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## E-SATISFACTION AND E-LOYALTY OF CONSUMERS SHOPPING ONLINE

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**Moez Ltifi**

**Faculty of Economics and Management of Sfax**

*Postal Address: P.B n°59, Sidi Bouzid 9100, Tunisia*

*Author's Personal/Organizational Website: <http://www.fsegs.rnu.tn>*

*Email: [ltifimoez2007@yahoo.fr](mailto:ltifimoez2007@yahoo.fr)*

Moez Ltifi is Ph.D, Student in marketing at the Faculty of Economics and Management of Sfax, Tunisia. His research interests include consumer attitudes toward online shopping, the influence of satisfaction, trust and involvement on the acceptance of new technologies and e-loyalty.

**Jamel-Eddine Gharbi**

**Faculty of Juridical, Economic and Management Sciences of Jendouba, Jendouba University, LIGUE laboratory**

*Postal Address: 18 Rue 02 Mars, Jendouba 8100, Tunisia*

*Author's Personal/Organizational Website: <http://www.fsjegj.rnu.tn>*

*Email: [Jameleddine.gharbi@fsjegj.rnu.tn](mailto:Jameleddine.gharbi@fsjegj.rnu.tn)*

Dr Jamel-Eddine Gharbi is a professor at Jendouba University. His areas of interests are online consumer behaviour, marketing perception, and Information technology.

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### Abstract

The objective of this research is to study the impact of emotional state and perceived risk of remote purchase on e-satisfaction during the Internet shopping. As well, it aims to study the influence of e-satisfaction on e-loyalty. The data gathering was carried out by a laboratory experiment followed by a questionnaire. The results show that three dimensions of the emotional state during Internet shopping (the pleasure, stimulation

and dominance) have a significant positive impact on e-satisfaction. Dimensions of the perceived risk of remote purchase, (the total risk, the financial risk, the social risk, the psychological risk, the functional risk, and the physical risk) don't have a significant impact on e-satisfaction, except the risk of loss of time has a negative impact. Finally e-satisfaction influences positively and significantly the e-loyalty of the cyber consumers.

**Keywords: Electronic commerce, Internet, emotional state, perceived risk, e-satisfaction, and e-loyalty.**

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## **INTRODUCTION**

Until today, the concepts of satisfaction and loyalty to a merchant website, is a central concern of marketers. In recent years, electronic commerce has entered a phase of exponential growth and the use of the Internet in the consumer decision-making process ensures that traders to make greater use of this tool. While consumer behavior in e-commerce seems to be a complex subject, the consumer expectations are changing, challenging traditional patterns of supply of commercial websites.

Given this situation, several questions arise: How do you measure customer loyalty in the field of e-commerce? To what extent the emotional state favors the creation of a long-term relationship between the brand (i.e. commercial website) and the consumer? And how is the perception of risk acting on satisfaction and loyalty of the commercial?

The answer to these questions is a priority for any player seeking to understand consumer behavior in the context of electronic commerce. Like the traditional stores, service quality commercial websites seems to play a role in the success and survival of websites in a competitive increasingly. The aim is to transform the simple act of consumption or purchasing a real electronic service. In this context, the objective of this research is to propose and test an explanatory model in order to understand the links between the emotional state, perception of risk in the context of consumer online satisfaction and loyalty online consumers. The diagram (1) below shows the conceptual model that we wish to test.

