

The Development of E-Trust: An Analysis of The Roles of Variables Related to The Brand, The Internet users and the website

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Abstract- Most of researches relative to the different antecedents of the e-trust does not take into account the dynamic nature of trust as well as the important role of the symbolic characteristics of the brand and the product's attributes. Thus and in a perspective that combines website-related elements, the brand equity-related elements and the characteristics of Internet users, this research attempts to provide some answers concerning the favorable elements to the development of the e-trust.

An empirical study conducted on the websites of cosmetics products showed that the brand equity-related elements, particularly the brand loyalty, the brand awareness/attention and the brand perceived quality, have positive and significant influences on the e-trust development. It showed, furthermore, that the characteristics of the websites, or more accurately the quality of the services provided by these websites, play crucial roles in the e-trust development. It showed, finally, that in an advanced stage of the e-trust relationship, the characteristics of the Internet users play moderating roles in the relationship between the e-trust and the e-service quality.

Keywords- E-trust; Brand equity; E-service quality; Disposition to trust; Perceived risk.

1. INTRODUCTION

The amount of research on the concept of e-trust has been on the rise for decades, putting this concept at the core of several different investigation objectives. Indeed, researchers have focused their efforts on the understanding and the explanation of the consumers' behavior online, by examining the elements that are favorable as well as the ones that are unfavorable to the establishment of a trustful atmosphere that is likely to encourage intentions and actions of online purchase (Yoon, 2002[97] ; McKnight *et al.*, 2002[62] ; Chouk and Perrien, 2003[25] ; Gefen and Straub, 2004[32] ; Chen, 2006[21] ; Rajaobelina *et al.*, 2009[74] ; etc.).

The majority of the models related to the various determinants of e-trust analyzed the roles of factors related to the site and the merchant (quality of the offer, interface devoted to the user, design, reputation, etc.), to the characteristics of Internet users (familiarity, aversion to risk, etc.), to the recommendations of third parties and to situational factors (perceived risk of online shopping, etc.). However, these models do not take into account the dynamic nature of the trust relationship between partners and the complexity of the online experience (Ben Naoui, 2014)[13]. They do not include the elements related to the image that the company wants to convey through its brand and its products in accounting for e-trust, either.

Relying on these observations, our research tries to shed some light on the development of e-trust in a perspective

that combines the dynamic nature of trust, the functional attributes of the product, the symbolic values conveyed by the brand, the characteristics of the final consumer's meeting place with the brand's various products (i.e. the brand's website), and the characteristics of the Internet user. It is more precisely dealing with the roles of website-related variables, notably the quality of the service delivered online, the roles of the features related to the brand, or more specifically, its brand equity, and finally, the roles of the variables related to the Internet user, that is his disposition to trust, and perceived risk.

Thus, we suggest bringing a number of answers to the following question: "To what extent do the e-service quality, the brand equity elements, the disposition to trust and the perceived risk contribute to the development of e-trust?"

To address this question, we propose, at first, to present the conceptual framework and the research hypotheses. We will then expose our research methodology and the methods of data collection and processing. We will eventually present the discussion of results, the research limitations and potential future research tracks.

2. CONCEPTUAL BACKGROUD

2.1 E-trust

The concept of trust is characterized by a multidisciplinary nature (economics, finance, sociology, psychology, management, traditional and digital marketing) which, on

the one hand, took part in understanding its basis and in conceptualizing it (Ben Naoui and Zaiem, 2014)[13], and on the other hand accentuated the issues of the proliferation of its definitions (McKnight *et al.*, 2002)[63]. A review of the literature showed us that trust, both classical and electronic, was defined, according to the followers of the psychological approach (Sirieix and Dubois, 1999[84]; Gurviez and Korchia, 2002[40]; Sirdeshmukh *et al.*, 2002[83]; Chen and Dhillon, 2003[22]; Pavlou, 2003[71]; Harris and Goode, 2004[42]; Nevins and Money, 2008[68]; Lohtia *et al.*, 2009[58]; etc.), as a disposition to trust, a belief, an expectation and a psychological state. As for the followers of the behavioral approach (Moorman *et al.*, 1993[64]; Mayer *et al.*, 1995[60]; Smith and Barclay, 1997[86]; Chaudhuri and Holbrook, 2001[19], Lee and Turban, 2001[55]; Mukherjee and Nath, 2003[65]; etc.), they assimilated it to a disposition to be vulnerable and dependent on others. Other theoretical approaches (Rempel *et al.*, 1985[77]; Lewicki and Bunker, 1996[57]; Gharbi *et al.*, 2003 [34]; Pennanen, 2006[73]; Akrouit and Akrouit, 2010[4]) emphasized its dynamic nature by conceptualizing it as a process that evolves over time and through interactions between the partners (Ben Naoui and Zaiem, 2014[14]).

Relying on the dynamic principle of trust, we intend to focus our research on an advanced stage of the trust relationship that is considered as a settled trust, based on familiarity and experiences between the partners and which is reflected in the expectations of achieving the promised and expected commitments. In addition, and in order to reconcile the psychological and the behavioral approaches, trust will be treated as a psychological expectation prior to an intention of behavior, as showed by Chouk and Perrien (2005)[23]. Consequently, e-trust is defined as being "the set of positive expectations related to the tradesman's competence and expertise in meeting his commitments, to the motivation to help the consumer in case of problems, and to the care brought to his interests (Chouk and Perrien, 2005).

2.2 The brand equity

Brand equity has been defined according to two main approaches. The first approach, called firm-based brand equity, assimilates it to the financial and accounting value a brand could bring to a product (Bello and Holbrook, 1995[11]; Simon and Sullivan, 1993). The second approach relies on the perceptions, preferences, choices and behavior of the consumer (Park and Srinivasan, 1994[70]). Thus, according to this perspective, brand equity is the behavioral outcome of a comparison between the marketing actions of a labeled product and those of an unbranded product having the same characteristics (Aaker, 1991a[2]; Keller, 1993[49]; You *et al.*, 2000[101]; You et Donthu, 1997[100], 2001[99], 2002[98]). It is also considered as a value, functional or symbolic, that the consumer associates with the consumption of a brand (Vazquez *et al.*, 2002[90]). The functional value is linked

to the objective characteristics and the physical performances of the product (Thi Minh, 2012[88]). The symbolic value, however, is evaluated through the emotions raised by the brand (Thi Minh, 2012[88]).

Most research works dealing with the concept of brand equity rely on the theoretical model of Aaker (1996b[1]) which conceptualizes it as a multidimensional construct composed of conscience, association, loyalty and perceived quality. However, there is no agreement among researchers on its operating mode. Indeed, the empirical operating modes of You and Donthu (1997[100], 2001[99], 2002[98]); You *et al.* (2000)[101]; Guizani (2008)[38] do not distinguish between the two dimensions, i.e. awareness and association to the brand. Guizani (2008)[38]; Thi Minh (2012)[88] added social value to the conventional dimensions of brand equity.

We note that we are interested in the conceptualization of brand equity by Donthu and You (2001)[99]. In fact, this conceptualization was elaborated along sound theoretical bases. It has been tested on three categories of brands and validated in several cultural contexts.

The positive and significant relationship between trust and brand equity has been highlighted in several studies. Indeed, Gurviez (1999) [41] showed that the dimensions of brand equity, namely performance, familiarity, knowledge and shared values are antecedents of trust. Aurier *et al.* (2001)[7] showed that trust is the result of all the dimensions of brand equity, namely perceived quality, perceived value and satisfaction. According to Amraoui (2004)[5], a high level of brand equity has a positive influence on trust in the brand. Janouri and Gharbi (2008)[45]; Broyles *et al.* (2009)[17]; Gora, Ba (2011); Thi-Minh (2012)[88] demonstrated empirically that brand equity has a positive and significant impact on online trust. Thus, we suggest setting out the first three research hypotheses:

H.1 : « The brand loyalty positively influences e-trust ».

