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Determinants of Adoption of Internet Banking by Trade Finance Customers in East Africa

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ABSTRACT *It is increasingly more interesting to the bank managers to understand what is important to customers when it comes to Internet banking, and especially banking conducted by the customers themselves. The purpose of this paper is to identify the factors that influence corporate customers' adoption of Internet banking services in Kenya, Uganda, Tanzania and Rwanda. This study involved 472 Trade Finance customers. The hypotheses are empirically evaluated by using Trade Finance customers of an East African bank as the target sample. The analysis reveals that corporate users are not motivated by the same factors as private users. In order to become Internet banking customers, it is extremely important for corporate users to have a system that is easy to use and operate with full support from the bank.*

KEY WORDS *Internet Banking, Trade Finance Customers, East Africa, Technology Acceptance Model*

JEL CODES L86, G21

1. Introduction

Trade Finance as a phrase is somewhat misleading. To those unfamiliar with this business area, it might sound to be more describing to talk about international trade. Trade Finance involves parties, usually in different countries, importing and exporting goods by using documents as the payment instrument, or using international guarantees to secure that the beneficiary party gets the payment as agreed. When trading partners make a trade agreement, they also have to agree on the payment method used. Trade Finance products are suitable for most of the occasions. These products involve documentary payments, Documentary Credits (D/C) and Collections, and International Bank Guarantees. International Chamber of Commerce (ICC) establishes all rules for Collections, D/Cs and International Bank Guarantees. Those rules are made

to be followed by all the parties involved to ensure smooth and reliable trade between all the countries.

Trade Finance online services can work either two ways, or one way (stand-alone) depending on if the service is connected to the banks systems. Some banks provide online services for all the products, some only documentary payments or different combinations of Trade Finance services.

When talking about online Trade Finance services, two way online services mean that the communication is done interactively: providing the customer a way of taking care of their Trade Finance business electronically via the Internet, sending and receiving transactions to and from the bank. Customers can make applications electronically, meaning they can issue deals (Import D/C's, Export Collections and Outgoing Bank Guarantees) to the bank, and receive issuances of deals (Export D/C's, Import Collections and Incoming Bank Guarantees) electronically from the bank. In addition to that, they can make amendments to the deals registered in the system, receive notifications and correspondence with the bank electronically, accept documents and payments and follow the status of their deals.

Stand-alone service refers to a service that is not connected to the banks systems in any way. It merely offers the customer an electronic way of filling in applications and saving historical data on the deals.

Online services usually provide the customer also a way of collecting historical data, making reports of them and using the deal information in various ways. For example the data saved is used to support accounting and bookkeeping for controlling and following up the company cash flow, liabilities and transactions.

Several studies have been conducted to investigate the issue from private retail customers' point of view in several countries, from several aspects (Sudarraj and Wu 2005, Lassar et al. 2005, Lu et al. 2005, Shih and Fang 2004, Eriksson and Kerem 2004, Akinci et al. 2004, Pikkarainen et al. 2004, Sohail and Shanmugham 2004, Devlin and Yeung 2004, Gerrard and Cunningham 2003, Chau and Lai 2003, Liao and Cheung 2002 and Karjaluoto et al. 2002).

However, what are missing in this stream of research, are those studies looking at the issue from corporate customer's perspective. The only two found were a qualitative study concentrating on the barriers to Internet banking adoption in Taiwan (Rotchanakitumnuai and Speece, 2002) and (Jagero and Abeka, 2011).

The aim of this study is to distinguish the factors (determinants) influencing corporate trade finance customers' when they make a decision to start using Internet banking services or not. The empirical evaluation is based on Trade Finance customers and their view on a specific Internet banking service provided.

Hypotheses

i. Perceived Usefulness positively influences use of Trade Finance Internet Services in East Africa.
ii. Perceived Ease of Use positively influences use of Trade Finance Internet Services in East Africa.
iii. Organizational Support positively influences use of Trade Finance Internet Services in East Africa.
iv. Bank Support positively influences use of Trade Finance Internet Services in East Africa.

