ADOPTION OF INTERNET BANKING: EVIDENCE FROM FRANCE

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ABSTRACT

Internet banking plays an important strategic role in the marketing of industrial banking. A previous study on a developing country (Mexico) was used as a model to show the similarities and differences with online banking in a developed country (France).This study, as in the Mexican example, examines the usage factors of online banking in France, using quantitative and qualitative methodology. Factorial Analysis suggests that there are a concrete number of common characteristics between Mexican users and French users, as well as certain distinctive characteristics between both samples. An interesting question was to see whether, in the Mexican case, the human factor is a relevant factor in the usage or non-usage of internet banking and whether it would be a weakness for French internet banking. Particular factors for French consumers were found, such as self-government (autonomy) and pragmatism.

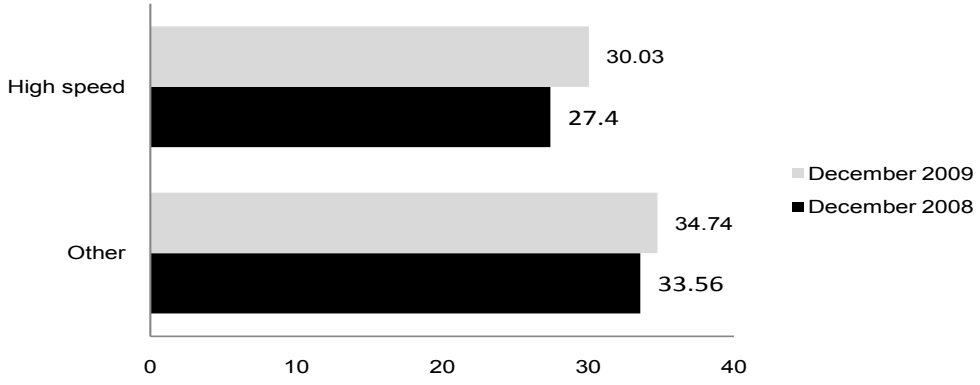
JEL: M31, G29

KEYWORDS: Internet banking, factor analysis, Internet banking users.

INTRODUCTION

In France, the use of Internet, and more specifically of Internet Banking, is a phenomenon that has been in constant evolution over the past few years. In December 2009, there were over 34.7 million active internet users over the age of 11, a 4% increase from 2008. These figures suggest that 65% of the French population currently has internet coverage. Of these 34.7 million internet users, 61% have declared that they access internet directly from their homes using a high-speed connection. This is a 10% increase from 2008.

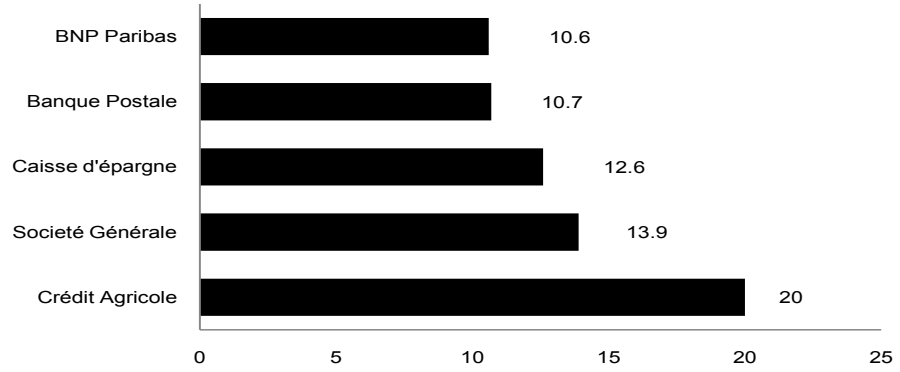
Figure 1: Internet Users' Evolution, France. (Millions of Users, over the Age of 11)



Source: Mediamétrie, 2010. More the 34 millions of internet users in France in December 2009.