H.2 : « The brand awareness/association positively influences e-trust ».

H.3 : « The brand perceived quality positively influences e-trust ».

2.3 The website-related variables

Ben Naoui and Zaiem (2013b)[14] classified the set of characteristics of a website mentioned in the literature into five main categories. The first category includes all the functional features of the site, including its appearance and the quality of the interface dedicated to users. The second category includes the safety elements, such as security, respect for personal data and achieving promises. The third category refers to the quality of the information. The latter should be clear, accurate, reliable, updated and varied. The fourth category refers to the hedonistic nature of a website (the emotional state, the flow state). The fifth category refers to the relational nature of a website, including the social support available to the Internet user so as to customize the offer dedicated to him and to interact with him when needed.

To evaluate the web sites characteristics, we focus on the different facets of the perceived quality of the service provided by these sites, as identified by Bressolles (2006)[16]. These are the quality of information, ease of use, design, reliability/respect of commitments, security/privacy and interactivity/personalization.

The literature has largely stressed the important role of the quality of web sites in general, and the service provided by these sites, in particular. Many empirical research works showed the positive and significant impact of the e-service quality on e-trust (Zha *et al.*, 2006[104]; Zarrai and Gharbi, 2007[103]; Kassim and Ismail, 2009[47]; Rajaobelina, 2011[74]; Ghane *et al.*, 2011[35]; Ben Naoui and Zaiem, 2014[13]). Indeed, the ease of use of the interface dedicated to Internet users is an important element in the building of e-trust (Koufaris and Hampton-Sosa, 2004[53]; Gummerus *et al.*, 2004 [39]; Zarrai and Gharbi, 2007 [103]; Kasim and Ismail, 2009[47]; Ben Naoui and Zaiem, 2014[13]). Similarly, the quality of the information provided by the web sites is a positive factor in the building of e-trust (Wang and Emurian, 2004; Kim *et al.*, 2005; Zarrai and Gharbi, 2007[103]; Ben Naoui and Zaiem, 2014[13]).

The researches of Wakefield *et al.* (2004)[94]; Zarai and Gharbi (2007)[103]; Cyr (2008)[28]; Ben Naoui and Zaiem (2014) [13] demonstrated that the design has a positive and significant impact on e-trust. Ribbink *et al.* (2004)[78]; Gummerus *et al.* (2004) [39]; Zarai and Gharbi (2007)[103]; Kasim and Ismail (2009)[47]; Ben Naoui and Zaiem (2014)[13] showed that e-trust is influenced in a positive way by security and respect for privacy. Finally and according to Gummerus *et al.* (2004)[39], reliability and respect of commitments help build e-trust.

We propose, from these theoretical evidences, to state the following hypothesis:

H.4 : « The e-service quality positively influences e-trust ».

H.4.1 : « The information quality positively influences e-trust ».

H.4.2 : « The ease of use positively influences e-trust ».

H.4.3 : « The design positively influences e-trust ».

H.4.4 : « The reliability and the respect of commitments positively influence e-trust ».

H.4.5 : « The security/privacy positively influence e-trust ».

H.4.6 : « The interactivity/personalization positively influence e-trust ».

2.4 Characteristics of Internet users

2.4.1 The disposition to trust

Two main approaches allowed the defining of the concept of disposition to trust. The first approach assimilates it to a trait of personality that remains steady over time (Sitkin and Pablo, 1992[85]; Walczuch *et al.*, 2001[95]; Lee and Turban, 2001[55]; Chouk, 2005[23]; Kim and Tadisina, 2007)[51] and that is influenced by the experiences of childhood (Fukuyama, 1995), by culture and by the type of

personality (Hofstede, 1980[44]). The second approach considers the concept as a predisposition and a tendency to be voluntarily dependent on others (McKnight *et al.* 1998[61], 2002[62]; McKnight and Chervany, 2002[63]). Plusieurs recherches témoignent de l'importance de la disposition à faire confiance dans la formation de la confiance en ligne. Cependant, la nature de la relation entre ces deux concepts est caractérisée par une certaine divergence. Indeed, some researchers opt for a moderating role of the disposition to trust between e-trust and its antecedents (Lee and Turban, 2001[55]; Chen and Barnes, 2007[20]; Zarrai and Gharbi, 2007[103]; Rajaobelina *et al.*, 2009[75]; Rajaobelina, 2011[74]). Others rather opt for a direct effect of the disposition to trust and e-trust (Gefen, 2000[33]; McKnight *et al.*, 2002[62]; McKnight and Chervany, 2002[63]; Koufaris and Hampton-Sosa, 2004; Kim and Tadisina, 2007[51]; Thompson and Jing, 2007[89]; Chen and Barnes, 2007[20]; Kantsperger and Kunz, 2010[46]; Ben Naoui and Zaiem, 2014[13]).

We note that the direct effect between these two concepts is much more prominent in the initial phase of the trust relation (McKnight *et al.* 1998[61], 2002[62]; Ben Naoui and Zaiem, 2014[13]). Besides, the objective of our research is the investigation of "established trust", as stated by Lee and Turban (2001)[55]; Rajaobelina (2011)[74]. Therefore, the disposition to trust will be considered as a moderating element in the relationship between e-trust and the e-service quality.

Thus, the fifth research hypothesis is the following:

H.5: "The effect of the e-service quality on e-trust is higher when the level of the disposition to trust is high"

2.4.2 Perceived risk

The first theoretical conceptualization of the notion of perceived risk originated in the work of Bauer (1960) who equated consumer behavior to examples of risk-taking and risk reduction (Ben Naoui, 2014[13]). The notion of perceived risk was defined as being an uncertainty or a loss associated with the evaluation of alternatives related to a purchase act and the consequences of this loss (Murray, 1991[67]; Volle, 1995[93]; Forsythe and Shi, 2003[30]; Mandel, 2003[59]; Cochart, 2003[26]; Yousafzai *et al.*, 2003[102]; Hillson and Murray, 2005[43]; Aqueveque, 2006[6]; Kim *et al.*, 2008[50], etc.).

Several different types of risk have been identified in the literature. It is mainly financial risk (Stone and Grønhaug, 1993[87]; Bobitt and Dabholkar, 2001[15]; Lendrevie *et al.*, 2003[56]; Laroche *et al.*, 2004[54]; Chouk and Perrien, 2004[24]; Bart *et al.*, 2005[9]; Janouri and Gharbi, 2008[45]), performance risk (Stone and Grønhaug, 1993[87]; Bobitt and Dabholkar 2001[15]; Laroche *et al.* 2004[54]; Janouri and Gharbi, 2008[45]), physical risk (Laroche *et al.*, 2004[54]; Gora, 2011[36]), social risk (Stone and Grønhaug, 1993[87]; Murray and Schlacter, 1990[66]; Laroche *et al.*, 2004[54]; Janouri and Gharbi, 2008[45]), time risk (Stone and Grønhaug, 1993[87]; Lendrevie *et al.*, 2003[56]; Laroche *et al.*, 2004[54];

Janouri and Gharbi, 2008[45]), psychological risk (Stone and Grønhaug, 1993[87]; Murray and Schlacter, 1980[66]; Bobitt and Dabholkar, 2001[15]; Lendrevie *et al.*, 2003[56]; Laroche *et al.*, 2004[54]; Janouri and Gharbi, 2008), risk related to the information (Laroche *et al.*, 2004[54]; Bart *et al.*, 2005[9]; Pennanen, 2009[72]), risk related to the digital environment (Pavlou, 2003[71]; Ratnasingham and Pavlou, 2003[76]; Verhagen *et al.*, 2004[91]; 2006[92]) and risk related to the relationship (Pavlou, 2003[71]; Ratnasingham and Pavlou, 2003[76]; Verhagen *et al.*, 2004[91]; 2006[92]).