2. Literature Review

Technology Acceptance Model

Technology Acceptance Model (TAM) was initially suggested by Fred Davis in 1989. It is one of the most studied and used models in the investigations of user acceptance of information technology. The model is adapted from Theory of Reasoned Action (TRA), which was originally proposed by Fishbein and Ajzen in 1975. Technology Acceptance Model is an information system theory, which purpose is simply to predict and explain the user acceptance of information technology. The model addresses the reasons why users either accept or reject particular piece of information technology. The revised model by Davis et al. (1989) is constructed from external variables (external stimulus), perceived usefulness and perceived ease of use (cognitive response), behavioral intention, and actual usage (behavior). (Davis et al. 1996a)

Deriving from Iivari and others, McFarland and Hamilton (2004) studied computer anxiety, system quality, prior experience, others' use, organizational support and task structure and their influence on computer-efficacy, perceived usefulness, and perceived ease of use and system usage. They discovered that system usage is significantly influenced by all of the abovementioned factors. They empirically tested the model with answers from users in US companies.

Yi and Hwang (2003) again studied self-efficacy, enjoyment, and learning goal orientation also in the context of TAM with university students. They used web-based class management system as the piece of technology examined. Self-efficacy appeared to directly influence the use, whereas enjoyment and learning goal orientation mediated through self-efficacy, usefulness and ease of use. Usefulness and ease of use in turn influenced the decision to use through behavioral intention.

There are many similarities between adopting other e-commerce activities and Internet banking. In many ways the reasons for adoption or rejection are alike. Eastin (2002) examined four different e-commerce activities (shopping, banking, investing and online services) and their diffusion in the United States. The outcome was that selfefficacy, amount of internet use; perceived convenience, perceived economic advantage, and overall adoption of similar innovation positively have positive influence to the overall adoption of e-commerce. According to them, perceived risk has a negative impact, and therefore it works as a barrier to adoption of any kind of ecommerce.

Jiang et al. (2000) utilized TAM in their empirical study about user behavior and ecommerce. Their model had five constructs: utilization of the Internet, near term consequences, facilitating conditions and experience with the Internet. They found out that the most important driving factor influencing the utilization of the Internet is prior experience. Another significant positive relationship was found between facilitating conditions and utilization of the Internet. This implies that the more familiar the users are with the Internet, and the better they feel they can get information from the sites, the more likely they are to use the Internet service in question.

Analyses of the state of the art

As already mentioned before, Technology Acceptance Model is widely and successfully used in the research about adoption of Internet banking. The model has been criticized for being almost too easy to generalize to any piece of information technology. However, it can also be the strength of it, as it is fairly easy to extend the model with other theories and models. This can be seen from the amount of research in the Internet banking area. The resemblance of studies not utilizing TAM and those that are, can be easily seen. Same factors, variables and determinants are empirically tested with slightly different sample and method.

The validity and reliability of the studies is good, although many of the studies are using university students as the sample. The use of such homogenized data can lead to results that are not applicable to the entire population of the respective country, for example. On the other hand the variety of countries and continents studied is satisfying for generalizing the research outcomes, also keeping in mind that the results are similar also in those studies that are using data with more invariance. Europe, North America, Asia, Australia, and Baltic countries, developing and developed countries have been covered with results supporting each other. Thus, the research items can be used to support the building of the model for Trade Finance banking in Scandinavian countries.

3. Methodology of Research

Research population

The researcher targeted population was business process in the organization, corporate Customers, Current system if any, Capability of the organization's technology infrastructure and the management of the organization. The study involved a total of 472 customers from Kenya, Uganda, Tanzania and Rwanda.

Research Instruments

The survey questions and their relation to the hypotheses are presented in the table below.

Table 1. Questionnaire questions for hypothesis testing

FACTOR	VARIABLE	HYPOTHESIS	SURVEY QUESTION
Perceived usefulness	PU	H1	I find/I think I would find TFIS useful in conducting Trade Finance banking transactions
Perceived ease of use	PEOU_1	H2	a) I find/I think I would find it easy to do what I want to in TFIS
	PEOU_2	H2	b) I find/I think I would find TFIS easy to use
Organizational support	OSU_1	H3	a) It is/would be important for me to have someone else in my organization to help out in case of non-technical* problems with TFIS
	OSU_2	H3	b) It is/would be important for me to have someone else in my organization to help out in case of technical** problems with TFIS
Bank support	BSU_1	H4	a) It is/would be important for me to have someone to help out in the bank in case of nontechnical* problems with TFIS
	BSU_2	H4	b) It is/would be important for me to have someone to help out in the bank in case of technical** problems with TFIS

* Non-Technical problem could be for example creating a template, finding a deal via Inquiry, etc)

**Technical problem could be for example getting an error message or being logged out in the middle of a transaction

Data Analysis

Analysis called ANOVA was conducted in order to determine the statistical significance of the correlations between the selected variables. The p-value of the F-test indicates the level of association between the dependent and independent variables in the model. When the significance p-value is less than 0.05, it means there is a statistically significant association between the dependent and independent variables. P-value 0.10 refers to weakly significant association. If the p-value is more than 0.10, then the model chosen is not statistically significant.

