



Keywords

E-Trust,
E-Banking,
E-Commerce

Received: February 05, 2014

Revised: March 20, 2014

Accepted: March 21, 2014

The determinants of e-trust in electronic banking services

Chakib Hamadi, Bouchra Esslimani

Department of commerce, LCGE laboratory, ENCG-Cadi Ayyad University, Marrakesh, Morocco

Email address

hamadi_chakib@yahoo.fr (C. Hamadi), besslimani@yahoo.fr (B. Esslimani)

Citation

Chakib Hamadi, Bouchra Esslimani. The Determinants of E-trust in Electronic Banking Services. *International Journal of Management Science*. Vol. 1, No. 1, 2014, pp. 15-21.

Abstract

This article attempts to Identify online trust determinants of electronic banking services. The results of the quantitative study show that these determinants include the site of the bank, the bank as institution, the customer him-self and third parties. They also show that moderating effect of the variable related to the legal framework governing e-commerce on the relationship between customer trust and trust in electronic banking services is not statistically significant.

1. Introduction

Trust seems to be the cornerstone of any exchange relationship. In fact, in a market economy, where economic agents trust each other, there are more transactions, more and more contracts resulting gains. This issues of trust all his interest in the case of an emerging market such as electronic commerce. The Internet has caused a revolution in the way we design trade. Therefore, there has been a proliferation of marketing research addressing consumer behavior online, and a large influx of work on the notion of trust toward electronic services (Vernette and Dubois, 2001, p.1).

Given the electronization trade, computers come into action instead of direct contacts between human beings. They are used to transmit information legally binding (supply, receipt, provision and payment). Necessary data are presented in a digital form. These data are thus likely to be modified; copied, stored, fueling a climate of uncertainty makes the risky decision to purchase web-users.

Therefore one of the major obstacles to the development of electronic commerce is the lack of consumer trust. This lack of trust, fueled by the proliferation of fraud, says that many are still resistant or at least remain reluctant to use e-commerce. Thereby establishing trust has become a major requirement for e-merchants.

Given the magnitude of electronic commerce and its complex dimensions, we chose to focus one-banking services in the world which is one of the sectors most sensitive to the issue of trust. Major questions that drive the banking managers today is how to inspire trust in their clients to purchase electronic services. Customers are reluctant to use online financial services while they are services which adapt perfectly to changes in their "lifestyle" and respond to their need to perform routine operations whenever they want with less effort. Of the foregoing, the issue of this article is to identify the determinants of trust in relation to electronic banking services as perceived and apprehended by the customer.

2. The Concept of Trust

Trust in marketing is defined as a key control that aims to curb opportunistic behavior when exchanges are characterized by high uncertainty. Several studies have tried to make reflections on the conceptualization of trust in marketing. Defined as presumption, waiting, belief, desire or as behavior, trust appears as a polymorphous concept. Based on early reflections, Smith and Barclay (1997) two predominant approaches have been identified in the literature. In the first, trust is identified as a psychological state upstream of the behavioral intention (presumption waiting belief). In the second, it is seen as an intention or Behavior (willingness to rely on partner behaviors confident). Thus, the taxonomy that can be offered is that between trust as a psychological variable integrating cognitive and emotional processes in the trust as a behavioral variable, an expression of apprehension exclusively conative concept.

Smith and Barclay (1997) define trust as "waiting emotive" which includes a cognitive component (credibility) and an affective component (benevolence). Trust as positive expectation toward the partner Underlying assumption is based on That It anticipation and predictability (Rempel, Holmes and Zanna, 1985). Deutsch (1962) advocates a design exclusively conative concept. It captures the trust as an action in which case we speak of confident behavior (Smith and Barclay, 1997), or as a behavioral intention is reflected in the willingness to be vulnerable (Mayer, Davis and Schoorman, 1995) or by willingness to rely on an exchange partner (Moorman, Deshpande and Zaltman, 1992; Andaleeb, 1995; Chaudhri and Holbrook, 2001).

The concept of trust is then treated as an actions that increase vulnerability to another" (Deutsch, 1962) or to "actions that reflect the willingness to accept vulnerability to a situation of uncertainty" (Smith and Barclay, 1997). According to Chouk and Perrien (2005), trust is a way that allows the buyer to commit to a limited number of sources whose past behavior has been satisfactory.