The literature has largely emphasized the importance of the notion of perceived risk in trust building. Nonetheless, researchers do not totally agree on the nature of the relationship between these two concepts (Mayer *et al.*, 1995[60]; Yousafzai *et al.*, 2003[102]; Chouk and Perrien, 2004[24]; Janouri and Gharbi, 2008[45]; Rajaobelina, 2011[74]; Ben Naoui, 2014[12]). As a matter of fact, perceived risk was considered to be an antecedent of trust, particularly in the works of Corbitt *et al.* (2003)[27]; Mukherjee and Nath (2003)[65]; Janouri and Gharbi (2008)[45]; Gora (2011)[36], etc., a consequence of trust (Olsen and Olsen, 2000[69]; Chang and Chen, 2008[18]) or a facet of trust (Kassim and Abdulla, 2006[48]). It was also considered as a moderating variable in the works of Grazioli and Wang (2001)[37]; Schlosser *et al.* (2006)[80]; Rajaobelina (2011)[74].

We restate the fact that the objective of our research is the study of "established trust" as expressed by Schlosser *et al.* (2006)[80]; Rajaobelina (2011)[74]. Thus, and in perfect agreement with Rajaobelina (2011)[74], the perceived risk of online purchasing is considered to be a moderating element in the relationship between e-trust and e-service quality. Hence our hypothesis **H.6**: "The influence of e-service quality on e-trust is weaker when the level of perceived risk associated with online purchasing is high".

3. METHODOLOGY

In order to validate the conceptual model and the research hypotheses, we used an online survey which consisted in submitting a questionnaire online and via mail (see Appendix 2 for more details about measurement scales). We chose this method of data collection in order to reproduce the authentic conditions of purchase online and to collect a large number of responses from respondents with different profiles.

The choice of the research subject product fell on cosmetics because their consumption is linked, on the one hand, to the physical and performance features of the product, and on the other, to the symbolic values conveyed by the brand and the emotions it raises in the consumer. As for the selection of the websites to be investigated, it took place along three stages:

- We started by asking a group of 26 women (with different socio-demographic profiles and various professional categories) to list all the brands of cosmetics commercialized online that they know.

- Then, we set up a list of 6 brands according to the following criteria: 1. Brands that are most cited; 2. Brands commercializing the same product and having the same price levels; 3. Brands having the same target and practicing similar marketing strategies; 4. Commercial websites sharing similar technical, functional and visual characteristics.
- In a third step, we measured the brand equity of the 6 preselected brands, using the measurement instrument of Yoo and Donthu (2001)[99] on a sample of 80 women with different profiles in terms of age, income, level of education, profession, Internet use frequency (50% of the women currently use Internet) and previous experiences with online shopping (50% of the women have already purchased cosmetic products online).

Finally, and as the purpose of our research is to identify the positive elements in the development of e-trust, we chose the two brands that have the highest brand equity: the Yves Rocher brand (www.Yves-rocher.fr) and the Kiko Milano brand (www.Kikocosmetics.fr).

After selecting websites, we proceeded with the invitation to take part in the survey. Hence, we sent emails in which we mentioned that only women were invited to participate in the survey. We explained to the recipients that they were kindly required to perform, as naturally as possible, an e-shopping experience of one or more products of a cosmetics brand. We made it clear that they could access the web site by clicking on the link printed below the message.

Before browsing and buying on the selected site, participants are invited to answer the first part of the questionnaire that includes questions related to the disposition to trust and to brand equity. After their online shopping experience, they are asked to answer the second part of the questionnaire that comprises questions related to the e-service quality, to the e-trust and to the perceived risk.

We finally collected 350 answers (175 answers for each web site) from a sample of women with different profiles in terms of age, income, level of education, profession, frequency of Internet use (50% of the women use Internet moderately, the other 50% use it more frequently), and previous experience with online shopping (50% of the women have already purchased online one or more cosmetic products vs. 50% of them did not buy cosmetics online).

4. EMPIRICAL STUDY

4.1 Reliability and validity of the measurement scales

To validate the measurement scales, we performed a Confirmatory Factorial Analysis (CFA) with the structural equation method (SEM). Besides, we used the maximum likelihood method (ML) to estimate variables. However,

the conditions of multinormality¹ have not been checked. Therefore, and in order to check if the violation of the normal law has no effect on the results, we used the Bollen-stine bootstrap (N = 2000) procedure. Then, we examined the values of the parameters estimated by the ML method and those found through the bootstrap method (N = 250) so as to ensure the stability of the data.

To check the reliability of the measurement scales, at the exploratory and confirmatory levels, we examined the Cronbach's Alpha indices and the Rho indices of Jöreskog that exceed the 0.6 threshold (Bagozzi and Yi, 1988[8], cited in Akrou, 2010[3]). The convergent and discriminating validity was established through the approach of Larker and Fornell (1981)[29], considering that the Rho values of convergent validity are above the 0.5 threshold (Roussel *et al.*, 2002[79]), and finally the extracted variances values exceed the square of the correlations between dimensions (see Appendix 3).

4.2 Reliability and validity of the global measurement model

The global measurement model presents a good goodness of fit (Chi-square/df = 2.536 ; GFI = 0.896 ; AGFI = 0.902 ; RMR = 0.032 ; RMSEA = 0.031 ; NFI = 0.909 ; CFI = 0.915 ; TLI = 0.909). The reliability at a confirmatory level was checked with the Rhô of Jöreskog values that are superior than the threshold 0.6 recommended by Bagozzi and Yi (1988[8], cited in Akrou, 2010[3]) (see Appendix 4, Table 1). Furthermore, the values of Rhô of the convergent validity are superior than the threshold 0.5 recommended by Roussel and al. (2002)[79] (see Appendix 4, Table 1). And finally, the extracted variances values, which are superior to the squared correlations between the different dimensions, confirm the discriminant validity of our model (see Appendix 4, Table 2).

4.3 Hypothesis tests and results

The causal model of our research indicate a satisfactory goodness of fit (Chi-square/df = 2.521 ; GFI = 0.889 ; AGFI = 0.886 ; RMR = 0.038 ; RMSEA = 0.039 ; NFI = 0.901 ; CFI = 0.909 ; TLI = 0.907). To test the research hypothesis, we used the Structural Equations Method (AMOS 18). The results of the causal links between the e-trust, the e-service quality and the dimensions of brand equity are presented in the table below. Hypothesis H.1, H.2, H.3 and H.4 and the sub-hypotheses arising from it are validated. Consequently, the brand loyalty, the perceived quality, the brand awareness/associations, the e-service quality and each of her dimensions have positive and significant influence on e-trust.