Regarding on-line banking, the latest data available shows that, of the five major banks in France (Crédit Agricole, Societé Générale, Caisse d'épargne, Banque Postale, BNP Paribas), the number of on-line banking users is around 15.7 million, which is approximately equivalent to 47% of Internet users.

Figure 2: Top five Banks Using Online Banking (January-March 2009)



Source: Médiamétrie//NetRatings, May 2009. 15.7 million On-line banking users in France.

Our objective is to become more familiar with the characteristics of this French clientele, in order to understand what motivates the use of internet banking, and be able to analyze retrospectively the similarities and differences with other cultures in which a high level of on-line banking use may also be found.

A previous study on the features of the adoption of internet banking in Mexico has shown eight separate factors of usage in the Mexican population. These factors were difficulty, trust, compatibility, third-party concerns, human contact, reference group influence, security and computer skills. Of all these aforementioned factors, human contact was the distinguishing factor for Mexican users relative to factors present in similar studies in other societies.

In the present study, we will analyze the similarities and differences of the Mexican example and French example. From samples with similar socio-economic characteristics, one of the most important particularities is the existence of a higher degree of collectivism in Mexican culture compared to French culture, which supposes that in the Mexican example that human factor is the most important element in the usage behavior of internet banking.

This article is organized as follows: section 2 briefly analyzes the theoretical framework of internet banking. The methodology and instruments used in the development are exposed in section 3. Section four presents in résumé form analyses made as well as the principal findings. Section 5 will offer a conclusion.

LITERATURE REVIEW

Digital technology has become an important factor for both the industrial and the service sectors, and it is considered to be an external force that can affect a firm´s success. In the service sector, many commercial banks have adopted Internet banking. Now, bank customers can perform many transactions on the banks' websites such as checking the balance, transferring money to a third party, payroll payments, ordering checks, and paying bills.

In the past few years, there has been a growing interest in the study of internet banking both in terms of academic interest and in the banking industry. For academics, whether the characteristics which incite consumers to adopt on-line banking are systematically identified is of interest to researchers. For senior bank management, being aware of clients' perceptions toward Internet banking helps may help to understand their customers better, which will help increase clients' satisfaction.

The literature review presented here aims at identifying which specific factors influence French users to turn toward Internet banking. As very few studies exist concerning Internet banking use in France, we have had to rely on existing studies done in other countries, which have enabled us to extrapolate the relevant factors. One of the first authors in the study of the motivational factors of the use of internet banking was Rogers (1995) who identified innovation, communication, availability and social structure as elements that motivate or discourage the use of internet banking.

Rogers demonstrated that these four elements were identifiable in every diffused research study. He explained innovation as an idea, a practice or an object that was perceived as new by an individual or another unit of adoption. By that, we can see that the concept of innovation is highly linked to clients' ability to perceive and identify something as "new". The perceived newness of the idea for the individual determined his or her reaction to it. In addition, the newness aspect of an innovation may be expressed in terms of knowledge, persuasion, or through the client's effective decision to adopt the concept or product.

Rogers further explained in his study that it should not be assumed that the diffusion and adoption of any form of innovation was necessarily desirable. Some types of innovation may be desirable for one person in a given situation, but undesirable for another potential user or nonuser in different situations. These aspects will be of great help to us when endeavoring to examine the factors which incite French clients to adopt online banking, given that its being seen as desirable or undesirable is one of the key factors in clients' acceptance of this new technology. Black, Lockett, Winklhofer and Ennew (2001) effectively demonstrated that innovation is a factor that increases the amount of users.

One of the important research questions addressed by traditional studies was how the perceived attributes of an innovation, such as its relative advantage, compatibility, complexity, trialability, and observability affected the rate of adoption (see Rogers 1983).

Previous studies, such as Gerrard and Cunningham (2003) show that internet banking users consider Internet Banking usage to be less complicated, more convenient and more compatible with their lifestyles. This contribution is very relevant to the profile of the French consumer, insofar as the compatibility of new technologies must correspond to his lifestyle. In addition, as Bendana, M., Rowe, F. (2001) show, the prior use of Minitel on the French market was an essential factor positively influencing the move toward online banking.