The Pearson product-moment correlation was added to conclude the regression analysis. The idea for the use of this correlation measure is to find out how much the dependent variable selected (PEOU_1, PEOU_2, SEF, OSU_1, OSU_2, BSU_1 and BSU_2) correlate with actual use of the system, and what are their relationships. Also the regression analysis correlations are based on Pearson product-moment correlation. In addition to the automatic 2-tailed significance indicator selected for the analysis, the rules for determining the strength of the relationship applied are as presented in table 1:

4. Findings

In total 472 customers were included in the survey, of which 137 (29%) replied. 19 responses were disqualified due to missing answers. In total the response rate for the survey was 25%. Proportionally Kenyans were most active in answering, resulting in 47% response rate. All of the returned answers were qualified in the research. The second best result was achieved in Uganda (35%) with the most answers qualified (55, response rate 33%). The answers received in Tanzania and Rwanda reached only somewhat over 20% response rate, resulting in less than 20 % of qualified answers (14% and 17%). However, the amount of individual answers included in Kenya and Tanzania was almost the same, 24 and 25 respectively. In Rwanda only 14 answers were qualified to be included in the survey.

The final sample size of the analysis is 118 out of which Rwanda covers 11.86%, Uganda 46%, Tanzania 21%, and Kenya 20%. 107 of the sample are users of the system, while only 11 represent non-users. From Kenya only users of the system responded to the survey, which makes the result analyzing somewhat difficult for Kenyan respondents, as non-users are missing from the sample (Table 2 contains the response statistics per country).

Table 2. Response statistics per country

NATION	SENT	RECEIVED	%	VALID	%
Rwanda	81	17	20.99	14	17.28
Uganda	166	58	34.94	55	33.13
Tanzania	174	38	21.84	25	14.37
Kenya	51	24	47.06	24	47.06
Total	474	137	29.03	118	25

Test of hypothesis 1

The first hypothesis ***Perceived Usefulness positively influences use of Trade Finance Internet Services*** was based on the assumption, that the more useful the potential user experience the system or service, the more likely it is that he starts using the system. No statistically significant relationship is discovered in either regression analysis (coefficient p-value=0.811) or Pearson correlation analysis (p-value 0.525). Following the applied scale of measuring the strength of the relationship, it is less than small in this case. Hence the hypothesis 1 is not supported by the

empirical results of either. The correlation figures between Perceived Usefulness and Use of the system, mean and standard deviation are presented in table 3.

Table 3. USE - PU Correlations, Mean and Standard Deviation

USE	PU
Pearson Correlation	0.06
Sig. (2-tailed)	0.525
N	113
Mean	4.26
Std. Deviation	0.874

Test of hypothesis 2

The second proposal, ***Perceived Ease of Use positively influences use of Trade Finance Internet Services***, suggests that the easier the customer experiences using the system, the propensity for him to use or start using the system is positively influenced. As we can see from the table 3, according to the Pearson product-moment correlation the empirical evidence of this study supports the second hypothesis, although regression analysis rejected it.

Perceived Ease of Use as a factor in trying to understand ones propensity to use TFIS is significant. There are two variables used to measure the Perceived Ease of Use. Both of them show that there is a positive correlation between PEOU and actual usage of the system. PEOU_1 Pearson product-moment correlation is 0.176, which is statistically significant (p-value=0.06). The correlation figure for PEOU_2 is 0.236, which means the relationship is statistically significant. Judging by these results, the hypothesis 2 is supported by Pearson correlation analysis. There is a statistically significant relationship between USE and PEOU.

Table 4 contains the correlation figures between Perceived Ease of Use and Use of the system, together with mean and standard deviation.

