Ecole Nationale Supérieure d'Informatique et d'Analyse des Systèmes

E-BANKING IN MOROCCO

A consideration of key variables

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The aim of this paper is to analyze some organizational factors, structural and policies that can accelerate or conversely hinder the adoption of this mode of distribution and electronic communications by banks. A closer look is focused on the case of the Moroccan market as a field of study.

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Abstract

Influenced by the impacts of globalization, the surfacing of newer technologies and emergence of new players in the market of financial services, banks are seeking to adopt newer solutions not only to establish their services, but also to contribute to their branding.

The adoption of e-banking becomes necessary for banks that wish to maintain their market share as well as retain and attract more customers. The adoption of e-banking however is not a simple process due to several factors that play a major role to promote the rapid conversion to the holders of e-banking. Hence, become an obstacle to ownership.

The aim of this paper is to analyze some organizational factors, structural and policies that can accelerate or conversely hinder the adoption of this mode of distribution and electronic communications by banks. A closer look is focused on the case of the Moroccan market as a field of study.

Keywords:

E-banking, organization of the banking sector, NTIC

Introduction

The emergence of the Internet in the economic field during the late 90s has given birth to a revolutionary way to conduct business across many industries. After a phase of euphoria and the bursting of the dotcom bubble, companies have increasingly invested in this virtual network to expand their operations to e-business. These activities are very varied including the use of online banking, conducting purchases and sales as well as the advancement of online secure payments and processing of tax returns and much more.

Discussing e-business from a general perspective may lead to dispersion or inconsistency. However, e-banking will be considered in this paper as a subcategory of the broader area of e-business. Therefore, we exclude from our discussion the other services and market transactions from e-commerce, e-government under a different logic of managerial point of view, to be limited only to transactions and banking services.

The choice of the banking sector is necessary because it probably appears as one of the economic activities most affected by the technological revolution that is taking shape before us. The ICT are not only crucial in the analysis of information, but they also allow banks to differentiate their services from their competitors. Since we have chosen (or forced) to transfer to the era of post-modernism, banks are forced to constantly innovate and update their marketing strategies to respond as best suited to the demands and requirements of each client and provide services that suit their needs of safety and reliability.

These institutions are now under an obligation, first, to acquire the best technologies to support the transformation of society and secondly to establish a captive relationship marketing

strategy. This result in the establishment of mechanisms that encourage greater knowledge and loyalty oriented to each client (Perrien et al, 1993; Perrien Ricard, 1999).

In addition to customer satisfaction, the foundation of a solid relationship is essential for banks in order to build a true partnership where the branch is no longer considered a place of passage required for the client (Lejeune, and Prefontaine Ricard, 2001). For this purpose, banks are to serve the irreversible demands of their clients and must work to offer the possibility to operate when the customer chooses to, where they chose to and how they want to go about it. Hence, the development of the concept of electronic financial services, commonly known as e-banking. This concept came in different forms; for financial institutions to conduct their operations, insofar as it meets the expectations of both internal users, that is to say the employees, or externally vis-a-vis their customers, suppliers and other institutional partners.

Under these conditions the adoption of e-banking has become a necessity for banks because it carries major opportunities in terms of a competitive advantage that allows improving operational effectiveness and efficiency within the company. Moreover, helps in developing stronger business relationship with more satisfied customers. However, the adoption of any innovation in an organization such as e-banking is not often an obvious thing. Therefore, several factors can contribute to its rapid adoption, or serve to hinder its adoption and deployment.

The aim of this paper is to analyze some factors namely organizational, structural and policy related. These elements may accelerate or conversely discourage the adoption of this mode of distribution and electronic communications by banks. While considering an empirical framework of a developing market such as the Moroccan one. This paper discusses the potential importance of this mode of electronic business for banking institutions.

A Conceptual Framework

The banking business has seen a significant change in its distribution services. Developments and enhancements of ATMs and telephone services were added offerings in addition to the Internet. The agency is no longer as formerly, the exclusive distribution channel of the bank. Thus, retailers and ATMs, and especially the internet have in turn shattered the unity of place, time and action, a principle so dear to the banking institutions of yesteryear.