Waite and Harrison (2004) show that expectations and perceptions of online retail banking information from consumers were high, concerning the relative advantage and complexity of attributes such as convenience and ease of use. Another study by Waite and Harrison (2002) about the expectations of online information provided by bank websites shows that consumers ranked the relative advantage of attributes; being easy to use and quick to download respectively as the first and the second most important attributes.

Sathye (1999), Cooper (1997), White and Nteli (2004) analyzed perceived risk and security as significantly important aspects for users when deciding on internet banking usage. Cooper (1997) also found that risk played an important role from the clients' point of view in the adoption of innovation. White and Nteli (2004) studied internet banking in the UK and the result shows that the security of the bank´s website was seen to be significantly more important than the other attributes and that security was still the number one issue in consumers' minds when considering internet banking.

Reference groups were analyzed by Fishbein and Ajzen (1975), Bagozzi (2000), Karjaluoto, Mattila and Pento (2002), who concluded that social influence, is the most important factor that influences the adoption of innovation, fundamentally by the degree of lack of knowledge and uncertainty. This provoked the need for the next groups to strengthen motivation toward new technologies and ideas, as in the case of internet banking.

DATA AND METHODOLOGY

In the present study, two methodologies are used. Firstly, a qualitative methodology, through group meetings with individual representatives of the studied population. These group meetings took place in two phases. The first phase, of an explorative nature, had as its objective, to discover the different factors, which influence the use or non-use of internet banking. Some of the factors found were security, computer skills, confidence in the system, compatibility with lifestyle, difficulty of use, the existence of third parties, the influence of social context, the functionality sought, the possibility for clients to do their transactions by themselves, and the cost.

All of these factors are common in the Mexican case, except for the factors: "do-it-yourself" and cost. These two factors can change clients' behavior toward the use of internet banking. In the case of "do-it-yourself," the subjects considered that this gave them a certain "freedom"; it did not oblige them to "give explanations on transactions." Some of the participants questioned stated, for example: "I don't have to wait in line at the bank," "It affords me a greater number of transactions with total autonomy"; "It makes it easier to monitor my transactions." However, the fact that internet banking has a cost puts off customers given that they consider that they already pay "enough" for traditional banking services, without the added costs of internet banking.

In the second phase of the qualitative study, we sought to confirm which factors limit the use of Internet banking. This exercise enabled us to confirm that factors such as simplicity, convenience, compatibility with lifestyle, privacy, autonomy, among others make people more likely to use online banking. In addition, factors such as doubts about security, the inability to complete all transactions, the lack of visibility as to whom you are dealing with or computer errors discouraged usage.

From the analysis of the qualitative section, we were able to develop a questionnaire, as part of the quantitative methodology. This questionnaire was based on Internet banking use in the Mexican sample, with certain adjustments to the particularities encountered in the qualitative phase, such as autonomy and cost.

The questionnaire consisted in three parts. The first part analyzed 21 factors concerning the participants' perceptions of internet banking, using a Likert scale with four categories and a neutral point. The second section questioned 25 related factors with aspects such as technology, internet usage, confidence, etc. Finally, questions of a socio-demographic nature were posed which allowed us to analyze the groups in relation to age, sex, civil status, net monthly income and the usage and access of computers and internet.

We were able to avoid using a random sample by means of a filter question: "Are you working at the moment" with 398 valid questionnaires. The sample gave the following socio-demographic characteristics see Table 1. Approximately 60% of the sample participants were men, with slightly more than 50% of the participants aged 20-35. All of the participants had at least a High School level education, and most were single.

The sample population was comprised of individuals possessing a computer and internet access at home and/or at their workplace in more than 75% of cases. These individuals have been Interne users for more than 7 years (in 56.04% of cases), and have an average weekly internet use rate of 1-4 hours (44.22%).