Table 4. USE – PEOU Correlations, Mean and Standard Deviation

USE	PEOU_1	PEOU_2
Pearson Correlation	0.176	0.236
Sig. (2-tailed)	0.06	0.011
N	115	115
Mean	3.94	3.95
Std. Deviation	0.91	0.897

Test of hypothesis 3

Supports from the users own organization was expected to positively influence use of TFIS: ***Organizational Support positively influences use of Trade Finance Internet Services.***

This hypothesis is not supported by the statistics. According to the regression and correlation analysis, both measures of this variable in the model proved to be negatively influencing the use of the Internet services for corporate banking. OSU_1 measured the importance of non-technical support and OSU_2 technical support. The correlations are almost the same (-0.065 and -0.073 respectively). Hence, it can be concluded that organizational support does not have any influence on the usage of the investigated system.

Both variables used to measure Organizational Support, and the strength of their correlation with Use is contained in table 7 with mean and standard deviation values.

Table 5. USE - OSU Correlations, Mean and Standard Deviation

USE	OSU_1	OSU_2
Pearson Correlation	-0.065	-0.73
Sig. (2-tailed)	0.497	0.44
N	113	113
Mean	2.65	2.98
Std. Deviation	1.26	1.302

Test of hypothesis 4

Vendor support has been studied before, and the availability of support is found to be important factor in influencing the use of Internet banking at least in Australia and Turkey (Sathye 1996 and Akinci et al. 2004) Based on this, the fifth hypothesis is ***Bank Support positively influences use of Trade Finance Internet Services.*** Although regression analysis rejected also this hypothesis, according to the Pearson correlation it is supported. The correlation is medium strong and significance is good (0.000) for both of the variables used to measure the importance of Bank Support. Hence, the sixth hypothesis is supported, and Bank Support appears to be the most important factor influencing use of corporate banking in the Internet. Pearson correlation, mean and standard deviation for Bank Support and its relationship with Use are shown in table 8.

Again the importance of technical and non-technical support was measured separately. Technical support correlates more with the actual usage of the systems, although the difference is not very big (0.343 and 0.405). Judging also by the results of regression analysis, availability of technical support from the bank is very important for the customers.

Table 6. USE - BSU Correlations, Mean and Standard Deviation

USE	BSU_1	BSU_2
Pearson Correlation	0.343	0.405
Sig. (2-tailed)	0	0
N	116	116
Mean	4.48	4.44
Std. Deviation	0.74	0.84

Adjusted research model

Due to the statistical non-significance of the research model, in order to find one that better explains corporate customers use of Internet banking services, I decided to remove some of the variables based of their standardized coefficient beta values. These values can be seen from table 4.9 above. Also the correlation analysis supports this approach (table 2).

The first variable removed is SEF, due to the fact that although the coefficient is the second largest (-0.250), it is also negative, which is against the assumption that all the variables would influence usage of the system positively. EXP_1 and EXP_2 are excluded due to the small values and reverse signs of the coefficients (-0.083 and 0.117). OSU_1 and OSU_2 are excluded for the same reason (0.068 and –0.034). AWE is removed due to the lowest coefficient value (0.002). PU was first excluded from the model, but the explanatory power of use suffered, and I decided to keep the variable in the model.

The Pearson product-moment correlation figures also support excluding these variables, especially Bank Support and Perceived Ease of Use, which were found statistically significant. According to coefficients (table 1) the biggest unique contribution to the model is made by

PEOU_2 (0.253) and second biggest by BSU_2 (0.168). However, as stated before these variables were not statistically significant. None of them variables actually made statistically significant unique contribution to the regression equation (coefficient p-value > 0.05 or 0.10)

In the adjusted model, Perceived Usefulness, Perceived Ease of Use and Bank Support are measured. The R-square of the adjusted model is 0.147. This means these variables explain 14.7% of the variance of the dependent variable use, as can be seen from table 4.18. According to the ANOVA F-test the p-value= 0.005, which means the null hypothesis is rejected and this model is statistically significant. The variable making the biggest contribution to the model is BSU_2, which is the only one making statistically significant contribution to the use of the system in the adjusted regression equation.

Table 7. Regression analysis summary of the adjusted model

R	R SQUARE	Adjusted R Square	Std. Error of the Estimate
0.384	0.147	0.106	0.329

Table 8. ANOVA for the adjusted model

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.929	5	0.386	3.562	0.005

Table 9 contains the values for standardized coefficients of regression analysis conducted for the adjusted research model.