It is indeed crucial elements underlying trust. Vulnerability is defined as the possibility of losses, the possibility that part is injured. The notion of waiting refers to the anticipation of the behavioral model of the other part of the exchange. The concept of trust is then treated as "actions that increase vulnerability to another" (Deutsch, 1962) or to "actions that reflect the willingness to accept vulnerability to a situation of uncertainty" (Smith and Barclay, 1997). According to Chow and Holden, trust is a way that allows the buyer to commit to a limited number of sources whose past behavior has been satisfactory. It is indeed crucial elements underlying trust. Vulnerability is defined as the possibility of losses, the possibility that part is injured.

2.1. Trust and Purchase Online

Morgan and Hunt (1994) in the context of the approach apprehending trust as psychological upstream of the behavioral intention, define trust toward a site as "pending consumer electronics retailer that will not exploit its vulnerability and promised that it will honor its commitments on the site. The concept of vulnerability is of a character even more important in the context of electronic commerce because the environment is perceived as more risky.

Moreover, Sirdeshmukh, Singh and Sabol (2002), also incorporate the commitments in their definition. Indeed, whether by privacy policies or trust marks, electronic merchants make commitments explicitly stated on their websites (respect for privacy, security, transaction, compensation arrangements. Thus, under pain of discredited their sites, merchants must honor their commitments (Chouk, 2003. Chouk and Perrien, 2003). On the Internet, if the consumer is vulnerable it is because it is faced with a risky environment. Two types of risk are inherent in electronic transactions: behavioral risk and environmental risk (Pavlou, 2003). Behavioral risk refers to the probability that a given merchant to be have opportunistically. Several examples can illustrate this: the non-delivery of ordered product, the non-conformity between the promised quality and the actual quality of the offer, the sale of private data to unauthorized third parties. When environmental risk, there is a risk inherent in the technology used and beyond the control of both parties to the exchange, including attempted fraud practiced by "hackers". The coexistence of these two types of risk makes the Internet a way to purchase risky. As the risk is quite high, consumers are more vulnerable than ever and the need for trust is increased.

2.2. Trust in Electronic Banking Services

Analyzing future challenges of online banking, Aldawani (2001) identified trust and security on the Internet as the main elements on which banks should consider building a lasting relationship with their customers online. Dimitriadis (2008) analyzing the customers trust in channel of the bank, distinguish between two dimensions of trust related to the individual: an affective dimension which corresponds to the benevolence and integrity (honesty) perceived by the customer toward the bank and a cognitive dimension is described by the perceived competence and credibility. One of the results of their research shows that the affective dimension is more important to predict online trust than the cognitive dimension. They partly explained by the fact that customers are already familiar with the bank. Another result of their conceptual model is to validate the relationship between trust in the bank and trust in the online channel distribution. They show, in this

sense, there was a transfer of trust bank customers to the new channel is banking site. Their work offers a typology of trust based on the level of analysis. Three types of trust can then be identified:

-The propensity to trust: it corresponds to the negative or positive disposition to trust a person or an entity in a context where information is insufficient.

-Institutional trust: it corresponds to the individual perceptions of the parent company's site.

-Interpersonal trust: it corresponds to the individual perceptions of competence, benevolence and integrity of the site. It corresponds to the overall quality of service offered via electronic integrating the quality of supply, security of transactions and process control and quality of design and navigation.

3. Research Hypotheses

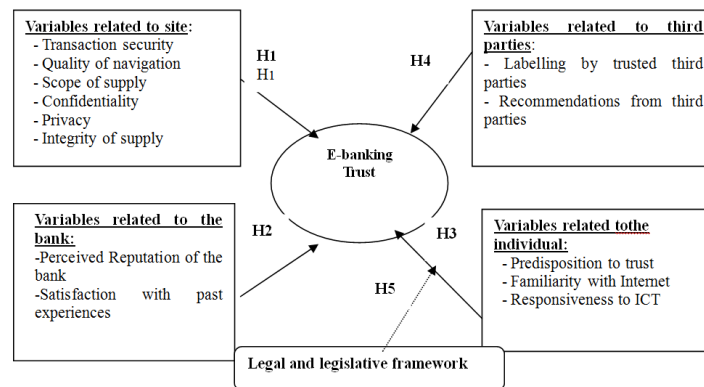


Figure 1. Research model of the determinants of e-banking trust.