Table 1: Participants' Profile

Gender	Frequency	Percent	Household Income per Month in Euros	Frequency	Percent
Female	168	42.53%	< 1350	116	30.29%
Male	227	57.47%	1351-2000	76	19.84%
Total	395		2001-2700	122	31.85%
Age			2701-3500	40	10.44%
20-25	90	22.73%	> 3500	29	7.57%
26-30	47	11.87%	Total	383	
31-35	75	18.94%	**Have computer at home**		94.20%
36-40	63	15.91%	**Have Internet at home**		92.40%
41-45	47	11.87%	**Have computer at work**		82.70%
46-50	22	5.56%	**Have Internet at work**		78.20%
51-55	25	6.31%	**Number of months using Internet**		
56-60	17	4.29%	Less than 6 months	18	4.63%
above 60	10	2.53%	6-12 months	10	2.57%
Total	396		1-3 years	54	13.88%
Marital Status			4-6 years	89	22.88%
Married	132	33.50%	7 years or more	218	56.04%
Not married	262	66.50%	Total	389	
Total	394		**Number of hours a week using Internet**		
Education			Less than 1 hour	40	10.28%
Primary	11	2.84%	1-5 hours	172	44.22%
Secondary	94	24.29%	6-10 hours	70	17.99%
Above secondary	282	72.87%	11-20 hours	40	10.28%
Total	387		21-40 hours	40	10.28%
			Over 40 hours	27	6.94%
			Total	389	

This table shows the profile of participants as socio-demographic variables

EMPIRICAL RESULTS

The number of variables was reduced to 28 with the intention of maximizing reliability. The coefficient of Cronbach's alpha reliability is 0.726. As this exploratory study covers 28 variables, it is considered that this coefficient is acceptable (Nunnally and Bersnstein (1994)).

Factor Analysis was used to explore the relationship between the 28 variables, to see if these variables could be summed up as definite explanatory factors. Analysis of Principle Components (ACP) extraction method was used by means of a Varimax rotation. Through the KMO and Bartlett test, we can reject the sphericity hypothesis, which will enable us to reduce the number of factors to be considered in the use of electronic banking.

Table 2 : KMO and Bartlett Test

Kaiser-Meyer-OlkinMeasure of Sampling Adequacy		0.68
Barlett's test of Sphericity	Approx. Chi-Square	7,367.33
	df	378
	Sig.	.000

This table allows us to verify that the Bartlett test as well as KMO permits us to accept the results of the ACP.

From Factor Analysis we found that the 28 variables could be reduced to eight explanatory factors for internet banking use: difficulty, compatibility, autonomy, trust, security, third-party concerns, pragmatism and reference group influence. These 8 factors add up to an approximately 70% variance rate, which insures us that these factors are indeed representative.

Table 3: Total Variance Explained

Factor	Initial Eigen values			
	Total	% of Variance	Cumulative %	
1	4.72	16.87	16.87	**Difficulty**
2	3.01	10.76	27.64	**Compatibility**
3	2.95	10.55	38.20	**Autonomy**
4	2.08	7.44	45.64	**Trust**
5	1.99	7.11	52.76	**Security**
6	1.69	6.05	58.81	**Third-Party Concerns**
7	1.62	5.79	64.61	**Pragmatism**
8	1.50	5.36	69.97	**Reference Group Influence**

**** Statistically significant at p ≤.. 001*
This table shows that all factors with an Eigen value> 1 make up approximately 70% of the variance

The Mexican case study, Mansumitrchai, Minor, Sanchez and Moska (2006), suggested that the explanatory factors for the adoption of Internet Banking were difficulty, trust, compatibility, third-party concerns, human contact, reference group influence, security and computer proficiency.As we can see in the Table 4: the Mexican and French consumers share six common factors when using Internet banking. These factors are difficulty, compatibility, trust, security, third-party concerns and reference group influence.