According to Dixon and Nixon (2000), the advanced technological applications are not new in the banking industry that has been long been connected to computers to process checks, transfer funds, grant loans and measure risk. Thus, the movement towards e-banking is a natural act for credit institutions in the era of electronic board; which used to have customers permanently connected without the intermittency of someone and a local link.

E-banking therefore designates the process by which a consumer can manage their banking transactions electronically without having to visit a physical branch. It manifests itself in several forms or communication mediums. Other authors such as Lemaitre (1997) and Vilatte (2007) define e-banking as a bank that covers not only the flow of information between

customers and production facilities of the bank, but also solicitation, sale, distribution and access to services, without the simultaneous physical presence in the same place between the consumer and the representative of the financial institution. It is, therefore, neither a specific technology, nor an organizational goal per se, but an innovative business practice where penetration and standardization is needed. While its adoption affects much more the daily operations of banks and the functioning of some institutions, as well as the lifestyle of customers, and more significantly alters the general organization of the functional system (Munos, 1999).

According to Rogers (1983), the process of adopting an innovation is a mental process through which a decision unit, either as an individual or an organization, through the mere knowledge of this innovation, training of attitude with regard to the latter, the decision of adoption or rejection, and finally to the confirmation of this decision. The adoption of e-banking by financial institutions, like any innovation, is not a simple process, but rather conditioned by many factors. Of these some are complementary, contributing to the same results, others are contrary, antagonistic. In this article, the focus is on the micro level of analysis, examining the organizational behavior of banks with regard to adopting e-banking, analyzing the impact of certain organizational variables (1), structural (2) and strategic (3).

Organizational Variables

The analysis of the relationship between the profile of the organization and innovation adoption of electronic channels of distribution and communication with regard to e-banking is an important part of our research. Several authors, specifically in marketing, showed that the effect of organizational characteristics is crucial in the response to innovations (Skhiri, 2000). Thus the size of the bank, the type of decision making, functional differentiation, financial resources, technical infrastructure, international experience of banking and risk aversion are factors that can accelerate or slow the adoption of e-banking by the institutions studied.

Despite the divergent opinions concerning the relationship between the size of the company in general and the adoption of innovations, authors such Kimberley and Evanisko (1981), Klepper and Coren (1996) have found that large firms are best placed to benefit from innovations and are best predisposed to adopt it, especially in terms of newer technologies. We believe, therefore, that large institutions are more likely to adopt e-banking because as part of their branding also because of the availability of the funding and resources necessary to cover the costs of adopting new electronic channels of distribution and communication. Hence the first hypothesis 1.a; the degree of infiltration by the techniques of e-banking is higher in larger banks.

The type of decision making refers to the manner in which decisions are taken within the organization either in a centralized or decentralized manner, and the number of people

involved in it. Some authors such as Rogers and Shoemaker (1971) indicate that the relationship between centralization and adoption of innovations is negative. In a bank where the decision is decentralized there is more opportunity for dialogue and exchange of ideas and information between members, so there is more discussion and understanding of the needs of the organization against the adoption of new communication and distribution of information and services. Therefore, the process of decision-making of a newer technology in the institution would be less complex, easier and more harmonized and therefore, faster among staff. Then, the decentralization of decision making within the bank would increase the likelihood of innovation adoption of e-banking. Based on these deductions the 1.b hypothesis states that the degree of adoption of e-banking is higher in banks where decisions are decentralized.

Functional differentiation, in turn, is defined in this paper as the degree of division of the bank into subunits. In this sense, the more the bank is formed in specialized units, able to assess the important of integration of technological innovations in e-banking to simplify the production tasks and to facilitate communication between the internal and external bank and its customers, partners and suppliers, the greater the likelihood of adoption of new channels of e-banking is high. Hence, the following hypothesis 1.c; the degree of adoption of e-banking is highest in the bank divided into several functional units.