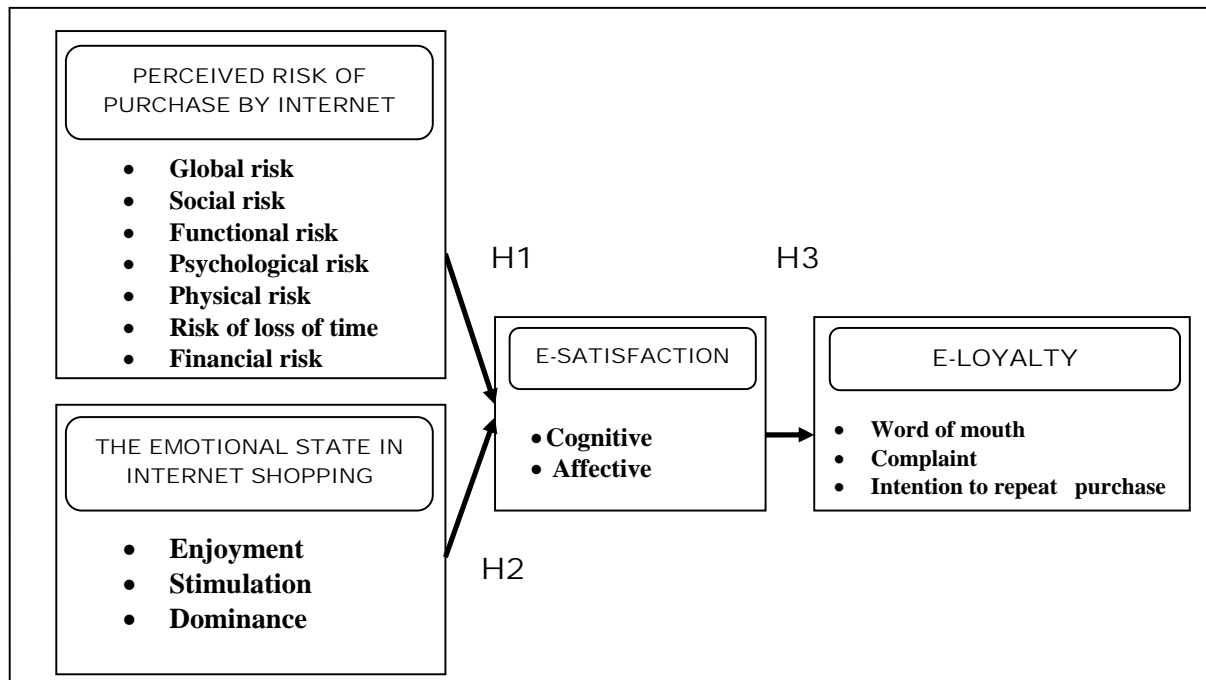


Figure 1: Conceptual model of research

As follows, we present the conceptual debate on each of our concepts. We also present the rationale for our hypotheses. Subsequently, we specify the methodology adopted. Finally, we present the results of the audit of the dimensionality and reliability of the measures taken and results to test our hypotheses.

## CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

### E-loyalty

According Allagui and Temessek (2005), the theoretical foundations of loyalty to a company of the Internet are similar to those of traditional loyalty. The concept of loyalty is central to marketing research. This concept has been the subject of much research Jacoby and Chestnut, (1978), Dick and Basu, (1994); Uncles and Laurent, (1997); Zeithaml and al, (1996); Oliver, (1999). The diversity of these studies demonstrates the richness of the subject. However, it is also the source of a sense of dispersion that does not satisfy the theorist nor the practitioner. Given the limitations of behavioral and attitudinal approaches largely developed by the marketing literature, contemporary research tends to adopt a relational approach to fidelity.

Under this approach, loyalty is defined as a continuing relationship established between the consumer and a brand or a brand. It represents the expression of the emotional connection that connects a consumer continues to make and is manifested in situations of purchasing and consumption. Mills (1998) emphasizes the dynamic nature of loyalty by presenting it not as a state, but rather as a relationship. In this way, loyalty is a relational process of development in which the contributions of both partners, strengthening their mutual fidelity (Dwyer and al, 1987; Evans and Laskin, 1994; Frisou, 1998).

This design does not qualify as loyal consumers who are really convinced of the superiority of their choice. Processor numbers differentiate the fidelity of the routine whose stability depends on economic conditions and does not represent a reflection of the effectiveness of the policy of the brand or sign (Cristou, 2001).

Indeed, loyalty is not only an abstract sense; it must be translated into concrete actions and behaviors (N'goala, 2003). Thus, fidelity is manifested by behavioral and psychological dependence and generates a strong will to continue the relationship. It is, thus, a constant attention paid by the individual to the mark in his thoughts and actions (Ouzaka, 2002). Loyalty can be seen as driving force consumers to resist changes in brands and this despite the situations encountered purchasing and consumption (Oliver, 1997; Aurier and al, 2001).