The two studies allow us to see several differences. In the Mexican case, human contact and computer proficiency are determinant factors in the use of Internet banking, as was shown in the previous study. However, the French case showed that autonomy and pragmatism are additional factors, which determine the use of Internet banking in France.

Despite the similarities found between Mexican and French consumers regarding usage factors, these factors do not hold the same importance. Difficulty is the most important factor for both populations. However, French consumers favor compatibility to trust, probably due to their profile. In the French case, security is placed above third-party concerns, and the least important factor is reference group influence.

With differences, we find two factors that do not exist in the Mexican case that are particular to the French case, namely autonomy and pragmatism. By analyzing these two factors in depth, French consumers find the former factor very important and appreciate being able to perform online banking transactions on their own, allowing them to do everything with full autonomy and without needing to account for their actions. As for the latter, French customers seek an aspect of practicality that is not offered by traditional banks, probably because of the timeless nature of the services offered by internet banking and the tradition of using online systems, as was the case with Minitel.

Table 4: A Study of Mexican and French Consumers on the Characteristics of Adoption

	French Consumers	Mexican Consumers
F1	Difficulty	Difficulty
F2	Compatibility	Trust
F3	Autonomy	Compatibility
F4	Trust	Third-Party Concerns
F5	Security	Human Contact
F6	Third-Party Concerns	Reference Group Influence
F7	Pragmatism	Security
F8	Reference Group Influence	Computer Proficiency

This table shows the similarities and differences between French and Mexican consumers.

In this sense, the hypotheses we should reject in this article would be:
H1: French consumers present similar characteristics to Mexican users in the eight factors that motivate or discourage Internet Banking use.

H2: The human factor is a factor, which discourages the usage of internet banking by French customers.

Given the results described, neither hypothesis 1 nor hypothesis 2 can be accepted. As similarities appear in only six of the eight factors and that in addition, the same import cannot be given to these factors. With respect to hypothesis 2, the human factor does not appear to be an aspect that concerns French consumers, which fact prevents us from accepting a discriminatory aspect in this study.

All of these reasons lead us to conclude that while the online banking services in different cultural markets present similar characteristics, the reasons for which consumers decide to use these services depend less of the services themselves that are proposed than on the socio-cultural characteristics of the area in which the banking services are implemented.Analyzing the correlation existing between socio-cultural variables and variables relative to the use of on-line banking will be the object of a future study.

CONCLUSION

This study examines the usage factors of online banking in France, using quantitative and qualitative methodology. The qualitative methodology is examined through group meetings with individual representatives of the studied population, whereas the quantitative methodology enables us to define which factors limit the use of Internet banking.

The exploratory nature of the present article has allowed us to link consumers with common characteristics and services with similar benefits; each consumer relies on common factors for the usage of internet banking, but also on distinctive factors due to socio-cultural aspects.

Mexican and French consumers have as a common point of reference six factors when using Internet banking. These factors are difficulty, compatibility, trust, security, third-party concerns and reference group influence. The differences are, in the Mexican case, human contact and computer proficiency, whereas the French case showed that autonomy and pragmatism are additional factors which determine the use of Internet banking in France.

It is usual that societies with a high level of collectivism seek human contact as a factor, which may motivate their use of internet banking. In addition, societies with a high level of individualism are not interested in human contact. Moreover, the tradition of online usage facilitates the easy integration of new services into internet banking.

One of the limits of the present study includes the fact that the sample population was not chosen at random, which fact does not enable us to make statistical inferences. This decision has however enabled us to give a wide overview of which characteristics determine the choice of using on-line banking in France.

The challenge for future studies is to analyze in depth the differences that exist between users and non-users of internet banking in France and to compare them to users and non-users in Mexico, in order to develop, *a posteriori*, a correlative model between factors determining the use of on-line banking and socio-cultural characteristics.