Table 1: Tests of hypothesis

Relations	CR	P	Conclusions
E-trust← Brand Loyalty	5.343	0.000*	H.1 is validated

E-trust← Brand Awareness / Associations	4.739	0.000*	H.2 is validated
E-trust← Perceived Quality	4.123	0.000*	H.3 is validated
E-trust← E-service Quality	7.915	0.000*	H.4 is validated
E-trust← Quality of information	3.684	0.000*	H.4.1 is validated
E-trust← Ease of use	2.256	0.000*	H.4.2 is validated
E-trust← Design	3.639	0.000*	H.4.3 is validated
E-trust← Reliability/respect of engagements	2.835	0.000*	H.4.4 is validated
E-trust← Security/Privacy	5.098	0.000*	H.4.5 is validated
E-trust← Interactivity/ Personalization	5.640	0.000*	H.4.6 is validated

4.4 Test of moderating effects of disposition to trust

We started by checking the reliability and validity of the measurement scale of the disposition to trust. The results of an exploratory factor analysis attest to the single dimensionality of the scale with a good internal consistency (Alpha de Cronbach = 0.894). The measurement model of the disposition to trust indicate globally a satisfactory goodness of fit (Chi-square/df = 3.561 ; GFI=0.956 ; AGFI=0.952 ; RMR=0.046 ; RMSEA=0.039 ; NFI=0.968 ; CFI=0.982 ; TLI=0.979). The reliability and the convergent validity of the scale are satisfactory with a value of the Rhô of Jöreskog equal to 0.819 and a value of Rhô of the convergent validity equal to 0.726.

To test the moderating effects of disposition to trust, we used a multi-group analysis with the modeling method by structural equations. We begin by dividing the sample into two groups according to the classification of dynamic clusters: a group of individuals with a high level of disposition to trust and a group of individuals with a weak disposition to trust.

The test of Chi-square difference between the free model and the constrained model is significant (Chi-square=16.781 ; df=9 ; p=0.000). Thus, the disposition to trust exerts a moderating effect on the relationship between the e-service quality and e-trust. In addition, the influence of the e-service quality exerted on e-trust is much stronger in the group of individuals with a high level of disposition to trust (see Table 2). This allows us to validate hypothesis H.5.

Table 2: Results of the moderating effect of the disposition to trust

	G1 : A higher level of disposition to trust			G2 : A weak level of disposition to trust		
	Estimate	CR	P	Estimate	CR	P
E-trust \leftarrow E-Service Quality	0.719	8.439	0.000	0.626	7.585	0.000

4.5 Test of moderating effects of perceived risk

We first verified the reliability and the validity of the measurement scale of perceived risk. The exploratory factor analysis results show the single dimensionality of the scale with good internal consistency (Cronbach's Alpha = 0.894). The three-item scale is considered as exactly identified. The reliability and the convergent validity of the scale are satisfactory with a value of Rhô of Jöreskog

equal to 0.879 and a Rhô value of the convergent validity equal to 0.721.

In order to test the moderating role of perceived risk, two groups were identified: a first group with a high level of perceived risk and a second one with a low level of perceived risk. The Chi-square test was significant (Chi-square=19.275 ; df=11 ; p=0.000). In addition, the influence of the e-service quality on e-trust is weaker in the group of individuals with a high level of perceived risk (see Table 3). Hence, hypothesis H.6 is validated.

Table 3: Results of the moderating effect of perceived risk

	G1 : A higher level of perceived risk			G2 : A weak level of perceived risk		
	Estimate	CR	P	Estimate	CR	P
E-trust \leftarrow E-Service Quality	0.823	8.989	0.000	0.769	9.236	0.000

5. RESULTS AND DISCUSSIONS

The objective of this research was to propose a conceptual framework related to the various determinants of e-trust. We were interested in studying: (1) The roles of website-related variables, namely e-service quality; (2) The roles of the characteristics associated with the brand, or more precisely, the brand equity; (3) The roles of variables related to the Internet user such as his disposition to trust and his perception of risks associated with e-shopping.

The findings of an empirical study conducted on two commercial websites related to two brands of cosmetics showed that all the dimensions of the e-service quality as well as the different facets of brand equity exert significant positive effects on e-trust. Features related to the Internet user, including his disposition to trust and his perception of risks when involved in online buying have moderating effects on the relationship between the e-service quality and e-trust.

In total agreement with the literature (Zha *et al.*, 2006[104]; Zarrai and Gharbi, 2007[103]; Kassim and Ismail, 2009[47]; Rajaobelina, 2011[74]; Ghane *et al.*, 2011[35]; Ben Naoui and Zaiem, 2014[13]), the empirical results of our research showed that the e-service quality has an impact on e-trust. Indeed, the information quality provided on the website has a significant positive impact on trust. These results were confirmed by Wang and Emurian (2005)[96]; Kim *et al.*, (2005)[52]; Zarrai and Gharbi (2007)[103], Ben Naoui and Zaiem (2014)[13]. Similarly, and as confirmed by Koufaris and Hampton-Sosa (2004)[53]; Gummerus *et al.*, (2004)[39]; Zarrai and Gharbi (2007)[103]; Kasim and Ismail (2009)[47]; Ben Naoui and Zaiem (2014)[13], the ease of use of the

interface devoted to the Internet user has a positive impact on e-trust.

Besides, we have shown that the site design exerts a positive impact on e-trust. These results are consistent with those of Wakefield *et al.* (2004)[94]; Zarai and Gharbi (2007)[103]; Cyr (2008)[28]; Ben Naoui and Zaiem (2014)[13]. It equally seems that e-trust is reinforced by security and respect for privacy. This converges with the conclusions of Ribbink *et al.* (2004)[78]; Gummerus *et al.* (2004)[39]; Zarai and Gharbi (2007)[103]; Kasim and Ismail (2009)[47]; Ben Naoui and Zaiem (2014)[13]. Reliability and compliance with promised commitments on the part of the online seller impacts on e-trust in a positive way. The work of Gummerus *et al.* (2004)[39] confirmed these results.

The empirical results showed that the components of brand equity, namely the brand loyalty, the brand awareness/association and the brand perceived quality have a significant positive impact on e-trust. Our results are consistent with those of Aurier *et al.* (2001)[7]; Amraoui (2003)[5]; Janouri and Gharbi (2008)[45]; Broyles *et al.* (2009)[17]; Gora (2011)[36]; Thi-Minh (2012)[88].

Finally, we showed that the disposition to trust and perceived risk of buying online play a moderating role in the relationship between the e-service quality and trust. These results are in keeping with those of Rajaobelina (2011)[74]. It seems, indeed, that the impact of the e-service quality on trust is stronger for users with a strong disposition to trust (versus users with a low disposition to trust). Similarly, the impact of the e-service quality on trust is weaker for users who perceive the risk associated with

buying online more acutely (versus Internet users who perceive this risk in a weaker way).

By paying closer attention to the moderating role of disposition to trust in the relationship between each dimension of the e-service quality and e-trust, we notice that the impact of the quality of information on e-trust is significant only for the group of women with a strong disposition to trust. The impact of the design is significant for the group of women with a low disposition to trust. The impact of reliability, respect of commitments, interactivity and personalization on e-trust are significant for both groups. The impact of ease of use on e-trust is not significant for either group.

Besides, when focusing on the moderating role of perceived risk in the relationship between each dimension of the e-service quality and e-trust, we deduce that the impact of interactivity and personalization and the role of design on e-trust are significant for both groups (low versus high levels of perceived risk). The impact of reliability, respect of commitments and security on trust are significant for the group of women who have a high level of perceived risk. The impact of the quality of information on e-trust is significant for the group with a low perception of the risk inherent in buying online. However, the impact of ease of use on trust is not significant for either group.

6. CONTRIBUTIONS, LIMITATIONS AND FUTURES RESEARCHES

Our study presents a conceptual framework that allows to explain the development of e-trust relying on the roles played by the e-service quality, the brand equity elements and the characteristics of Internet users. The integration of brand equity elements is a significant theoretical contribution of the current research work. In fact, it allowed to highlight the set of functional attributes through the products' physical qualities and performance, as well as all the symbolic values through the emotions raised by the brand.

However, this conceptual framework does not deal with the importance of the impact of third parties in the development of e-trust. It would have been interesting to integrate other elements, such as the impact of virtual communities, to enrich the research results.