Research in this integrated approach, trying to present a broader conceptualization of loyalty. This is to study the behavior relationships, positive intentions towards the brand (change of sign, word of mouth, recommendation, resistance against persuasion, complaint, etc.), or consequences of fidelity. Taylor and Hunter (2003) note that loyalty to a web merchant is often captured by the intentions of fidelity, such as the intention to revisit a site, intends to recommend a site, or intend to buy the site.

Thus, beyond the intention of repeat purchase, a consumer loyalty can be expressed by caring behavior. This behavior can be manifested in a great desire to maintain the relationship, such as the tendency to complaint constructive or word-of-mouth expressing positive a willingness to join others in their choice (Cristou, 2001).

### **Word of mouth**

Word-of-mouth can be defined as the act of communicating formally or informally with other consumers about products and services of the company, including recommendations and defending the company against attacks from other consumers (Hennig-Thurau and al, 2002). It is a communication that is beyond the company and comes from a quite natural in the external environment and specifically for consumers. Word-of-mouth is characterized by a high credibility (Gremler and al, 1994). To advertising, consumers are generally skeptical of the sincerity and credibility of the message and saw that the belief that behind every advertisement there is a commercial interest that takes precedence over any design. Word-of-mouth is an important indicator of loyalty. In this context, Gould (1995) states that a loyal customer can be defined as one who not only uses the goods or services, but satisfaction is such that it speaks to his entourage. A loyal customer will disclose to others of good assessments and encourage them to attend the same company or buy the same brand. It is therefore to free publicity for the company.

### **Complaint**

The complaint is defined as a phenomenon related to post-purchase response to dissatisfaction during an episode of purchase or consumption of a product or service (Cree and Ladin, 1998). This is a "request for information, correction and / or compensation from the client and from the organization, following dissatisfaction with responsibility of the organization" (Prim- Allaz and Sabadie, 2003). The complaint is a valuable source of free information for identifying malfunctions. Therefore, companies must treat it as a source of enrichment rather than as a constraint.

The importance of the complaint is that of being given a second chance to the company. It allows it to overcome the problems that were causing the discomfort or dissatisfaction of the consumer and thus enable it to prevent and reduce the risks associated with customer relationship breaks Zeithaml and al, (1996); Prim and Pras, (1999). The theoretical foundations of loyalty to a cyber merchant are nearly identical compared to the traditional loyalty. However, the operating environment changes to better take into account the specificities of the interactive context in the field of interactive commerce.

### **Intention of repeat purchase**

If loyalty is defined as an uninterrupted sequence many purchases of the same brand, it is estimated according to the marketing literature that a minimum of three or four successive repeat purchase enough to talk about loyalty. The set of behavioral approaches to loyalty only attaches to observe the behavior of repeat purchase, without asking their intentional or not. The lack of distinction in all of these measures between intentional loyalty and loyalty is the main observed through this approach. It seems difficult to reconcile the overly simplistic approach to the behavioral importance of attitude in the decision process.

Behavior on the Internet is much less stable over time. Indeed, the cyber consumer has more alternatives to choose from, the cost of change is relatively small, and information about the sites is available at low cost. All these factors make it generally more difficult to understand loyalty to a website in its classical. In this context, Boulaire and Mathieu (2000) have demonstrated the centrality could play the commitment to the site in the determination of the precision. They emphasized the relevance of transcribing the relational approach in the conceptualization of loyalty on the internet.

Relational loyalty must be manifested by a cooperative relationship in the long run. The consumer is no longer a mere purchaser of the product or user of the site, but a true partner with whom we can cooperate and be willing to make sacrifices in the short term. The establishment of such a relationship necessarily involves the strengthening of satisfaction and consumer confidence in the brand or site.