APPENDIX

Appendix A: Survey

La banque en ligne
Ce questionnaire s'inscrit dans le cadre d'une recherche sur la banque en ligne en France
(Nous appelons banque en ligne tous les services de votre banque "traditionnelle" sur Internet)
Merci de bien vouloir répondre le plus sincèrement possible à ce questionnaire.

Nous avons besoin de votre OPINION, non pas de votre expérience ou connaissance.
Indiquez votre niveau d'accord ou non avec les phrases suivantes.
1. Pas du tout d'accord
2. Pas d'accord
3. Ni en désaccord ni d'accord
4. D'accord
5. Tout à fait d'accord

	Je pense que la/ la banque en ligne	**1**	**2**	**3**	**4**	**5**
1	fait gagner du temps par rapport à l'agence					
2	améliore mon statut social					
3	est adaptée à mon style de vie					
4	est pratique parce qu'elle est disponible 24H/24					
5	peut être décevante					
6	est difficile à comprendre					
7	est plus chère que les services bancaires en agence					
8	c'est pour les experts en informatique					
9	peut-être compliquée et frustrante					
10	est adaptée avec mon travail					
11	est facile à utiliser					
12	est financièrement sécurisée					
13	permet de faire les même transactions que dans l'agence					
14	permet de réaliser des opérations depuis mon domicile					
15	est exposée aux pirates informatiques qui peuvent accèder à mes données personnelles					
16	présente un risque de diffusion des données personnelles					
	Je pense qu'avec la/ banque en ligne	**1**	**2**	**3**	**4**	**5**
17	les opérations bancaires sont difficiles					
18	il y a une absence de contacts humains					
19	il n'y a pas de "reçu"					
20	les transactions bancaires sur Internet nécessitent des procédures complexes					
21	des tiers peuvent accéder à mes informations bancaires sur Internet					

Utilisez-vous la banque en ligne ?		Oui.
		Non.

1. Pas du tout d'accord
2. Pas d'accord
3. Ni en désaccord ni d'accord
4. D'accord
5. Tout à fait d'accord

	Quelle est votre opinion sur propositions suivantes:	**1**	**2**	**3**	**4**	**5**
1	Je suis à l'aise avec la technologie					
2	J'aime utiliser Internet					
3	J'ai confiance dans la banque en ligne					
4	L'utilisation d'Internet est difficile					
5	J'utilise des services sur Internet					
6	J'aime utiliser la banque en ligne					
7	Utiliser Internet demande beaucoup d'effort					
8	J'aime les innovations					
9	Mes amis m'ont influencé dans l'utilisation (ou pas) de la banque en ligne					
10	Ma famille m'a influencé dans l'utilisation (ou pas) de la banque en ligne					
11	Les procèdures pour avoir accès à la banque en lignes sont complexes					
12	Le face à face est important dans les relations bancaires					
13	Les questions de sécurités sur internet m'influencent dans l'utilisation de la banque en ligne					
14	Les sites internet de la banque en ligne sont complexes					
15	L'utilisation de la banque traditionnelle est plus efficace que la banque en ligne					
16	Les opérations bancaires sont difficiles avec la banque traditionnelle					
17	La banque traditionnelle est compatible avec mon style de vie					
18	La banque traditionnelle n'est pas pratique comparée à la banque en ligne					
19	J'ai confiance dans la banque en ligne pour protéger mes données personnelles					
20	J'ai confiance dans la technologie utilisée par la banque en ligne					
21	Des compétences insuffisantes en informatique découragent l'utilisation de la banque en ligne					
22	Je suis préoccupé à propos de la sécurité des banques en ligne					
23	Ma décision d'utiliser la banque en ligne fut influencée par l'utilisation du Minitel					
24	Je préfère la banque en ligne parce que je peux faire les opérations moi-même					
25	J'apprécie les fonctionnalités de la banque en ligne					