4. Research Methodology

A quantitative study was undertaken to identify the determinants of e-trust and exploring the relationship of cause and effect between the concept of e-trust purpose of the study, and the different variables studied, but also estimate the importance of these relationships. This will validate the model of the determinants of e-banking trust.

Sample:

The parent population consists of actual and potential customers of electronic banking services. The sample should be representative of the population as far as possible. The parent population is not exhaustive, it was necessary to use a non-probabilistic sample building. For this purpose, a convenience sample was defined units seeking people with important criteria for the study, which are age, occupational category and sex and to obtain an equivalent sample number and quality and especially heterogeneous deliberately to ensure stability of the results. The sample consisted of 105 unbanked clients of different Moroccan banks.

- Questionnaire:

Our study is based on the study of the determinants of trust toward e-banking, variables related to bank site,

In the light of the literature review and discussion presented above and to provide answers to the questions raised, we propose to test the following hypotheses:

Hypothesis 1: Trust in the website of the bank (by means of security, confidentiality, quality of information...) resulting trust online.

Hypothesis2: Customer trust in the bank itself determines his trust in the use of electronic services.

Hypothesis3: The trust of the client (positive or negative disposition to trust) positively affects the subscription of electronic banking services.

Hypothesis4: The role of third fosters trust in subscribing to these online services.

Hypothesis5: The legislative and legal framework governing trade online promotes customer trust in using e-banking services. The research model with hypotheses is illustrated by the following figure:

banking, customer, and third in the legal framework have Faist themes of the questionnaire. The answers given by the respondents in a qualitative study which is an important point for a more detailed analysis of the latter. And avoid as much bias in the responses of terms generated by inappropriate responses.

Once the collected data and to test our hypotheses, analysis type, principal component analysis, reliability testing, multiple regression analyzes were conducted in order to achieve proper interpretation of the results and derive explanatory models.

The principal component analysis allowed us to identify a factor structure of the multi dimensional variable trust-related site, consisting of five dimensions: ease of navigation on the website of the bank; quality of information available on the website of the bank, protection of privacy, quality of presentation of the bank's website and safe navigation on the website of the bank. Then a reliability analysis has been invested to determine the consistency and internal coherence factor structures emerged. Thanks to this analysis, some structures were purified factor giving rise to stable and coherent structures.

It also concludes that the trust in the bank as an institution is one of the determinants of trust for the use of

electronic services.

The principal component analysis shows that trust related to the customer is one of the determinants of trust

in the use of electronic banking services, itself composed of disposition to trust and to take the risk.

a) *Principal component analysis of reliability and trust toward the bank site.*

Variable	Dimensions	Items	laoding	Alpha
E-banking trust	Ease of navigation	The bank website is easy to access	,791	,872
		It is easy to navigate on the bank website	,827	
	Information quality	The information available on the bank website is what you need	,883	,853
		The information available on the bank website is relevant	,880	
		The information available on the bank web site is easy to understand	,810	
		The bank communicates its security policies on the banking website	,828	
	Navigation security	There are clear explanations of security on the bank's website	,809	,720
		The bank site displays explicit commitment son the protection of personal data	,736	
		The site protects your personal information	,784	
	Privacy	The site does not use your banking information inappropriately	,848	,732
		The bank website is visually pleasing	0,801	
	Website presentation	The website is visually appealing	,869	,685

b) *Principal component analysis and reliability of trust toward the bank.*

Variable	Dimension	Items	laoding	Alpha
Trust toward the bank	physical bank	Your satisfaction following past interactions with the bank confirms your trust	,835	,564
	Service quality	The perceived reputation of the bank as an institution inspires trust	,835	

c) *Principal component analysis of reliability and trust related to the client.*

Variable	Dimension	Items	laoding	Alpha
Trust related to cybercustomer	Predisposition of the client	Generally, you are predisposed to trust	,866	,668
		Generally, you are predisposed to risk	,866	

According to principal component analysis, we retain that trust is related to one-third of the determinants of trust in the use of electronic banking services, consisting of the dimension: intervention of third persons or organizations, she partnership composed of the same bank site with another site recognized, and the intervention of a

certifying body.