Table 9. Standardized Coefficients of the adjusted model

Hypothesis	Variable	Beta	Sig.	Result
H1: Perceived Usefulness positively influences use of Trade Finance Internet Services	**PU**	-0.007	0.952	Rejected
H2: Perceived Ease of Use positively influences use of Trade Finance Internet Services	**PEOU_1**	0.042	0.791	Rejected
H2	**PEOU_2**	0.115	0.417	Rejected
H4: Bank Support positively influences use of Trade Finance Internet Services	**BSU_1**	0.074	0.540	Rejected
H4	**BSU_2**	0.287	0.019	Accepted

Regression analysis for the five variables above reveals that the only hypothesis supported by the adjusted model is H4. This means, the only variable in this regression equation statistically significantly influencing use of Internet banking by corporate customers, is Bank Support. To be more specific, that is banks support in technical issues related to the system.

As Perceived Usefulness has a relatively strong mean value M=4.25, which indicates that it is a very important factor to both users and non-users of the system, I decided to study more the meaning of it. A further investigation was conducted with regression analysis, with intention to

determine how the other variables correlate with PU. It was discovered that Perceived Ease of Use Explains 32.8% of the variance of Perceived Usefulness (R-square is 0.328). According the ANOVA f-test the statistical significance of this model is very strong (p-value < 0.001).

Thus, Perceived Ease of Use has an impact also on Perceived Usefulness, not only usage of a system. Although the impact of Perceived Usefulness on Use is not statistically significant, PEOU_1 has statistically significant (p<0.001) strong influence on PU. The standardized coefficient value for PEOU in predicting PU is 0.688. As the correlation analysis revealed, PEOU is strongly significant factor influencing usage of corporate banking services in the Internet, and now obviously also to PU.

5. Discussions, Suggestions, and Managerial Implications

As previously mentioned, the outcome of this study is surprising in many ways. The originally built model as such could not be validated by the empirical data. Several factors omitted from the previous researches, especially TAM, which was largely the basis for this study, failed with one of its variables in statistical significance. Although this variable, Perceived Usefulness, was finally concluded to the adjusted model with Perceived Ease of Use and Banks Support, the last was the only variable statistically supported in the regression analysis. Only the following two hypotheses were supported by the results of t-test and correlation analysis:

H2: Perceived Ease of Use positively influences use of Trade Finance Internet Services
And ***H4: Bank Support positively influences use of Trade Finance Internet Services***

Most of all it is important for the corporate customers in East Africa to have a system that can be easily used for the purpose of making banking transactions. And if there are problems while making the transactions, it is very important to have a person to contact in the bank to help in both non-technical and especially technical problems and questions. Support provided by users own organization is irrelevant, as well as previous experience of similar services. Awareness of the things related to the system, and the empirical results of this research give a good basis for making suggestions of issues that are good for bank management to take into consideration. First of all, clearly both users and non-users think that the Internet services are worthwhile and useful in handling banking transactions. However, more variance in results could be detected among the users of the case system. This might imply that there are more expectations towards the functionalities in it. Those who already are familiar with using the service perhaps know more what is missing or additional features that would be even more useful to enhance their job performance.

6. Recommendations

Banks should make their customer more aware of their new products or services, in this, Internet banking, to encourage higher adoption rate. They can do so by having seminars, exhibitions or giving free-trial periods to allow customers to evaluate their new inventions. Besides that, education and publicity through mass media will also prove to be effective.

Banks should offer both technical and non technical support to their corporate customers as this is proved to be one of the most essential factor that influences corporate customers to adopt internet banking services.

Internet banking sites should be made as user-friendly as possible as not many consumers are familiar with computer and the Internet, especially the older and uneducated generation. Providing online help and giving customer the choice of their preferred language will ease their transactions.

If possible, banks should not charge customer for their Internet banking services. This is because users have to incur other costs. However, if this does not appear to be feasible, they would have to make sure that the costs of transacting manually does not exceed the costs of Internet banking.

References

1. Akinci, S., Aksoy, S. & Atilgan, E. (2004), Adoption of Internet banking among sophisticated consumer segments in an advanced developing country, *The international Journal of Bank Marketing*, Vol. 22 no 3, pp. 212-232.