Données personnelles

1. Sexe	☐	Homme	☐	Femme			
2. Age	☐	20-25	☐	26-30	☐	31-35	
	☐	36-40	☐	41-45	☐	46-50	
	☐	51-55	☐	56-60	☐	plus de 60	
3. État civil	☐	Vivant seule	☐	En couple			
4. Éducation	☐	Primaire	☐	Secondaire	☐	Supérieur	
5. Revenus mensuels (net)	☐	< 1350	☐	1351-2000	☐	2001-2700	
	☐	2701-3500	☐	> 3500			
6. Avez-vous un ordinateur chez vous ?			☐	Oui	☐	Non	
7. Avez-vous un accès à Internet chez vous ?			☐	Oui	☐	Non	
8. Avez- vous un ordinateur sur votre lieu de travail ?			☐	Oui	☐	Non	
9. Avez-vous un accès Internet sur votre lieu de travail ?			☐	Oui	☐	Non	
10. Depuis combien de temps utilisez vous Internet (e-mail, etc.)?							
			☐	Moins de 6 mois	☐	6 - 12 mois	
			☐	1 - 3 ans	☐	4 - 6 ans	
			☐	7 ans ou plus			
11. En moyenne, combien d'heures par semaine utilisez-vous Internet ?							
			☐	(-) d'une heure	☐	1 à 5 heures	
			☐	6 à 10 heures	☐	11 à 20 heures	
			☐	21 à 40 heures	☐	Plus 40 heures	
12. Où utilisez-vous principalement Internet :			☐	Chez vous	☐	Sur votre lieu de travail	
			☐	Les deux	☐	Autres _____	

REFERENCES

Akinci, S., Aksoy S., and Atilgan, E. (2004), "Adoption of Internet banking among sophisticated consumer segments in an advanced developing country," *International Journal of Bank Marketing*, Vol. 22 No. 3, pp. 212-232.

Agarwal, R., Sambamurthy, V. and Stair, R.M. (2000), "Research report: the eVolving relationship between general and specific computer self-efficacy-an empirical assessment", *Information Systems Research*, Vol. 11 nº4, pp. 418-30.

Bendana, M.,Rowe, F. (2001), « L'influence de la pratique d'Internet et des services alternatifs (Minitel) sur l'intention d'adopter les services bancaires sur Internet », *Revue Sciences de Gestion, Edition spéciale : les enjeux du commerce électronique par Internet*, Nº5/6, juin-juillet, pp.160.178

Bendana, Mohamed (2006) "Banque á distance et réseaux d'agences bancaires : usage et évolution de la mobilité des clients », *Systèmes d'Information et Management*; 11, 2; ABI/INFORM Global, pp. 81.

Black. N.J., Lockett. A..Winklhofer. H.. and Ennew. C. (2001). "The adoption of Internet financial services: a qualitative study". *International Journal of Retail and Distribution Management.*, Vol.29 nº 8. pp. 390-398.

Bogozzi, R.P. (2000), "On the concept of international scale action in consumer behavior", *Journal of Consumer Research*, Vol. 27, December, pp. 388-96.

Business Digest, November 4, 2004.

Business News Americas, October 24, 2003.

Bouchez, G. (2001), " Banque en ligne: la France conserve un potentiel de croissance intact", *01net*, available www.01net.com/article/169048.html

Chau, P.Y.K. (2001), "Influence of computer attitude and self-efficacy on IT usage behavior", *Journal of End User Computing*, Vol. 13 No. 1, pp. 26-33.

Chau, D. and Chou, A.Y. (2000), "A guide to the internet revolution in banking", *Information Systems Management*, Vol. 17 nº. 2, pp. 51-7.

Cooper. R.G. (1997). "Examining some myths about new product winners". In Katz. R (Ed.). *The human Side of Managing Technological Innovation*. Oxford. pp. 550-560.

Fishbein. M. and Ajzen. I. (1975). "Belief. Attitude. Intention and Behavior: An Introduction to Theory and Research". *Addison-Wesley. Reading*. MA.