In addition, we endeavored to investigate elements that are favorable to the development of e-trust. This choice led us to select brands having high brand equity. It would have been interesting to extend the search field to other brands with low levels of brand equity so as to compare the results.

The second contribution of our research is the identification of the nature of the relationship between the Internet users' characteristics and e-trust that is based on the dynamic nature of the concept of trust. Thus, the perceived risk and the disposition to trust were studied as being moderating elements in the development of e-trust.

Our research presents levers of action and of brand management which take into account the specificities of the traditional and digital environment. Indeed, in a perspective that combines the product's functional attributes, the symbolic characteristics conveyed by the brand and the quality of the meeting place between the end consumer and the various brand's products (that is the brand's website), professionals should consider both the brand equity components and the quality of service delivered by the brand's website, in order to foster the development of a climate of trust and hence encourage users to purchase online. They should also focus their efforts on studying the different Internet users' profiles who wish to buy cosmetics online.

The most difficult thing, in this case, is operating on elements related to the personalities and profiles of Internet users. Nevertheless, and according to an empirical research findings, the website elements that influence the trust of all types of Internet users are design, interactivity and the customization of the offer. Thus, we recommend that professionals rely, first, on the interactive nature of the site, in order to support, guide and advise the prospective buyers by providing offers that meet their needs, their expectations, and the nature as well as the specificities of their skin types, etc. They should equally build further on the aesthetic, visual and sound aspects of the site, while keeping a certain harmony between the image conveyed by the site design and the one conveyed by the physical point of sale.

Our search has a methodological limitation, though. It is inherent in the nature of the data collection mode. Indeed, this choice is primarily accounted for by our desire to ensure authentic conditions for the development of e-trust. This would be a difficult condition to meet if we used a survey in a laboratory, as this may alter the behavior of participants who are to be assisted and observed while they are browsing the site. Nevertheless, it is difficult to control the entire browsing experience on the selected site.

REFERENCES

- [1] Aaker, D. A. 1996b. Measuring brand equity across products and markets. *California Management Review*. 38.
- [2] Aaker, D.A. 1991. *Managing Brand Equity*. New York, The Free Press
- [3] Akrou, F. 2010. *Les méthodes des équations structurelles*. 1st Edition, Unité de Recherche en Marketing.
- [4] Akrou, W. and Akrou, H. 2010. Relations entre acheteur et vendeur: Les catalyseurs d'une confiance durable. *Décisions Marketing*. 57.
- [5] Amraoui, L. 2003. La perception du risqué lié à l'achat: Une approche intégrative du capital de marque, de la confiance en la marque et de l'image du point de vente. *Proceedings in the 2nd Atelier de Recherche AFM, La Sorbonne, Paris*. 21-35.

- [6] Aqueveque, C. 2006. Extrinsic cues and perceived risk: The influence of consumption situation. *Journal of consumer Marketing*. 23, 5. 237-247.
- [7] Aurier, P., Benavent, C. and N'Goala, G. 2001. Validité discriminante et predictive des composantes de la relation à la marque. *Proceedings in the 17th of the AFM Congress*.
- [8] Bagozzi, R.P. and Yi, Y. 1988. On the evaluation of structural equation model. *Journal of The Academy of Marketing Science*. 16. 74-94 cited in Akrouf, F. 2010. *Les méthodes des équations structurelles*. 1st Edition, Unité de Recherche en Marketing.
- [9] Bart, Y., Shankar, V., Sultan, F. and Urban, G. L. 2005. Are the drivers and role of online trust the same for all web sites and consumers? A large scale exploratory empirical study. *Journal of Marketing*. 69. 133-152.
- [10] Bauer, R. 1960. Consumer Behavior as risk taking. *Dynamic Marketing for a Changing World*. R.S. Hancock ed., American Marketing Association, 389-398.
- [11] Bello, D.C. and Holbrook, M.B. 1995. Does an absence of brand equity generalize across product classes?. *Journal of Business Research*. 34. 125-131.
- [12] Ben Naoui, F. 2014. La formation de la confiance envers un site web informatif et son effet sur les réactions des internautes: Une approche intégrant la qualité d'un service en ligne et les caractéristiques individuelles. PhD Thesis, 10 Nov. 2014.
- [13] Ben Naoui, F. and Zaiem, I. 2014. The initial e-trust formation to a content-based website: The role of e-service quality and disposition to trust. *Journal of Research in Marketing*. 3, 1. 222-231.
- [14] Ben Naoui, F. and Zaiem, I. 2013b. An exploratory study of the key factors in the evaluation of informative web sites and their influence on e-trust : the role of traits of personality. *International Review of Management and Business Research*. 2, 1/3, Mars 2013. 282-301.
- [15] Bobitt, L.M. and Dabholkar, P.A. 2001. Integrating attitudinal theories to understand and predict use of technology-based self service. *International Journal of Service Industry Management*. 12, 5. 423-450.
- [16] Bressolles, G. 2006. La qualité de service électronique : NetQual Proposition d'une échelle de mesure appliquée aux sites marchand et effets modérateurs. *Recherche et Applications en Marketing*. 21, 3.
- [17] Broyles, S.A., David, W.S. and Thaweenphan, L. 2009. Examining brand equity antecedent/consequence relationships. *Journal of Marketing Theory and Practice*. 17. 145-162.
- [18] Chang, H.H. and Chen, S.W. 2008. The impact of online store environment cues on purchase intention, trust and perceived risk as mediator. *Online Information Review*. 32, 6. 818-841.
- [19] Chaudhuri, A. and 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
- [20] Chen, Y.H. and Barnes, S. 2007. Initial trust and online buyer behavior. *Industrial Management and Data Systems*. 107, 1. 21-36.
- [21] Chen, C. 2006. Identifying significant factors influencing consumer trust in an online travel site. *Information Technology and Tourism*. 8, 3/4. 197-214.
- [22] Chen, S.C. and Dhillon, G.S. 2003. Interpreting dimensions of consumer trust in e-commerce. *Information Technology and Management*. 4, 2/3. 303-318.
- [23] Chouk, I. 2005. Confiance et Commerce électronique : Un premier bilan. In *proceedings of the 4th International marketing Trends Congress*. Paris 2005.
- [24] Chouk, I. and Perrien, J. 2004. Les facteurs expliquant la confiance du consommateur lors d'un achat sur un site marchand : Une étude exploratoire. *Décisions Marketing*. 35. 75-86.
- [25] Chouk, I. and Perrien, J. 2003. Les déterminants de la confiance du consommateur vis-à-vis d'un site marchand : Une étude exploratoire. In *proceedings of the 6th of E.Thil*. 25-26 November 2003.
- [26] Cochart, M.M. 2003. La perception du risque de santé alimentaire : Approfondissement conceptuel et perspectives managériales. In *proceedings of the 3rd International Marketing Trends Congress*. Venise.
- [27] Corbitt, B.J., Thanasankit, T. and Yi, H. 2003. Trust and e-commerce: a study of consumer perceptions. *Electronic Commerce Research and Applications*. 2, 3. 203-215.
- [28] Cyr, D. 2008. Modeling website design across culture: Relationship to trust, satisfaction and e-loyalty. *Journal of Management Information Systems*. 24, 4. 47-72.
- [29] Fornell, C. and Larcker, D.F. 1981. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*. 18 (February). 39-50.
- [30] Forsythe, S.M. and Shi, B. 2003. Consumer patronage and risk perceptions in Internet shopping. *Journal of Business Research*. 56. 867-875.
- [31] Fukuyama, F. 1995. *Trust*. The Free Press, New York, NY.
- [32] Gefen, D. and Straub, D.W. 2004. Consumer Trust in B2C e-Commerce and the Importance of Social Presence: Experiments in e-Products and e-Services. *Omega: The International Journal of Management Science*. 32, 6. 407-424.
- [33] Gefen, D. 2000. E-Commerce: The Role of Familiarity and Trust. *The International Journal of Management Science*. 28. 725-737.
- [34] Gharbi, J.E., Ayari, M. and Ben Achour, A.A. 2003. Relation entre les traits de l'individu, l'émotion et la confiance dans le site. In *proceedings of AIM*, Grenoble 2003.

