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DETERMINANTS OF INTERNET BANKING EVIDENCE FROM HIGHER EDUCATION

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ABSTRACT: This paper examined the factors that influence the academic staff of higher education intention to adopt Internet banking in Nigeria. The Technology Acceptance Model (TAM) was used for this study as a theoretical framework with three independent variables and one dependent variable. A total of 146 academic staff from federal universities in Nigeria participated in the survey. The results of the SPSS 22 regression analysis supported the hypothesized direct relationship. Simple probability sampling technique was used with a total valid of 146 respondents and data was collected through a self-administered questionnaire. The results revealed that convenience, perceived credibility, and perceived usefulness had significant positive influence among academic staff of higher education on the intention to adopt Internet banking. The findings from this research would be useful for bank managers in the banking industry and their customers, particularly for academic staff of higher education in Nigeria.

KEYWORDS: Internet Banking, higher education, technology acceptance model,

1.0 INTRODUCTION

Today technology is the major forces behind so many changes happenings in the financial sector such as creating new products, services market opportunities and developing more information, system oriented business and management processes of business firms (Cheung, Xiao, & Liu, 2014). Moreover, the advantages of technology in services business firms are to reduce expenses, boost consumer service and delivery, and also to homogenize nucleus service contributions (Al-Alak & Alnawas, 2011). The Nigerian banking has been innovative and receptive to a new technological development in the area of internet banking in the financial service industry (Chatrchyan et al, 2013).

The internet banking has an ever-growing significance in the banking industry because of the dual benefits it brings to both the customers and the banking industry. Even though an information system (IS) overhead is regarded as both risky and costly, today financial institutions are one of the largest investors in IS (Mashhour & Zaatreh, 2008). Today, because of the challenging facing business firms in the financial industry, banks have been adopted harried to initiate a various alternative delivery channel to pull consumers and improve consumers' awareness. It has been observed in the developed countries generally and more especially in the developing countries during the last decade, internet banking has enjoyed remarkable multidimensional growth and provide effective service delivery as compared to the traditional banking system (González, Comesaña, & Brea, 2007).

Similarly, the main purpose of this study is to examine the factors facing internet banking service among academic staff of higher education in Nigeria. Internet banking adoption will be studied using the various factors that influence factors such as perceived usefulness, perceived ease of use and convenience. Hence, more knowledge on the factors that affect Internet banking adoption is always needed in order to facilitate and understand the adoption of internet banking. Based on the aforementioned, the researcher examined the factors that influence academic staff of higher education in Nigeria to use the Internet for their banking transactions. In order to address the research issues in this paper, the researcher reviewed existing

works on Internet banking adoption including research methods appropriate for this paper, and then applied them to the context of Nigeria.

2.0 LITERATURE REVIEW

Today one the most significant theories used by researchers when studying customer's intention to adopt Internet banking is Technology Acceptance Model (TAM), which originally proposed by Davis (1989). TAM was considered by the previous researchers as a robust instrument for studying and researching the adoption and usage of Internet banking, by looking at the demand side issues of IT/IS usage (Howcroft, Hamilton, & Hewer, 2002; Mayer, Davis, & Schoorman, 1995), rather than the supply, or developer's perspective, as is often the case. Overall, TAM can successfully guide technology implementation, developments and innovations within the area of Internet banking in the banking industry.

2.1 Perceived Usefulness

Davis (1989) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance". The significance of perceived usefulness has been widely recognized in the field of e-banking and internet banking (Polatoglu & Ekin, 2001). There is also broad research that presents evidence of the important impact of perceived usefulness on user acceptance of e-banking (Davis, Bagozzi, & Warshaw, 1989; Venkatesh, Morris, Davis, & Davis, 2003). Davis (1989) reported that user acceptance of computer systems is driven to a large extent by perceived usefulness. However, previously researcher have found that perceived usefulness had a direct effect on internet banking usage (Pikkarainen, Pikkarainen, Karjaluoto, & Pahnila, 2004). People use online banking services because they find that using banking websites enhances the productivity of their banking activities and that they are useful for performing financial transactions (Kesharwani & Bisht, 2012).

Meanwhile according to Calais (2003) discovered that perceived usefulness effect Taiwan people's intentions to adopt e-banking systems significantly. Hence, the greater the perceived usefulness of using e-banking and internet banking services, the more likely that internet banking will be accepted by users and a customer will have a positive attitude towards Internet banking when customers feel that using Internet banking provide benefits for them (Polatoglu & Ekin, 2001).