### **Emotional state**

"Intense emotional state, characterized by a sudden physical and mental disturbances which are abolished in the presence of certain stimuli or representations vivid, appropriate responses to adapt to the environment. Inadequate modulation of emotional reaction leads to an exaggeration of the reaction in terms of euphoria or depression, or decrease it with insensitivity and indifference. Cognitive functions can be secondarily affected "(Louise Berube, 1991.)

Emotions are complex reactions that involve both body and mind. These reactions include a subjective mental state, such as anger, anxiety or love, an impulse to act as escape or attack, whether expressed openly or not, and profound change in the body, such that an increased heart rate or blood pressure.

Some of these physical changes prepare for adaptation actions supported. Others such as postures, gestures and facial expressions communicate to others what we feel or what we want others to believe that we feel.

By emotion, we mean a mental state of real time that arises from cognitive appraisals of events or thoughts. It has a phenomenological tone, is accompanied by physiological processes, is often expressed physically, and may result in specific actions to affirm or cope with the emotion, depending on its nature and meaning for the person having it (Richard P. Bagozzi, Mahesh Gopinath and Prashanth U.Nyeer,).

It follows from these definitions that combines emotion:

- Physical sensations (changes in heart rate, muscle tone, alertness, sweating...)
- Mental representations
- The specific motor responses (from the tension of facial muscles to flight or attack, for the case of a threatening situation, the smile is to "jump for joy" in a pleasant situation).

The importance and place of these elements in the development of emotion theories vary. Mehrabian (1970 and 1977) and Mehrabian and Russell (1973, 1974 and 1975) identify the emotional state as a reaction against the individual manifests an environment. According to Bitner (1992), is the set of tangible stimuli that influence the perception and response of the individual.

Emotion is a multidimensional concept. The dimensional perspective that describes emotions in terms of minimum number of base dimension recognizes this feature. The model of Mehrabian and Russell (1974) identifies three dimensions of emotion, namely pleasure versus displeasure, arousal and awakening versus non-dominant versus non-dominance. Regarding the first dimension, pleasure describes the satisfaction or happiness felt vis-à-vis a stimulus. Dube (1999) defined pleasure as "a primary motivation for purchasing hedonic products or services, or as a signal that a transaction has been satisfactory." Bel and Dube (1998) present three sources of pleasure: sensory pleasure, pleasure and fun social psychology. The sensory pleasure is the sense of contact between the individual and the physical world. The description of the sensory dimensions by the interviewees reflected this kind of pleasure. The social pleasure is being with others and especially with friends by performing an activity. Psychological pleasure has two kind of pleasure: the pleasure emotionally grasped through positive emotional responses experienced during a consumption experience, which includes cognitive and the intellectual dimension.

In this research, we will retain the emotional and sensory pleasure. Kardess (1988) states that arousal is a physiological state influenced by exposure to emotional stimuli. Dominance is defined as the extent to which the individual controls or is controlled by stimuli.

To sum up the emotional reaction means an intense experience of short duration and specific to a stimulus. The multidimensionality of this concept reflects its conceptual richness and explains the emotion in terms of three central dimensions.

In this research, we will look to capture the potential impact of these emotional states on the satisfaction of online shoppers. The study of this influence is part of the vision of Zajonc (1980.1984) which postulates that "the primary reaction of an individual in a situation where the emotional and cognitive conflicts, is emotional". Thus emotional

states positively influence the satisfaction of online shoppers. So our assumptions are as follows:

*H.1.1: The pleasure has a positive effect on the satisfaction of cyber consumers.*

*H.1.2: The stimulus has a positive effect on the satisfaction of cyber consumers.*

*H.1.3: The dominance has a positive effect on the satisfaction of cyber consumers.*

### **Perceived risk**

The notion of risk is a central theme of research in many fields as finance, marketing, sociology and psychology. In marketing, the risk is a source of much debate about the detailed steps of consumer behavior. Indeed, Bauer (1960) was the forerunner of the theory of perceived risk that consumers often perceive a risk at the time of their purchases. For this author, "consumer behavior involves risk in the sense that any action by the consumer will lead to consequences that can not anticipate with certainty approximate and some could be unpleasant."