- [35] Ghane, S., Fathian, M. and Gholamian, M. R. 2011. Full relationship among e-satisfaction, e-trust, e-service quality, and e-loyalty: The case of Iran e-banking. *Journal of Theoretical and Applied Information Technology*. 33, 1. 1-6.
- [36] Gora, B. 2011. Risque perçu par le consommateur à travers ses achats de services sur Internet. Master Thesis in Business Administration, *Université de Québec A Trois-Rivières*.
- [37] Grazioli, S. and Wang, A. 2001. Looking without seeing: Understanding unsophisticated consumers' success and failure to detect internet deception. *Proceedings of the ICIS 2001*.
- [38] Guizani, H. 2008. Personnalité de la marque et Capital marque: Essai de construction d'un modèle intégrateur. PhD Thesis, University of Pierre Mendes. France.
- [39] Gummerus, J., Liljander, V., Pura, M. and Van Riel, A. 2004. Customer loyalty to content-based Web sites: The case of an online health-care. *The Journal of Services Marketing*. 18, 2/3.
- [40] Gurviez, P. and Korchia, M. 2002. Proposition d'une échelle de mesure multidimensionnelle de la confiance dans la marque. *Recherche et Applications en Marketing*. 17, 3. 41-61.
- [41] Gurviez, P. 1999. La confiance comme variable explicative du comportement du consommateur : Proposition et validation empirique d'un modèle de la relation à la marque intégrant la confiance. *AFM Congress*, 15. 301-327.
- [42] Harris, L.C. and Goode, M.M.H. 2004. The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of Retailing*. 80. 139-158.
- [43] Hillson, D.A. and Murray-Webster, R. 2005. Understanding and managing risk attitude. Gower Publications, Aldershot, UK.
- [44] Hofstede, G. 1980. Motivation, Leadership and Organization: Do American Theories apply abroad?. *Organizational Dynamics*. 9, 1. 42-63.
- [45] Janouri, F. and Gharbi, J.E. 2008. Affrontement entre le risque perçu et le capital marque dans la formation de la confiance dans un site marchand. In proceedings of the International Congress Marketing Trends, Venice. 17th-19th of January 2008.
- [46] Kantsperger, R. and Kunz, W.H. 2010. Consumer trust in service companies: A multiple mediating analysis. *Managing Service Quality*. 20, 1. 4-25.
- [47] Kassim, N.M. and Ismail, S. 2009. Investigating the complex drivers of loyalty in e-commerce settings. *Measuring Business Excellence*. 13, 1. 56-71.
- [48] Kassim, N.M. and Abdullah, A.K.M.A. 2006. The influence of attraction on Internet banking: An extension to the trust-relationship commitment model. *International Journal of Bank Marketing*. 24, 6. 424-442.
- [49] Keller, K.L. 1993. Conceptualizing, measuring and managing customer-based brand equity. *Journal of Marketing*. 57, 1.
- [50] Kim D.J., Ferrin D.L. and Rao H.R. 2008. A trust-based consumer decision-making model in electronic commerce: the role of trust, perceived risk, and their antecedents. *Decision Support Systems*. 44, 2. 544-564.
- [51] Kim, E. and Tadisina, S. 2007. A model of customers' trust in e-businesses: micro-level inter-party trust formation. *The Journal of Computer Information Systems*. 48, 1. 88-104.
- [52] Kim, H.R., Lee, M. and Ulgao, F.M. 2005. Brand personality, self-congruity and the consumer-brand relationship. *Asia Pacific Advances in Consumer Research*. 6. 111-117.
- [53] Koufaris, M. and Hampton-Sosa, W. 2004. The development of initial trust in an online company by new customers. *Information and Management*. 41, 3. 377-397.
- [54] Laroche, M., McDougall, G.H.G, Bergeron, J. and Yang, Z. (2004). Exploring How Intangibility Affects Perceived Risk. *Journal of Service Research*. 6, 4. 373-389.
- [55] Lee, M.K.O. and Turban, E. 2001. Trust model for consumer internet shopping. *International Journal of Electronic Commerce*. 6, 1. 75-91.
- [56] Lendrevie J., Lévy, J. and Lindon, D. 2003. *Théorie et pratique Marketing*. Mercator, 7th (Ed.) Dalloz.
- [57] Lewicki, R.J. and Bunker, B.B. 1996). Developing and maintaining trust in work relationships. Cited in Kramer, R.M. and Tyler, T.R. (Eds). *Trust in Organizations: Frontiers of Theory and Research*. Sage, Thousand Oaks, CA. 114-139.
- [58] Lohia, R., Bello, D.C. and Porter, C.E. 2009. Building trust in US-Japanese business relationships: Mediating role of culture sensitivity. *Industrial Marketing Management*. 38. 239-252.
- [59] Mandel, N. 2003. Shifting selves and decision making: the effects of self-construal priming on consumer risk-taking. *Journal of Consumer Research*. 30, 1. 30-40.
- [60] Mayer, R.C., Davis, J.H. and Schoorman, D.F. 1995. An integrative model of organizational trust. *Academy of Management Review*. 20, 3. 709-734.
- [61] McKnight, H.D., Cummings, L.L. and Chervany, N.L. 1998. Initial trust formation in new organizational relationships. *Academy of Management Review*. 23, 3. 473-490.
- [62] McKnight, H.D., Choudhury, V. and Kacmar, C. 2002. Developing and validating trust measures for e-commerce : An integrative typology. *Information Systems Research*, 13, 3. 334-361.
- [63] McKnight, D.H., and Chervany, N. 2002. What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology. *International Journal of Electronic Commerce*. 6, 2. 35-59.