Hence, the following hypothesis has been proposed:

H1: Perceived usefulness has a positive influence on the intention to adopt Internet banking among academic staff of higher education in Nigeria.

2.2 Perceived Ease of Use (PEOU)

In TAM, an individual's belief develops the intention to use the system. According to Davis (1989), PEOU refers to the degree to which a person believes that using a particular system would be free of effort. Similarly, Zeithaml (2002)) stated that the degree to which an innovation is easy to understand or use could be considered as perceived ease of use. Lawrence et al., (2009) found that PEOU has a positive effect on behavioral intention to use the Internet banking. Also with less complexity in interacting with the system, positive attitude could be developed subsequently towards intention and behavior. According to Guriting & Ndubisi (2006) found that PEOU had a significant positive effect on behavioral intention to use online banking in Malaysia. Several researchers have proposed that a system that is easy to use will be more widely accepted than the one that is not as easy to use (Ndubisi & Sinti, 2006). Based on these findings, it is highly expected that the general causalities found in TAM are also applicable to Internet banking services.

Hence, the following hypothesis has been proposed:

H2: Perceived ease of use has a positive influence on the intention to adopt Internet banking among academic staff of higher education in Nigeria.

2.3 Convenience (CONV)

According to Copeland, Mizuno, & Shaeri (2009) defined convenience goods as a class of consumer products that were intensively distributed and required minimal time and physical and mental effort to purchase. Some later definitions of convenience also focused on resources such as time and effort required of the consumer in shopping for a product (Downing, 1990). Other researchers, however, expanded the concept of convenience to incorporate no shopping activities. It is related to the visual view of the Internet compared to telephone banking (Compton, Conway, Stinson, & Grant, 2006). Convenience is one of the most beneficial features of Internet banking (Liao and Cheung, 2002; Daniel, 1999). People can bank online to pay bills, check balances, transfer funds, apply for auto loans and mortgages, and use other complementary services at the tip of a finger anytime from anywhere (Yu & Fang, 2009) indicate that time-saving and 24/7 access appear to be the most important aspects of the convenience of Internet banking services (Grant, Mergen, & Widrick, 2004), explains that as people become more time and leisure conscious, the convenience aspects of Internet banking will be increasingly valued.

Therefore, the following hypothesis has been proposed.

H3: Convenience has a positive influence on the intention to adopt Internet banking among academic staff of higher education in Nigeria.

3.0 METHOD AND MATERIAL

This present study focused on how the academic staff of higher education in Nigeria perceived the adoption of Internet banking. The main motivation for this research work was that there was an inadequate study conducted that involved academic staff intention to adopt Internet banking in Nigeria. However, a population of 146 academic staff from federal university participated in the survey exercise. A convenience sampling method was used as survey instrument for this study. Convenience sampling is a type of no probability sampling which involves the sample being drawn from that part of the population which is close to hand. Convenience sampling method is cost effective, and this method has been used in many information systems research (Lee, Eze, & Ndubisi, 2011).
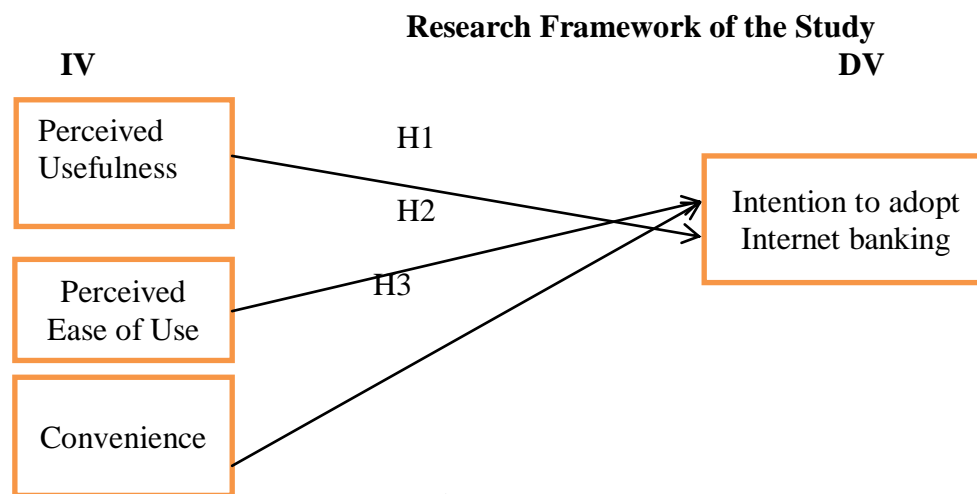
Research Framework of the Study

Figure 1: Research Framework.