Langley and Truax (1994) also point out that obtaining funding is a key factor in the process of adoption of technologies by firms. As part of this research, technology adoption of e-banking

costs quite high, requires significant financial justification not only to cover the costs of adopting these technologies, but also for learning a new business model, technology support and implementation of new processes and training of existing staff. Thus, the organization that has significant financial resources and/or an easier access to capital is more likely to adopt the new electronic channels of distribution and communication. From this observation, the following assumption is needed 1.d; the degree of adoption of e-banking is positively correlated with the financial resources of the bank.

Structural Variables

The structural variables reflect the social and economic characteristics of innovation as a concept, and the market to which it is addressed (Rogers, 1962, 1983, Rogers EM and Shoemaker ,1971, Robertson 1971). Most authors are strongly interested in the relationship between structural factors and the adoption of innovations. They indicate that, in general, these factors put pressure on the company at all levels of its activity. This pressure is particularly important when introducing changes within the organization.

The technological environment is connected to the internal state of the technology available to the firm. According to Miller (1985), when a firm has more innovative manufacturing technologies, the greater the probability of adopting another innovation is great. As part of the adoption of e-banking we believe that technological progress that characterizes the bank and the degree of automation of its services positively affects its behavior in innovations related to e-banking. The likelihood of adoption of new distribution channels would be more important if the bank has a history of introducing new information technologies and communication in its

process. Hence the following hypothesis 2.a; the degree of adoption of e-banking is more important if the bank regularly adopts different types of technological innovations.

According to Rogers (1983), the perceived relative advantage of innovation is positively related to its rate of adoption. By studying the factors influencing the adoption of Internet banking, Tan and Teo (2000) showed that the perceived relative advantage of this innovation is positively related to ROE (Return on Equity). Based on his assertions, we believe that investment in technology, e-banking is more important if the bank perceives that this innovation could provide it with improved performance in terms of increasing its market share in terms of customer satisfaction and in terms of cost reduction. This leads us to hypothesize 2.b; investment in e-banking is even higher than the perceived relative advantage of this innovation is important for the organization.

Strategic Variables

Strategic factors that we identified in our study involve two variables that determine the international profile of the bank, namely, the mode of overseas presence and number of steps involved. The former reflects the manner in which the institution is present abroad. In this sense, the classification proposed by Kotler, Dimaulo McDougall and Armstrong (1991) has an order of increasing penetration. There are four main strategies of presence abroad: exports (Representative Office in the case of banking), business partnerships, direct investment abroad and the strategic alliance. The authors indicate that each strategy is linked to the commitment, the risk and potential profit that the firm can draw.

Indeed, the international environment in which the bank is exposed to offers greater opportunities to know and evaluate the importance of technological innovations, as it stimulates it to adopt new techniques in e-banking to monitor trends in its competitive environment, better serve its customers scattered across the globe and especially to be continuously informed. In light of these statements, we hypothesize 3.a; the level ofownership of e-banking technologies by a bank is higher as it operates internationally.

The number of foreign target markets defined, meanwhile, as the number of markets that the bank aims to conquer overseas. The higher the number, the greater the likelihood of adoption of new electronic channels of distribution and communication is great. Indeed, under these conditions, the need for a bank to serve customers scattered across several countries requires the adoption of more efficient cheaper channels. This is especially true when the competitive environment is more restrictive. This allows us to formulate the following hypothesis 3.b; the degree of adoption of e-banking is positively correlated with the number of target markets abroad. The table below summarizes the assumptions and the relationships between variables and the degree of adoption of e-banking.

1. Organizational Variables	Relationship to the adoption of e-banking
a. Size	+
b. Type of decision making	+
c. Functional differentiation	+
d. Financial Resources	+
2. Structural Variables	
a. Technological Environment	+
b. Relative Advantage	+
3. Strategic Variables	
a. Presence Abroad	+
b. Number of targeted foreign markets	+

Table 1 : Table 1 Name

Methodology

The validation of our conceptual framework was carried out using a method of collecting quantitative data on the basis of a representative survey of Moroccan banks. The choice of context is primarily explained by the importance of banking in this country, and then the situation of banks located in the platoon of technological development, with banks having already taken the first steps towards e-banking and other spending. A structured questionnaire was used to achieve the objectives of our study. Our sample represents the bulk of the adoption of Moroccan banks presented below.