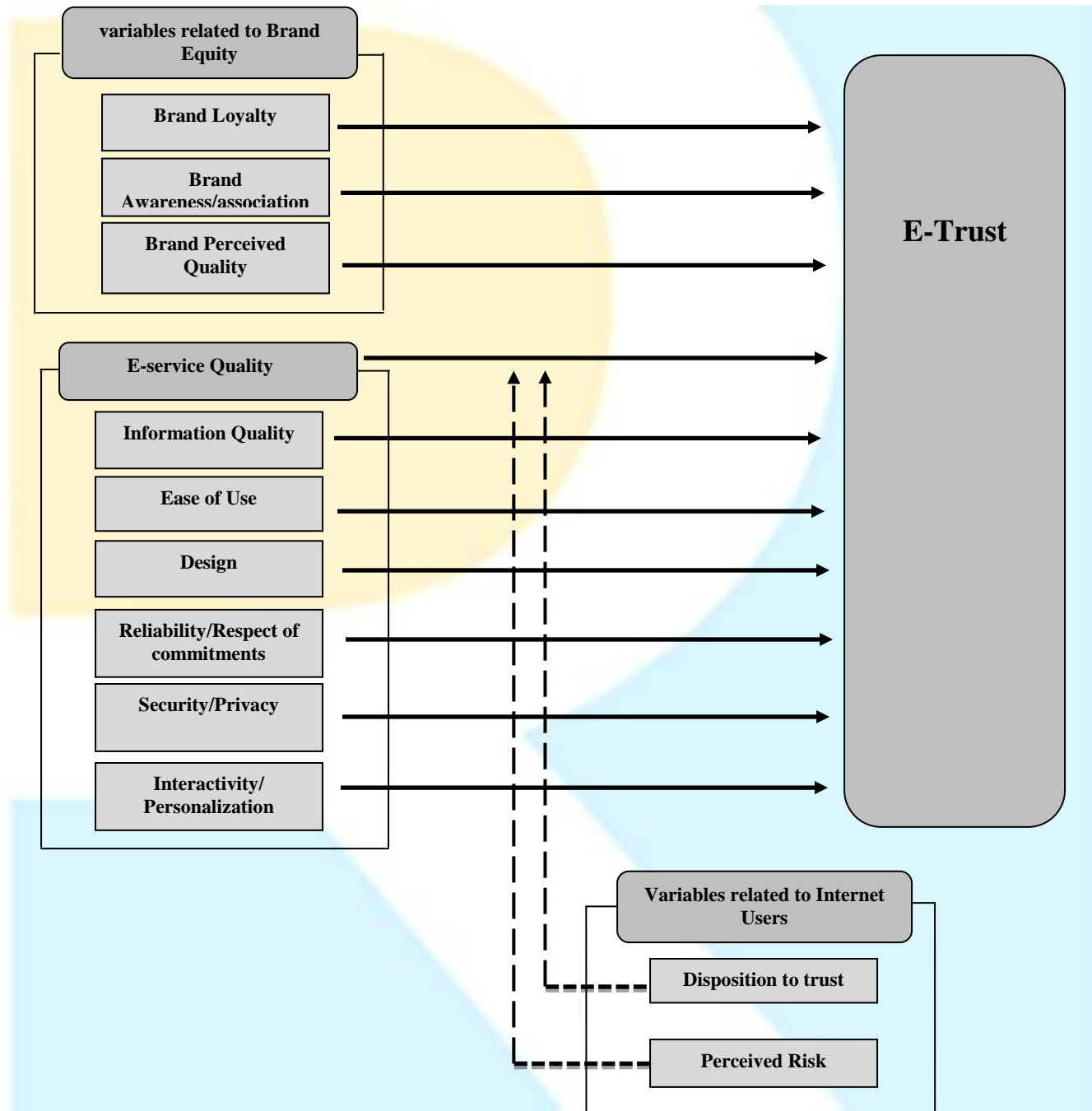
- [64] Moorman C. Desphandé R and Zaltman G. 1993. Factors Affecting Trust Marketing Research relationship. *Journal of Marketing*; 57. 81-101
- [65] Mukherjee, A. and Nath, P. 2003. A model of trust in online relationship banking. *International Journal of Bank Marketing*. 21, 1. 5-15.
- [66] Murray, K.B. and Schlacter, J.L. 1990). The impact of services versus goods on consumer's assessment of perceived risk and variability. *Journal of The Academy of Marketing Science*. 18, 1. 51-65.
- [67] Murray, K.B. 1991. A test of services marketing theory: Consumer information acquisition activities. *Journal of Marketing*. 55. 10-25.
- [68] NeviNs, J.L. and Moner, R.B. 2008. Performances applications of distributors effectiveness, trust and culture in import channels of distribution. *Industrial Marketing Management*. 37. 46-58.
- [69] Olsen, J. and Olsen, J.M. 2000. I2i trust in e-commerce. *Communications of the ACM*. 43, 12. 115-127.
- [70] Park, C.S. and Srinnivasan, V. 1994. A survey-based method for measuring and understanding brand equity and its extendibility. *Journal of Marketing Research*, 31, 2.
- [71] Pavlou, P.A. 2003. Consumer Acceptance of Electronic Commerce : Integrating Trust and Risk with the Technology Acceptance Model. *International Journal of ElectronicCommerce*. 7, 3. 101-134.
- [72] Pennanen, K. 2009. The Initial Stages of Consumer Trust Building in e-Commerce A Study on Finnish Consumers. *Business Administration Marketing*. Acta Wasaensia N° 201.
- [73] Pennanen, K. 2006. How Consumers Build Trust in e-Commerce: Towards a Trust Formation Model. *Latin American Advances in Consumer Research*. 1, 3844.
- [74] Rajaobelina, L. 2011. Les antécédents et les conséquences de la confiance en ligne: Le cas du secteur financier. PhD Thesis, November 2011.
- [75] Rajaobelina, L., Bergeron, J., and Ricard, L. 2009. Proposition d'un Modèle des Antécédents et des Conséquences de la Confiance en Ligne: Le Cas des Services Bancaires en Ligne. In proceedings of the IBIMA. 10, 27. 207-218.
- [76] Ratnasingham, P. and Pavlou, P. A. 2003. Technology trust in Internet-based interorganizational electronic commerce. *Journal of Electronic Commerce in Organizations*. 1, 1. 17-41.
- [77] Rempel, J. K., Holmes, J. G. and Zanna, M. P. 1985. Trust in close relationships. *Journal of Personality and Social Psychology*. 49, 95-122.
- [78] Ribbink, D., Van Riel, A.C.R., Liljander, V. and Streukens, S. 2004. Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality*. 14, 6.
- [79] Roussel, P., Durrieu, F., Campoy, E., and El Akermi, A. 2002. Méthodes d'équations structurelles : Recherches et applications en Gestion. Economica (Ed.), Paris.
- [80] Schlosser, A.E. White, T.B. and Lloyd, S. 2006. Converting website visitors into buyers: How website investment increases consumer trusting beliefs and online purchase intentions. *Journal of Marketing*. 70, 2. 133-148.
- [81] Shim, S., Eastlick, M.A., Lotz, S.L. and Warrington, P. 2001. An online purchase intentions model: The role of intention to search. *Journal of Retailing*. 77. 397-416.
- [82] Simon, C.J. and Sullivan, M.W. 1993. The Measurement and determinants of brand equity: A financial approach. *Marketing Science*. 12, 1. 28-52.
- [83] Sirdeshmukh, D., Singh, J. and Sabol, B. 2002. Consumer trust, value and loyalty in relational exchanges. *Journal of Marketing*. 66.15-37.
- [84] Sireix, L. and Dubois, J.L. 1999. Vers un modèle Qualité-Satisfaction intégrant la confiance. *Recherche et Application en Marketing*. 14, 3. 1-22.
- [85] Sitkin, S.B. and Pablo, A.L. 1992. Reconceptualizing the determinants of risk behavior. *Academy of Management Review*. 17, 1. 9-38.
- [86] Smith, B.J. and Barclay, D.W. 1997. The effects of organizational differences and trust on the effectiveness of selling partner relationships. *Journal of Marketing*, 61, January, 3-21.
- [87] Stone, R.N. and Gronhaug, K. 1993. Perceived Risk: Further considerations for the marketing discipline. *European Journal of Marketing*. 27, 3. 39-50.
- [88] Thi-Minh, H.L. 2012. Capital-marque et personnalité de la marque: Contributions théoriques et apports empiriques dans un contexte vietnamien. PhD. Thesis. University of Grenoble, 2012.
- [89] Thompson, T.S.H. and Jing, L. 2007. Consumer trust in e-commerce in the United States, Singapore and China. *Omega*. 35. 22-38.
- [90] Vazquez, R. Del Rio, A.B. and Iglesias, V. 2002. Consumer-based Brand Equity: Development and Validation of a Measurement Instrument. *Journal of Marketing Management*. 18, 1/2. 27-48.
- [91] Verhagen, T., Tan, Y. and Meents, S. 2004. An Empirical Exploration Of Trust And Risk Associated With Purchasing At Electronic Marketplaces. In Proceedings of the 17th Bled E-Commerce Conference. Bled, Slovenia, 21-23rd June 2004.
- [92] Verhagen, T., Meents, S. and Tan, Y.H. 2006. Perceived risk and trust associated with purchasing at electronic marketplaces. *European Journal of Information Systems*. 15. 542-555.
- [93] Volle, P. 1995. Le concept de risque perçu en psychologie du consommateur : antécédents et statut théorique. *Recherche et Applications en Marketing*. 10, 1. 39-56.
- [94] Wakefield, R.L., Stocks, M.H. and Wilder, W.M. 2004. The role of web site characteristics in initial trust formation. *The Journal of Computer Information Systems*. 45, 1. 94-103.
- [95] Walczuch, R., Seelen, J. and Lundgren, H. 2001. Psychological reasons for consumer trust in e-retailing.

