adoption of internet banking (V and Amudha, 2014).

CONCLUSION

Based on our analysis, age and income of bank customers in Davao City have strong influence on likelihood to adopt internet banking in their banking transactions. Younger generation is more adaptable to internet banking adoption as compared to the older generation. In addition, higher level of income is more often associated with more volume of expenses and banking transactions. It is also worth noting that the convenience construct have statistical influence to internet banking adoption which means that the internet banking system usefulness to bank customers and easy-to-use features determine their decision whether to use internet banking or not.

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