Bank	Group	PNB (MDH)	Net income (MDH)	Branches
Attijariwafa Bank	Groupe ONA	13 255	3 941	1 874
Banque Populaire du Maroc	Groupe BP	8 963	2 833	690
BMCE Bank	Finance Com	6 414	385	512
Société Générale Maroc	Société Générale	3 217	746	320
BMCI	BNP Paribas	2 413	807	242
Crédit Agricole du Maroc	État Marocain	2 120	345	377
Crédit du Maroc	Crédit Agricole	1 646	362	276
CIH	Groupe CDG	1 327	404	112

Table 2 : Table 2 Name

Of the 8 targets banks, 3 are operating internationally and 5 with purely local activities; 3 banks in our sample are foreign banks operating in the Moroccan market.

In terms of personal characteristics of respondents, it should be noted that all respondents have the responsibility of the department or multichannel director of information systems.

Analysis

Measuring rate of impregnation techniques of e-banking to measure the rate of adoption of e-banking financial institution, we relied on the utilization rate of seven types of electronic channels of distribution and communication of financial services, which are: Phone banking, mobile banking, the ATM, TV banking, PC Banking, Extranet and Internet Banking. The analysis of the measuring instrument shows a Cronbach's alpha equal to 0.6993, indicating strong internal consistency of the instrument.

The adoption rate is calculated as a percentage of continuous use of the seven channels per bank. This percentage varies between 0% (none of these technologies is used) to 100% (all technologies are used. This measure assesses the degree of adoption of innovations is mainly inspired Daghfous and Skhiri (2000). The table below illustrates the degree of adoption of the channels of e-banking in our sample, as they are foreign or domestic, doing international business or not.

	Total Sample N= 8	**Local Banks N= 5**		**Foreign Banks N= 3**
Adoption rate of e-banking channels		International Activity	Local Activity	
Less than 33%	59.7%	43.8%	95.8%	61.5%
33 to 66%	24.9%	37.5%	4.2%	30.8%
More than	16.4%	18.8%	0%	7.7%

Table 3: Degree of adoption of new electronic channels of e-banking

The results thus released, show that our total sample consists mainly of banks low adoption of electronic channels of e-banking (59.7%), followed in second place, banks adoptive medium (24.9%). Banks strongly adoptive represent only 16.4% of our total sample. The level of adoption is relatively higher among the foreign banks and domestic banks with international activities, and this confirms the assertion that international banks are generally more adoptive of new channels of e-banking as banks a purely national activities. The international banking activity is indeed faced a greater mass of competitors that operate in different socio-economic and cultural backgrounds. Cons must know it by controlling new variables and adapt. Under these conditions be informed and able to communicate, and be able to meet the needs and requirements of these customers personalized, becomes an essential asset for success.

	Local Banks		**Foreign Banks**	**Total Sample**
	International Activity	Local Activity		
Phone Banking	56.3	8.3	38.5	30.2
Mobile Banking	18.8	4.2	23.1	13.2
GAB	100	100	100	100
TV Banking	4.3	0.2	0	2.8
PC Banking	25.0	14.2	23.1	15.1
Extranet	18.8	0.0	23.1	11.3
Internet Banking	49.3	18.3	23.1	36.4

Table 4 : Categorization of banks by type of adoptive electronic channel in percentage

The measure of degree of adoption of each type of electronic channel studied shows that electronic

channels are the most adopted ATM (100%), phone banking (30.2%) and internet banking (36.4%). However, the level of adoption is relatively higher among the foreign banks and international and it is at each channel type studied. This confirms our assertion above that international banks are generally more adoptive of new channels of e-banking activities than purely domestic banks.