2. Chau, P.Y.K. & Lai, V.A.K. (2003), An Empirical Investigation of the Determinants of User Acceptance of Internet Banking, Journal of *Organizational Computing and Electronic Commerce*, Vol. 13 No. 2 pp. 123-145.

3. Davis, F. D., Bagozzi, R. P & Warshaw, P. R. (1989), User Acceptance of Computer Technology: a Comparison of Two Theoretical Models, Management Science, Vol. 35, No. 8.

4. Davis, F. D & Venkatesh. V. (1996a) A critical assessment of potential measurement biases in the technology acceptance model: three experiments, *Int . J . Human – Computer Studies*, Vol. 45, pp. 19-45.

5. Devlin, J. F. & Yeung, M. (2003), Insights into customer motivations for switching to Internet banking, *Int. Rev. of Retail, Distribution and Consumer Research*, Vol. 13 No. 4 pp. 375–392.

6. Eastin, M. S.(2002), Diffusion of e-commerce: an analysis of the adoption of four e-commerce activities, *Telematics and Informatics,* Vol. 19, pp. 251–267.

7. Eriksson, K., Kerem, K. & Nilsson, D. (2004), Customer acceptance of internet banking in Estonia, *International Journal of Bank Marketing*, Vol. 23 No. 2, pp. 200-216.

8. Flavian, C. Torres, E., & Guinalíu, M. (2004), Corporate Image measurement A further problem for the tangibilization of Internet banking services, *International Journal of Bank Marketing* Vol. 22, No. 5, pp. 366-384.

9. Gerrard, P. & Cunningham, J.B. (2003), The diffusion of internet banking among Singapore consumers, *International Journal of Bank Marketing*, Vol. 21, No. 1, pp. 16-28.

10. Jagero N. and Abeka, S. O. (2011), Corporate Customers Usage of Internet Banking in East Africa, *IJCSI International Journal of Computer Science Issues*, Vol. 8, Issue 5, No 1, September 2011 ISSN (Online): 1694-0814.

11. Jiang, J.J., Shu, M.K. Klein, G. & Lin, B. (2000), E-commerce user behavior model: *an empirical study, Human Systems Management*, Vol. 19, pp. 265–276.

12. Karjaluoto, H., Mattila, M. & Pento, T. (2002), Factors underlying attitude formation towards online banking in Finland, *International Journal of Bank Marketing* Vol. 20, No. 6, pp. 261-272.

13. Lassar, W. M., Manolis, C. & Lassar, S. S. (2005), The relationship between consumer Innovativeness, personal characteristics, and online banking adoption, *International Journal of Bank Marketing,* Vol. 23 No. 2, pp. 176-199.

14. Lu, H.P., Hsu, C.L. & Hsu, H.Y. (2005), *An empirical study of the effect of perceived risk upon intention to use online applications, Information Management & Computer security,* Vol. 13 No. 2, pp. 106-120.

15. McFarland, D. J. & Hamilton, D. (2004), Adding contextual specificity to the technology acceptance model, Computers in Human Behavior, *Article in Press* Vol. 39, pp. 283-295.

16. Pikkarainen, T., Pikkarainen, K. Karjaluoto, H. & Pahnila, S. (2004). Consumer acceptance of online banking: *an extension of the technology acceptance model, Internet Research,* Vol. 14 No. 3, pp. 224–235.

17. Rotchanakitumnuai, S. & Speece. M. (2002), Barriers to Internet Banking adoption: a qualitative study among corporate customers in Thailand, *International Journal of Bank Marketing, Vol*. 21, No. 6/7, pp. 312-323.

18. Shih, Y.Y & Fang, K. (2004), *The use of a decomposed theory of planned behavior to study Internet banking in Taiwan, Internet Research*, Vol. 14 No. 3, pp. 213–223.

19. Sohail, A. S. & Shanmugham, B. (2003), *E-banking and customer preferences in Malaysia: An empirical investigation, Information Sciences*, Vol. 150, pp. 207-217.

20. Sudarraj, R.P., & Wu, J. (2005), *Using information-systems constructs to study online and telephone banking technologies, Electronic Commerce research and applications*, Article in press, 17 pages.

21. Yi, M. Y. & Hwang, Y. (2003), Predicting the use of web-based information systems: self-efficacy, enjoyment, learning goal orientation, and the technology acceptance model, *Int. J. Human-Computer Studies*, Vol. 59, pp. 431-449.