4.0 RESULTS AND ANALYSIS

The researchers used the statistical package for social sciences (SPSS). The first statistical analysis to be performed was coefficient Cronbach's alpha to measure the internal reliability analyses to examine various scales. Reliabilities of these scales were as follows, Perceived Usefulness is 0.953, Perceived Ease of Use is 0.801, and Convenience is 0.781

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.810[a]	0.655	0.653	0.62

a. Predictors: (Constant), Convenience, Perceived Usefulness,   Perceived Ease of Use
b. Dependent Variable: Intention to adopt

The adjusted R^2 under the model summary show the exploratory power of the model, from 0 to 1.00. In the data above, the adjusted R^2 in table 1 above is 0.653 which reflects 65% by the model of why the intention to adopt internet banking.

Table 2: ANOVA Result

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	323.339	3	107.780	280.317	.000[b]
Residual	169.945	442	.384		
Total	493.284	445			

a. Dependent Variable: Intention_to_adopt
b.   Predictors: (Constant),   Convenience,   Perceived_Usefulness, Perceived_Ease_of_Use

After checking the adjusted R^2, look at the significance value in the F test under the ANOVA. If it is less than 0.05, the relationship is significant between the variables. The ANOVA table of indicates that the model as a whole is significant {F (280.317), P < 0.000}.

Table 3 : Multiples Regression Analysis

Results of correlation analysis when Intention to adopt is dependent variable

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.964	0.131		7.375	0.000
1 Perceived Usefulness	0.11	0.027	0.131	4.032***	0.000
Perceived_Ease_of_Use	0.593	0.04	0.632	14.84***	0.000
Convenience	0.122	0.038	0.133	3.215***	0.001

*** *Correlation is significant at the 0.001 level (1-tailed)*

The correlation statistics clearly establish a very strong and positive relationship of Intention to adopt internet banking with perceived usefulness, perceived ease, and convenience. Intention to adopt internet banking also shares a positively strong relationship with perceived usefulness, perceived ease, and convenience. All of the above-depicted relationships are statistically significant, also as the two-tailed significance value is 0.000 for all which is lower than the present significance level i.e. 0.01. Therefore, H1, H2, and H3 were all supported. However, the relationship between Intention to adopt internet banking and perceived usefulness, perceived ease and convenience was found to be stronger and statistically significant.

5.0 DISCUSSION

The study validates copiously discussed and established a relationship between Intention to adopt internet banking and perceived usefulness, perceived ease, and convenience. The study brings forth the fact that perceived usefulness, perceived ease, and convenience shares an extremely strong and significant relationship with Intention to adopt internet banking. High coefficient of correlation establishes a high degree of association between the three constructs, whereas the high value of the coefficient of determination communicates considerably greater predictive strength of the identified model and hence significant generalizability.

6.0 SUMMARY AND CONCLUSION

Future researchers could explore the research model of mediated moderation by searching and testing the variables that possibly provide direction to the moderating effects on the Intention to adopt internet banking and perceived usefulness, perceived ease and convenience link. The present study has established a significant linear relationship of Intention to adopt internet banking and perceived usefulness, perceived ease, and convenience. However, the possibility of plausible nonlinear relationships between these two constructs cannot be denied. Further researchers could hypothesize and test the non-linear relationship between Intention to adopt internet banking and perceived usefulness, perceived ease, and convenience to refine the explanatory power of the hypothesized model. Moreover, the study could be replicated in other industries with distinct characteristics by surveying the respondents with diverse cultural, social and consequently, psychological mindset.