To test the hypotheses already advanced on the relationship between the degree of organization adoption of new channels of e-banking and organizational variables, structural and strategic analysis of bivariate associations were used, namely the analysis of Pearson correlation when the variables are continuous in nature, analysis of variance (ANOVA statistics) when the variables are discrete and Post Hocanalysis to locate the existing differences of means. The results of the relationship between organizational variables, structural, strategic and degree of adoption of advanced of advanced communication and distribution of e-banking are presented in the tables below.

Variable	Average Adoption Rate	%	F-test	Sig.
Size (H 1.a)	PME	0.0857	15.940	0.000
	Great	0.3226		
Type of decision making (H 1.b)	Centralized	0.2128	2.112	0.152
	Decentralized	0.3571		
International Experience	No experience	0.1143	17.310	0.000
	Little experience	0.0816		
(H 3.a)	Average experience	0.1654		
	Strong experience	0.4857		

Table 5 : Table 5 Name

Variable	Average Adoption Rate		F-test	Sig
Adopted regular new technologies (H 2.a)	No	0.1469	16.952	0.000
	Yes	0.3889		

Table 6 : Table 6 Name

<table>
<tr><th>Variable</th><th>Pearson Correlation Coefficient</th><th>Sig</th></tr>
<tr><td>Functional division (H 1.c)</td><td>0,442 (a = 0,01)</td><td>0,001</td></tr>
<tr><td>Financial Resources (H 1.d)</td><td>0,296 (a = 0,05)
Enrollment in local schools, 2005
<table>
<tr><th>School</th><th>New Students</th><th>Graduate Students</th><th>Modified</th></tr>
<tr><td></td><td>Undergraduate Student</td><td></td><td></td></tr>
<tr><td>Université du cèdre</td><td>110</td><td>103</td><td>+7</td></tr>
<tr><td>Collège de l'orme</td><td>223</td><td>214</td><td>+9</td></tr>
<tr><td>Académie de l'érable</td><td>197</td><td>120</td><td>+77</td></tr>
<tr><td>Collège des pinacées</td><td>134</td><td>121</td><td>+13</td></tr>
<tr><td>Institut du chêne</td><td>202</td><td>210</td><td>-8</td></tr>
<tr><td></td><td>Graduate</td><td></td><td></td></tr>
<tr><td>Université du cèdre</td><td>24</td><td>20</td><td>+4</td></tr>
<tr><td>Collège de l'orme</td><td>43</td><td>53</td><td>-10</td></tr>
<tr><td>Académie de l'érable</td><td>3</td><td>11</td><td>-8</td></tr>
<tr><td>Collège des pinacées</td><td>9</td><td>4</td><td>+5</td></tr>
<tr><td>Institut du chêne</td><td>53</td><td>52</td><td>+1</td></tr>
<tr><td>Total</td><td>998</td><td>908</td><td>90</td></tr>
</table>
Source : Dummy data provided for illustrative purposes only</td><td>0,170</td></tr>
<tr><td>Perceived Relative Advantage of Innovation (H 2.b)</td><td>0.384</td><td>0.004</td></tr>
</table>

Table 7 : Table 7 Name

Mode of presence Abroad (H 3.a)	Average Adoption Rate		F-test	Sig
Representative Offices	Yes	-	-	-
	No	0.6291	-	-
License Agreements	Yes	-		-
	No	0.2291		
Strategic Alliance	Yes	0.1894	7.556	0.008
	No	0.4000		
Establishment of subsidiaries	Yes	0.1323	11.579	0.001
	No	0.3297		

Table 8 : Table 8 Name

We can see from the above table that seven organizational variables have a significant impact on the degree of adoption of new electronic channels. The relationship between firm size and innovation adoption based on the claim of Kimberly and Evanisko (1981) is confirmed. The size of the firm is one of the most effective indicators for the adoption of new technologies. The store size is positively related to opportunities for the adoption of web banking (E. Diniz,

1998). Indeed, large banks are more likely to adopt e-banking innovations. The hypothesis H is confirmed 1.a

The relationship between the type of decision and the adoption of innovations, e-banking is not significant, and the hypothesis H 1.b is not confirmed. This finding is consistent with the assertions of (Kimberly and Evanisko 1981) stating that the nature of the relationship between the type of decision making and adoption of IT innovations, depends on the context and where other variables are involved and must be taken into account to be able to identify the true nature of this relationship.