Several researchers in marketing have proposed a multitude of definitions of perceived risk. Indeed, Cox E Rich (1964) have conceptualized entant that "the quantity issues in a purchase situation." For their part, Murray (1991) points out that the perceived risk is the uncertainty perceived by the consumer for losses or gains of a particular transaction. Volle (1995) also identified the risk as "the possibility of loss due to the purchase or consumption of a product (or service)." This diversity in the conceptualization of the concept confirms About Fishhoff (1985) which states "if one were to read ten articles on risk, it should not be surprised to see the risk described in ten different ways".

Although no consensus was reached on the precise nature of perceived risk, most authors agree that it is a built-dimensional, consisting of the likelihood of unpleasant results and the importance of loss, Roselius (1971), Bettman (1973), Lutz and Reilly (1973), Taylor (1974), Peter and Tarpey, (1975) and Peter and Ryan 1(976). On the other hand, it is considered a multi-faceted building up of physical risk, psychological risk, social risk, financial risk, performance risk and risk of loss of time, Jacoby and Kaplan, (1972); Peter and Tarpey, (1975); Brooker, (1984), Garner, (1986); Mitchell, (1992); Shiffman and Kanuk, (1994).

With the advent of the Internet as a new environment to purchase virtual nature, Forsythe and Shi (2003) have defined the perceived risk associated with Internet purchases as "the expectation of loss subjectively determined by year Internet Particular shopper in contemplating a purchase online". The risk perceived by consumers in using this new marketing method, to order the products they want increases. Indeed, Cox and Rich (1964) argue that certain forms of purchase are perceived as riskier. Thus, Spencer, Engel and Blackwell (1970) and Festervand, and Tsaais Synder (1986) specifically state that the purchase by telephone and mail order purchases are more risky than buying in a store.

Despite the importance of perceived risk in the understanding of satisfaction, there is no consensus regarding the relationship between these concepts. Indeed, some researchers consider the perceived risk as antecedent of satisfaction; others conceptualize because of satisfaction. As part of our research, the perceived risk is considered a precursor of satisfaction. Thus, the perceived risk makes it all the more

critical the concept of e-satisfaction.

Indeed, the lack of security and network reliability, lack of confidentiality of personal information stored or transmitted which can be intercepted by anyone other than those involved in the transaction reluctant to leave the consumer this means of distribution. This reluctance is manifested at the level of dissatisfaction of the consumer to the commercial website. Thus, we assume a negative impact on the dimensions of perceived risk on the dimensions of satisfaction with the site. Therefore, our assumptions are as follows:

*H.2.1: The global risk associated with purchasing over the Internet has a negative impact on the satisfaction of cyber consumers.*

*H.2.2: The financial risk associated with Internet shopping has a negative impact on the satisfaction of cyber consumers.*

*H.2.3: The risk of loss of time associated with Internet shopping has a negative impact on the satisfaction of cyber consumers.*

*H.2.4: The social risk associated with purchasing over the Internet has a negative impact on the satisfaction of cyber consumers.*

*H.2.5: The psychological risk associated with purchasing over the Internet has a negative impact on the satisfaction of cyber consumers.*

*H.2.6: The functional risk associated with Internet shopping has a negative impact on the satisfaction of cyber consumers.*

*H.2.7: The physical risk associated with Internet shopping has a negative impact on the satisfaction of cyber consumers.*

### **E-satisfaction**

Satisfaction has generally been presented as an emotional state arising from the non-confirmation of positive or negative initial expectations for the experience of possession or consumption (Oliver, 1980). However, recent research shows that this conception transactional, cognitive, based on a single standard of comparison (initial expectations) is far from sufficient to identify the process of formation of satisfaction.

In addition, this definition of popular satisfaction and is often confused with the conceptualization of perceived quality, found no echo in research in the field of e-commerce and the Web sites in general. This is due to the difficulty of measuring satisfaction in this perspective. In addition, as emotional satisfaction has been studied in research on the browsing experience but less evident in research on electronic commerce (Chiou, 2004).