- Proceedings of the Eighth Research Symposium on Emerging Electronic Markets (RSEEM 01). Maastricht, The Netherlands, September 16-18, 2001. (M. Schoop, R. Walczuch, eds.); <http://www-i5.informatik.rwth-aachen.de/conf/rseem2001/>
- [96] Wang, Y.D. and Emurian, H.H. 2005. An overview of online trust: Concepts elements, and implications. *Computers in Human Behavior*. 21. 105-125.
- [97] Yoon, S.J. 2002. The antecedents and consequences of trust in online-purchase decisions. *Journal of Interactive Marketing*. 16, 2.
- [98] Yoo, B. and Donthu N. 2002. Testing cross-cultural invariance of the brand equity creation process. *The Journal of Product and Brand Management*. 11, 6/7.
- [99] Yoo, B. and Donthu, N. 2001. Developing and validating multidimensional consumer- based brand equity scale. *Journal of Business Research*. 52. 1-14.
- [100] Yoo, B. and Donthu, N. 1997. Developing and Validating a Consumer-Based Overall Brand Equity Scale for Americans and Koreans: An Extension of Aaker's and Keller's Conceptualizations. Paper Presented at AMA Summer Educators Conference, Chicago.
- [101] Yoo, B., Donthu, N. and Lee S. 2000. An Examination of Selected Marketing Mix Elements and Brand Equity. *Journal of the Academy of Marketing Science*. 28. 197-213.
- [102] Yousafzai, S.Y., Pallister, J.G. and Foxall, G.R. 2003. A proposal model of e-trust for electronic banking. *Technovation*. 23, 11. 847-860.
- [103] Zarrai, R. and Gharbi, J.E. 2007. Perceptual and Personal Determinants of Trust on a Commercial web site. *Proceeding in ECIG* 2007.
- [104] Zha, J.X., Ju, F.H. and Wang, L.S. 2006. Customer satisfaction in E-commerce: An exploration of its antecedents and consequences. *International Conference on Management of Innovation and Technology*. 1, 4035894.540-544.

APPENDIX

Appendix 1

The research model



Appendix 2

The measurement scales

E-Service quality	Bressolles (2006)	6 dimensions, 18 items 5 likert-type scale
E-trust	Chouk and Perrien (2005)	4 dimensions, 16 items 5 likert-type scale
Brand equity	You and Donthu (2001)	3 dimensions, 15 items 5 likert-type scale
Disposition to trust	Teo and Liu (2002) Chen (2006)	2 dimensions, 6 items 5 likert-type scale
Perceived risk	Shim et al. (2001) ; Chen (2006)	1 dimension, 3 items 5 likert-type scale

Appendix 3

Table 1: Reliability and validity of the e-service quality measurement scale

	The reliability at an exploratory level	The reliability at a confirmatory level	The convergent validity (Fornell and Larker, 1981)	The discriminant validity (Fornell and Larker, 1981)					
	Cronbach's Alpha	Rhô of Jöreskog		1	2	3	4	5	6
1. Ease of use	0,892	0.884	0.653	0.653					
2. Quality of information	0,887	0.882	0.684	0.166	0.684				
3. Design	0,899	0.986	0.666	0.210	0.193	0.666			
4.Security/ privacy	0,875	0.871	0.698	0.261	0.158	0.158	0.698		
5.Reliability/ Respect of engagement	0.887	0.881	0.687	0.176	0.129	0.111	0.271	0.687	
6.Interactivity / Personalization	0.896	0.892	0.632	0.098	0.167	0.201	0.145	0.099	0.632

Table 2: The ESQ model fit indices

Chi-Square	GFI	AGFI	RMR	RMSEA	NFI	CFI	TLI
2.856	0.893	0.891	0.026	0.020	0.897	0.966	0.899

Table 3: Reliability and validity of the brand equity measurement scale

	The reliability at an exploratory level	The reliability at a confirmatory level	The convergent validity (Fornell and Larker, 1981)	The discriminant validity (Fornell and Larker, 1981)		
	Cronbach's Alpha	Rhô of Jöreskog		1	2	3
1. Perceived Quality	0.897	0.799	0.686	0.686		
2. Loyalty	0.902	0.798	0.693	0.203	0.693	
3.Brand Awareness / Association	0.901	0.799	0.694	0.315	0.056	0.694

Table 4: The brand equity model fit indices

Chi-Square	GFI	AGFI	RMR	RMSEA	NFI	CFI	TLI
2.568	0.813	0.810	0.050	0.052	0.879	0.906	0.883

Table 5: Reliability and validity of the e-trust measurement scale

	The reliability at an exploratory level	The reliability at a confirmatory level	The convergent validity (Fornell and Larker, 1981)	The discriminant validity (Fornell and Larker, 1981)		
	Cronbach's Alpha	Rh� of J�reskog		1	2	3
1.Credibility	0,905	0.887	0.732	0.732		
2.Integrity	0,878	0.876	0.713	0.286	0.713	
3.benevolence-Orientation to resolve problems	0.889	0.879	0.721	0.186	0.281	0.721

Table 6: The e-service quality model fit indices

Chi-Square	GFI	AGFI	RMR	RMSEA	NFI	CFI	TLI
3.106	0.891	0.889	0.046	0.044	0.877	0.954	0.879

Appendix 4

Table 1: Reliability and convergent validity of the variables of the global measurement model

	Rh� of J�reskog $P\xi$	Rh� of the convergent validity (p_{vc})
Ease of use	0,897	0,641
Quality of information	0,877	0,574
Design	0,810	0,685
Security/privacy	0,743	0,572
Reliability/Respect of engagement	0,879	0,608
Interactivity / Personalization	0,864	0,626
Perceived Quality	0,871	0,702
Brand Awareness Association	0,873	0,722
Loyalty	0,876	0.767
Credibility	0,864	0.759
Integrity	0.851	0.748
Benevolence-orientation to resolve problems	0.739	0.647

Table 2: The discriminant validity of the measurement model

	1	2	3	4	5	6	7	8	9	10	11	12
1.Ease of use	0,641											
2.Quality of information	0,220	0,574										
3.Design	0,254	0,121	0,685									
4.Security/ Privacy	0,225	0,221	0,320	0,572								
5.Reliability/ Respect of engagement	0,303	0,151	0,132	0,201	0,608							
6.Interactivity / Personalization	0,163	0,277	0,117	0,534	0,292	0,626						
7.Perceived Quality	0,074	0,013	0,012	0,020	0,123	0,006	0.702					
8.Brand Awareness Association	0.075	0.112	0.107	1.879	2.709	1.620	2.575	0,722				
9.Loyalty	0,078	0,024	0,020	0,025	0,102	0,177	0,488	0.205	0,767			
10.Credibility	0,162	0,206	0,156	0,187	0,204	0,160	0,039	0,122	0.038	0.759		
11.Integrity	0.134	0.109	0.098	0.124	0.180	0.201	0.097	0.198	0.009	0.091	0.748	
12.Benevolence- orientation to resolve problems	0.149	0.228	0.102	0.301	0.007	0.117	0.075	0.084	0.170	0.154	0.049	0.647