The hypothesis which states that H 1.c innovation adoption of e-banking is important in the bank divided into several functional units is confirmed. It shows the importance of the functional division of the company in specialized units, capable of assessing the importance of integrating technological innovations of e-banking to simplify the tasks and communication between the banks and its internal and external partners.

The positive relationship between financial resources and the degree of innovation adoption of e-banking has not been confirmed, and the Pearson correlation coefficient shows a non-significant correlation of 0.296. H 1.d is unconfirmed.

The results also show that there is a positive and significant relationship between the technical infrastructure at the bank and the degree of adoption of new e-banking channels. And it confirms that the higher the bank has developed a technical infrastructure such as the presence of telecommunication infrastructure, multimedia, networks, electronic platforms, architectures

secure techniques that allow it to communicate with its customers and partners securely and confidentiality plus the probability of adopting electronic channels for e-Banking is true. The hypothesis H 2.a is confirmed.

The results of the relationship between the degree of innovation adoption of e-banking and relative advantage, shows that there is indeed a positive and significant at the risk of 0.01. This is consistent with the work of Rogers (1983), Tan and Teo (2000) which is that the perceived relative advantage of innovation is positively related with the adoption of innovation. Thus, the electronic channels of e-banking allows these financial institutions to raise performance levels increase in the share market, in terms of cost savings and level of customer satisfaction. The hypothesis H 2.b is confirmed.

Regarding the relationships between strategic variables and the degree of innovation adoption of e-banking, the results confirmed our assumptions, namely, the international profile of the bank to have a significant impact on the degree of adoption of these communication channels. Indeed, all the internationalization strategies of the bank show a positive and significant relationship with organizational adoption of electronic channels. These results lead to the conclusion that the hypothesis H 3.a is largely confirmed.

Fisher's analysis presented in the table above shows that the relationship between the number of target foreign markets and the degree of adoption of e-banking is positive and significant. Indeed the more foreign markets targeted by a bank, the greater importance it is to satisfy its customers located in all these markets. Consequently, the likelihood of adoption of new e-tools banking is predominant. The hypothesis H 3.b is thus confirmed.

Conclusion

Electronic commerce, especially banking, is a recent form of trading. It will continue to grow in the coming years based on widespread access through electronic networks, including the internet and mobile telephony.

Facing this development requires a good preparation in terms of resources and expertise from companies, especially banks for the implementation and deployment of all e-banking channels. Indeed, success in e-banking is highly dependent on the ability of banks to adapt to the contributions and challenges of these new ways of doing business. Thus, based on the results of this study, we can conclude, firstly, the typical profile of the bank shall adopt e-banking channels. Thus, a bank using these media in Morocco, is a bank, first-class operating in multiple markets through representative offices, subsidiaries, or through strategic alliances; having one or more foreign partners. It is also a bank divided into several functional units which has a technical infrastructure for telecommunications, multimedia and highly developed networks, and regularly adopted different types of technological innovations. It also sees the adoption of such technological innovations as an advantage. The adoption of such medium is fairly costly which requires significant financial justification, not only to cover the investment, but also for training and maintenance.

The appreciation of the value of this strategic shift have been taken by banks in terms of communication and direct contact with customers when choosing the adoption of e-banking is more than ever, another field that must be plowed. Stopping before this issue is the theme of

efficient and effective alignment between an organizations' strategy and information technology, and that is what we intend to develop in future studies.

List of Tables

Bibliography

Arndt J. (1967), Role of product- related conservations in the diffusion of a new product, *Journal of Marketing Research*, 4, 291-295.