Friedman, B. , Kahn, P.H. Jr and Howe, D.C. (2000), "Trust online", *Communications of the ACM*, Vol.43 No. 12, pp. 34-40

Hair, J.F., Anderson, R.E., Tatham, R.L., and Black, W.C. (1998), "Multivariate Data Analysis", 5th ed., *Prentice-Hall*, Upper Saddle River, NJ.

Hong, W., Thong, J.Y.L., Wong, W.M. and Tam, K.Y. (2001), "Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics", *Journal of Management Information Systems*, Vol. 18 nº 3, pp. 97-124.

Kim, K.K., Prabhakar, B. and Kim, B.H. (2001), "Initial trust as a determinant of the adoption of Internet Banking", available at: http://mri.inha.ac.kr/article/8-1/banking%5D.PDF

Johnson, R.D. and Marakas, G.M. (2000), "Research report: the role of behavior modeling in computer skills acquisition-toward refinement of the model", *Information Systems Research*, Vol. 11 nº 4, pp. 402-17.

Lassar, Walfried M., Manolis Chris and Sharon S. Lassar (2005), "The relationship between consumer innovativeness personal characteristics, and online banking adoption", *International Journal of Bank Marketing*, Vol. 23 No. 2, pp. 176-199.

Liao, Z. and Cheung, M.T. (2002), "Internet-based e-banking and consumer attitudes: an empirical study*", Information & Management*, Vol. 39 No. 4, pp.283-95.

Mattila, M., Karjaluoto, H., and Pento, T. (2003), "Internet banking adoption among mature customers: early majority or laggards?", *Journal of Services Marketing*, Vol. 17 No. 5, pp. 514-28.

Moore GC, Benbasat I (1991), "Development of instrument to measure the perceptions of adopting an information technology innovation", *Information System Research* 2(3), pp. 192–222

Moutinho, L. and Smith, A. (2000), "Modeling bank customers´satisfaction through mediation of attitudes towards human and automated banking", *International Journal of Bank Marketing*, Vol. 18 No. 3, pp. 124-34.

Mulligan, P., Gordon, S. R. (2002), "The impact of information technology on customer and supplier relationships in the financial services", *International Journal of Service Industry Management*, Vol.13, Nº 1, pp. 29-46

Peterson, R.A. (1994), "A meta-analysis of Cronbach´s coefficient alpha", *Journal of Consumer Research*, Vol. 21, September, pp. 381-91.

Pikkarainen, Tero, Pikkarainen Kari, Karjaluoto, Heikki and Seppo Pahnila (2004), "Consumer acceptance of online banking: an extension of the technology acceptance model*", Internet Research*, Vol. 14 No. 3, pp. 224-35.

Rogers. E.M. (1995). "The diffusion of Innovations" 4st ed.. *The Free Press*. New York. NY.

Tan M, Te Teo SH (2000), "Factors influencing the adoption of Internet banking", *J Association Information System*, pp. 1-44

Thompson RL, Higgins C, Howell JM (1991), "Personal computing: toward a conceptual model of utilization", Vol 15, pp. 125–143

Waite. Kathryn and Tina Harrison (2002). "Consumer exceptions of online information provided by bank websites". *Journal of Financial Services Marketing*. Vol. 6. nº 4. pp. 309-322

Waite, Kathryn and Tina Harrison (2004), "Online banking information: what we want and what we get", *Qualitative Market Research: An International Journal*, Vol. 7 No. 1, pp. 67-79.

Wang, Y., Wang, Y., Lin, H., and Tang, T. (2003), "Determinants of user acceptance of internet banking: an empirical study", *International Journal of Service Industry Management*, Vol. 14 No. 5, pp. 501-19.

White, Helen and Fotini Nteli (2004), "Internet banking in the UK: Why are there not more customers?", *Journal of Financial Services Marketing*, Vol. 9 No. 1, 49-56.

Wungwanitchakorn, A. (2002), "Adoption Internet of banks customer on internet banking service", *ABAC Journal*, Vol. 22, Nº3, pp. 63-80

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