It shows that the variables related to legal and legislative framework is one of the determinants of trust in the use of electronic banking services, consisting of the dimension impact of laws and statutes regulating e-commerce.

d) *Principal component analysis of reliability and trust related to third*

Variable	Dimension	Items	laoding	Alpha
Trust relate to third parties	Intervention of third parties	The partnership bank site with another recognized site promotes your trust	,857	,637
		The intervention of a certification organism (Trustmark) helps your trust	,857	

e) *Principal component analysis of reliability and trust-related legal and legislative framework for e-commerce.*

Variable	Dimension	Items	laoding	Alpha
Trust-related legislative framework	Impact of laws and legislation	give your opinion with respect to laws regulating trade online	,884	,724
		the laws regulating trade online influence positively your trust	,775	

5. Results and Discussion

To carry out tests of our research hypotheses, multiple regression analysis was performed. At first, we had to calculate the variables for each item and each driver then perform regressions to identify sub-model for each driver,

before arriving at the final explanatory model of trust vis-à-vis e-banking services.

The regression results show that trust related to the site of the bank due to the ease of navigation, the quality of information available, the safety of navigation, the protection of users' privacy and quality of presentation.

Table 1: regression n°1

Variables	Standardized coefficients	Tstudent	β significance
Constant	-	,000	,000
fac_navig	,299	-	,000
qual_info	,389	-	,000
sec_navig	,492	-	,000
protec_private	,226	-	,000
qual_present	,334	-	,000
Coefficient R ²	,089		
Fisher coefficient F	-		
Significance of F	,000		

Trust toward e-banking services related to the physical bank is explained by the previous satisfaction and the reputation of the bank.

Trust toward e-banking services related to customer himself explains the predisposition to trust and risk aversion.

Table 2 : regression n°2

Variables	Standardized coefficients	T student	β significance
Constant	-	-	-
Satisfaction	,060	-	,000
Réputation	,059	-	,000
Coefficient R ²	,098		
Fisher coefficient F	-		
Significance of F	,000		

Table 3: regression n°3

Variables	Standardized coefficients	T student	β significance
Constant	-	-	-
prédispo_conf	,057	-	,000
prédispo_risq	,058	-	,000
Coefficient R ²	,086		
Fisher coefficient F	-		
Significance of F	,000		

Trust toward e-banking services related to third persons or bodies can be explained by the partnership site with another site and recognized the intervention of a certifying body.

Therefore, the last test of the model concluded that a relationship exists between the actual trust vis-à-vis e-banking and its determinants in particular, trust-related site, trust related to physical bank, related to customer trust himself and trust-related third parties. Trust related to the site seems more important predictor of the relationship, followed by the related customer then comes the trust associated with the third and finally to the physical bank.

Table 4: regression n°4

Variables	Standardized coefficients	T student	β significance
Constant	-	-	-
Partnership	,059	-	,000
Label_trust	,056	-	,000
Coefficient R ²	,090		
Fisher coefficient F	-		
Significance of F	,000		

Table 5: regression n°5

Variables	Standardized coefficients	T student	β significance
Constant	-	-	-
Trust related to the website	,071	-	,000
Trust related to cyber customer	,027	-	,000
Trust related to third parties	,024	-	,000
Trust related to physical bank	,019	-	,000
Coefficient R ²	,093		
Fisher coefficient F	-		
Significance of F	,000		

After analyzing the relationship between trust associations vis-à-vis e-banking and its determinants, we have to verify the moderating variable related to the legal framework of the relationship: trust and customer related trust in electronic banking services. To do this, the analysis of interaction effects, multiple regression called moderate, was performed. It allows to analyze the effect of a moderator variable Z on the relationship between an independent variable X and a dependent variable Y, the product of two variables X*Y is calculated first, then two regressions tested. The first is a test of the main effects of X and Z on Y. The second regression is carried out after introduction of the multiplicative term(X * Z).

Table 6: regression n°6

Variables	Standardized coefficients	T student	β signification
Constant	,56,271	-	,000
trust_clt	,450	-	,052
trust_law	,075	-	,673
X*Z	,159	-	,622
Coefficient R ²	,090		
Fisher coefficient F	,22,753		
Significance of F	,000		

In view of the results of the regression moderate, it appears that the effect of moderating variable related to the legal framework related to customer relationship trust and trust in electronic banking services is not statistically significant. Nevertheless, in the literature, we could still keep this relationship moderation, thus referring to the logic: if the client knows that using e-banking services is protected by copyright laws and organizational structures against any potential risk posed by the exchange of electronic data, or misuse, trust is automatically increased.