Bhimani (1996), Securing the commercial Internet," *Communications of the ACM*, Juin 1996.
Cockburn C. et Wilson T.D. (1996) Business Use of the World-Wide Web, *International Journal of Information Management*, 16(2), 83-102.

Cooper R. B. et Zmud R. W. (1990), Information technology implementation research: a technological diffusion approach', *Management Science*, February, 36, 2, 123-139.

Daniel E. (1999), Provision of electronic banking in the UK and the Republic of Ireland, *International Journal of Bank Marketing*, 17, 2, 72-82.

Dicherson M. D.et Gentry J. W. (1983), Characteristics of adopters and non-adopters of home computers. *Journal of consumer research*, 10(2), 225-235.

Diniz, E. (1998). Web banking in USA ", dinizlhaas.berkely.edu

Dixon M. et Nixon B.(2000), E-banking: Managing your money and transactions online. SAMS publishing, 244p.

Ernst & Young (2001), Global online retailing, *An Ernst & Young Special Report*, 142 p.
Gatignon, H. et Robertson T. S. (1985), A proposal Inventory for new Diffusion Research", *Jounal of Consumer Research*, 1(march), 249-267.

Issac. H, Volle. P (2009), E-commerce. Pearson Education

Langley A. et Truax J. (1994), A Process Study of new Technology Adoption In Smaller Manufacturing firms. Montréal, Presses de l'université de Québec a Montréal.

Lejeune, Albert, Prefontaine, Lise et Ricard Line. 2001. « Les chemins vers la performance : L'approche relationnelle et la transformation des entreprises». *Gestion*, vol. 26, no. 3, p.45-51.

Kimberly, J.R., Evanisko, M.J. (1981). Organization innovation: the influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. *Academy of Management Journal*, 24(4), 689-713.

Kirsner, D. et Balbi D. (1997), Les besoins des banques , *Banque*, 586, 38-39.

Lemaitre P. (1997), Les enjeux de la banque a distance, *Banque*, 587, 63-65.

Miller D. F. (1985), Social Policy: An Exercise in Metaphor. *Knowledge, 7:2*, 191-215.
Mols N. (1998), The behavioral consequences of PC banking, *International journal of bank marketing*, 16, 5, 195-201.

Munos A. (1999), Technologies et Metier de service, *Decisions Marketing*, no.17 (aout), 55-65.

Ostlund, L. E.(1969), The role of Product Perceptions in innovative behavior, in ed. P.R. Mac Donald, *Marketing Involvement in Society and the Economy,* Chicago:American Marketing Association , p.259-266.

Perrien, J., Filiatrault, P. and Ricard, L. (1993), "The implementation of relationship marketing in commercial banking", *Industrial Marketing Management,* Vol. 22, pp. 141-148.

Quelch and Klein (1996), The Internet and International Marketing, *Sloan Management Review*, Spring, 60 - 75.

Ricard L. et Perrien J. (1999), Explaining and evaluating he implementation of organizational relationship marketing in the banking inustry: Client's perceptions. Journal of Business Research, 45, 199 - 209.

Riggins, F J and Rhee, H-S S (1998). Toward a Unified View of Electronic Commerce. *Communications of the ACM 41 (10):* 88-95.

Rogers, E. M. (1962), Diffusion of innovations, New York: The free press

Rogers, E. M. Et Shoemaker, F.F. (1971), Communications of Innovations. New york. Free Press.

Robertson, Thomas S. (1971), " Innovatrice behavior and communication", New York, Holt, Rinehart and Winston.

Skhiri S. (2000), Adoption des innovations en technologie de !'information par les entreprises internationales". Memoire de maitrise en Sciences de Gestion, Universite de Quebec a Montreal.

Tan, M. et Teo, T. S.H. (2000), Factors Influencing the Adoption of Internet Banking. *Journal of the Association for Information Systems*, 1, 5, 1-44.

Villates D. (1997), Demain, la banque à distance, *Banque*, 585, 68-70.