REFERENCES

1. Al-Alak, B. A., & Alnawas, I. A. M. (2011). Measuring the acceptance and adoption of e-learning by academic staff. *Knowledge Management and E-Learning*, *3*(2), 201–221.
2. Calais, E. (2003). GPS measurements of crustal deformation in the Baikal-Mongolia area (1994–2002): Implications for current kinematics of Asia. *Journal of Geophysical Research*, *108*(B10), 2501. http://doi.org/10.1029/2002JB002373
3. Chatrchyan, S., Khachatryan, V., Sirunyan, A. M., Tumasyan, A., Adam, W., Aguilo, E., … Swanson, J. (2013). Evidence for associated production of a single top quark and W boson in pp collisions at sqrt[s]=7 TeV. *Phys Rev Lett*, *110*, 22003. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/23383893
4. Cheung, C. M. K., Xiao, B. S., & Liu, I. L. B. (2014). Do actions speak louder than voices? the signaling role of social information cues in influencing consumer purchase decisions. *Decision Support Systems*, *65*(C), 50–58. http://doi.org/10.1016/j.dss.2014.05.002
5. Compton, W. M., Conway, K. P., Stinson, F. S., & Grant, B. F. (2006). Changes in the prevalence of major depression and comorbid substance use disorders in the United States between 1991-1992 and 2001-2002. *The American Journal of Psychiatry*, *163*(17), 2141–2147. http://doi.org/10.1176/appi.ajp.163.12.2141
6. Copeland, E. J., Mizuno, S., & Shaeri, M. (2009). Dynamics of a scalar field in Robertson-Walker spacetimes. *Physical Review D - Particles, Fields, Gravitation and Cosmology*, *79*(10). http://doi.org/10.1103/PhysRevD.79.103515
7. Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*, 319–340. http://doi.org/10.2307/249008
8. Davis, F. D., Bagozzi, R., & Warshaw, P. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, *35*, 181–192. http://doi.org/10.1287/mnsc.35.8.982
9. Downing, T. E. (1990). Reducing Hunger in the 1990s: Third Annual Hunger Research Briefing and Exchange, Brown University, Providence, Rhode Island, 4-6 April 1990. *Disasters*, *14*(3), 274–275. http://doi.org/10.1111/j.1467-7717.1990.tb01071.x

10. González, M. E. A., Comesaña, L. R., & Brea, J. A. F. (2007). Assessing tourist behavioral intentions through perceived service quality and customer satisfaction. *Journal of Business Research*, *60*(2), 153–160. http://doi.org/10.1016/j.jbusres.2006.10.014

11. Grant, D., Mergen, E., & Widrick, S. (2004). A Comparative Analysis of Quality Management in the US and International Universities. *Total Quality Management and Business Excellence*, *15*, 423–438. http://doi.org/10.1080/1478336042000183613

12. Guriting, P., & Ndubisi, N. O. (2006). Borneo online banking: evaluating customer perceptions and behavioral intention. *Management Research News*, *29*(1/2), 6–15. http://doi.org/10.1108/01409170610645402

13. Howcroft, B., Hamilton, R., & Hewer, P. (2002). Consumer attitude and the usage and adoption of home-based banking in the United Kingdom. *International Journal of Bank Marketing*, *20*(3), 111–121. http://doi.org/10.1108/02652320210424205

14. Kesharwani, A., & Bisht, S. S. (2012). The impact of trust and perceived risk on internet banking adoption in India: An extension of technology acceptance model. *International Journal of Bank Marketing*, *30*(4), 303–322. http://doi.org/10.1108/02652321211236923

15. Lawrence, A. D. R. A., Barber, B. M. B., Odean, T., Emory, C., Nofsinger, J. R., Sias, R. W., … Rangel, G. J. (2009). The impact of public information on investors. *Journal of Financial Economics*, *25*, 59–82. http://doi.org/10.1057/fsm.2010.5

16. Lee, C. H., Eze, U. C., & Ndubisi, N. O. (2011). Analyzing key determinants of online repurchase intentions. *Asia-Pacific Journal of Marketing and Logistics*. http://doi.org/10.1108/13555851111120498

17. Mashhour, A., & Zaatreh, Z. (2008). A Framework of Evaluating the Effectiveness of Information Systems at Jordan Banks: An Empirical Study. *Journal of Internet Banking and Commerce*, *13*(1), 1–14.

18. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integration model of organizational trust. *Academy of Management Review*, *20*(3), 709–734. http://doi.org/10.5465/amr.2007.24348410

19. Ndubisi, N. O., & Sinti, Q. (2006). Consumer attitudes, system's characteristics and internet banking adoption in Malaysia. *Management Research News*, *29*(1/2), 16–27. http://doi.org/10.1108/01409170610645411

20. Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Research*, *14*(3), 224–235. http://doi.org/10.1108/10662240410542652

21. Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of Internet banking services. *International Journal of Bank Marketing*, *19*(4), 156–165. http://doi.org/10.1108/02652320110392527

22. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*.

23. Yu, T.-K., & Fang, K. (2009). Measuring the post-adoption customer perception of mobile banking services. *Cyberpsychology & Behavior : The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, *12*(1), 33–5. http://doi.org/10.1089/cpb.2007.0209Zeithaml, V. A. (2002). Service excellence in electronic channels. *Managing Service Quality*. http://doi.org/10.1108/09604520210429187