6. Research Contributions

The contributions of this research appear in two levels: theoretical contributions of order, in fact, the results of this research will enrich the literature related to trust in e-commerce, including e-banking services. On the other hand, this work presents practical contributions that results encourage managers to redirect their banks and commercial managerial efforts to gain trust of their clients in order to improve the performance of their electronic services.

7. Limitations of the Research

This research examined the determinants of trust vis-à-vis the use of online banking. It assumes that the factors are inherent in the particular site of the bank, the bank as an institution, the customer itself and third parties, and therefore it can confirm the assumptions outlined above. Overall, we can conclude that trust is at the heart of the development of e-banking and electronic exchanges in general. Without a minimum of trust transactions are hardly possible, the concept of trust plays a pivotal role in the adoption of electronic commerce.

It is important to remember that this research has a number of limitations. First, it was noted that we used a convenience sample in this research, which greatly limits the generalization and extrapolation of results. Also, the collection time reduced responses, which forced us to content ourselves with the sample size too low, something that could reduce the reliability of the results.

8. Future Avenues of Research

The results also suggest some avenues of research, in fact, the Moroccan banking environment remains a land of multiple perspectives and future research, replication of this research may be interesting in order to confirm or invalidate any results taking into account the limitations already advanced. It would also be appropriate to identify other causal or moderating variables that could stabilize the relationship between trust and use of electronic banking services.

It is also interesting to consider the reciprocal process of transferring trust from reality to the virtual world: trust in the virtual world, did she not influence trust in the real

world? Indeed, it would be reasonable to expect a delay of the execution of an operation on the site of a bank can damage the trust in the bank premises. Trust vis-à-vis a site can affect the trust vis-à-vis the company and vice versa. This reflection, which has seating for the reciprocity principle of the transfer of trust, deserves further study.

References

- [1] Aladwani A.M., (2001), Online banking: a field study of driver, development challenges, and expectations; *International Journal of Information Management*. Vol, 21; pp. 213-225.
- [2] Andaleeb S.S. (1995), "Dependence relations and the moderating role of trust : implications, *International Journal of Research in for behavioral intentions in marketing channels*," Marketing, 12 157-72
- [3] Chaudhuri A. et Holbrook M. B. (2001), The chain of effects from brand trust and brand Affect to Brand Performance: The Role of Brand Loyalty, *Journal of Marketing*, 65, 81-93.
- [4] Chouk I. et Perrien J. (2003) Determinants of consumer trust when buying a commercial site: proposal of a preliminary conceptual framework. Research Paper No. 308, DMSP, Paris Dauphine.
- [5] Deutsch M. (1962), Cooperation and trust: some theoretical notes, *Nebraska Symposium on Motivations Proceedings*, 275-320.
- [6] Dimitriadis & Kyrezis (2008), Does trust in the bank build trust in its technology-based hannels?,
- [7] Dubois P. L. et Vernet E. (2001), Contributions et pistes pour la recherche en E-marketing, *Recherche et Applications en Marketing*, 16, 3, 1-8.
- [8] CHOUK I. (2005), Confiance et commerce électronique : un premier bilan, *Centre de recherche DMSP, Université Paris dauphine*.
- [9] Mayer R., Davis J. et Schoorman F. (1995), An integrative model of organizational trust, *Academy of Management Review*, 20, 3, 709-734.
- [10] Moorman C. Deshpandé R. et Zaltman G. (1992), Relationship between providers and users in market research: the dynamics of trust within and between organizations, *Journal of Marketing Research*, 29, 314-328.
- [11] Morgan R. et Hunt S. (1994), The commitment-trust theory of relationship marketing, *Journal of Marketing*, 58, 20-38.
- [12] Pavlou P. A. et Chellappa R. K. (2001), The role of perceived privacy and perceived security in the development of trust in electronic commerce transactions, *Information System Research*.
- [13] Pavlou, P.A. (2003), Consumer acceptance of electronic commerce: Integrating trust and risk, *International Journal of Electronic Commerce*, 3, 101-134.

- [14] Rempel J. K., Holmes J. G. et al. (1985), Trust in close relationships, *Journal of Personality and Social Psychology*, 49, 1, 95-112.
- [15] Sirdeshmukh D. Singh J. et al. (2002), Consumer trust, value and loyalty in relational exchanges, *Journal of Marketing*, 66, 15-37.
- [16] Smith J. B. et al. (1997), The effects of organizational differences and trust on the effectiveness of selling partner relationships, *Journal of Marketing*, 61, 3-21.