Current researches mostly opt for a design considering the dual satisfaction as the result of two parallel processes, one is cognitive and the other is affective (Evrard, 1989). Beyond this distinction between the cognitive and emotional literature presents another difference in definition of satisfaction. In fact, researchers have defined this concept in



two distinct perspectives: a transactional perspective and relational perspectives. The transactional approach this meeting as a state resulting from the subsequent confirmation or refutation of the initial expectations in connection with a transaction.

However, this assessment point seems insufficient to judge the satisfaction felt by the individual during his experiences with the brand or the brand. The relational approach this meeting as "a constructed abstract describes the experience cumulative total (cumulative) consumption of a product or service" (Johnson and al, 1995). It is thus an effective state resulting from an overall assessment of the relationship with the company (De Wulf and al, 2001). In this way, the move towards relationship marketing requires a consideration as an object of satisfaction or dissatisfaction rather than the instant transaction but rather the combined experiences of past consumption.

In the trade of electronic commerce Dandouau (2001) states that the satisfaction of the user from a tradeoff between rewards and frustrations; for achieving the original purpose of the consultation (or may not be exactly the information sought or only one neighbor), by the way the goal was achieved (in terms of cognitive effort and time involved), the navigation itself, which could provide unintended stimulations.

However, it seems important to note that it is difficult for a company to influence the satisfaction derived from a client on the Web. Satisfaction of the latter is also dependent on factors that are not controlled directly by the company (the quality of its equipment, the congestion on the Internet, etc.).

In summary, it seems clear that brands and retailers are moving more and more to relational strategies in order to retain customers and maintain and develop relations of exchange and cooperation in the long run. However, the question at this stage is to identify ways to achieve such a relationship of loyalty in the long run. Several studies have established the importance of the perception of product quality in the creation of relationships and customer loyalty to the brand or the brand. It can be concluded that e-satisfaction has a positive effect on e-loyalty. Our assumptions are as follows:

*H.3.1: The cognitive e-satisfaction has a positive effect on the loyalty of cyber consumers.*

*H.3.2: The affective e- satisfaction has a positive effect on the loyalty of cyber consumers.*

## **RESEARCH METHODOLOGY**

After presenting the conceptual framework of our research and based on assumptions from our literature review, the methodology is devoted to the presentation of the method of data collection, the method of sampling and finally the justification of choice of scales for measuring concepts of our model.

The methodology adopted is a laboratory experiment followed by a questionnaire measuring the emotional state experienced during navigation, the perceived risk of by a remote, satisfaction and loyalty of shoppers. Subjects should only browse the site selected for the selected products. The term navigation is set to twenty minutes. The

subjects were asked to shop in a natural way, and as usual they will actually make the purchase through the Internet if they can buy the products. Everyone realizes this process of shopping itself. The experiment was conducted in February and March 2011.

The sample consisted of 400 undergraduate students and graduate faculty of Northwestern Tunisia. The sampling method is that of convenience. The sample has the following characteristics: 63.8% are female, 57% are aged 20 to 25, 94.5% were single and 51.6% have a computer at home.

### **Measurement concepts**

To measure the perceived risk to the merchant site to buy, we used the measurement scale developed by Jacoby and Kaplan (1972). This scale was used and validated by Murray and Schlacter (1990). This measure of perceived risk is composed of six types of risks are financial, performance, physical, psychological, social and related to time. Each is measured by scale of 5 items from (1) strongly disagree (5) strongly agree. The authors report a very satisfactory reliability index (Cronbach's alpha is about 0.87). Three items from the scale and Gronhaug Stone (1993) measured the overall perceived risk of buying the site. These state that the reliability of this scale is good (Cronbach's alphas range from 0.60 and 0.89).

Mehrabian and Russell (1974) develop the scale that we adopted to measure the emotional state during Internet shopping. It is composed of three distinct dimensions, namely that pleasure, arousal and dominance. The Cronbach alphas ranged from 0.56 to and 0.83.

The chosen measure of satisfaction is two-dimensional (cognitive satisfaction and emotional satisfaction). These two dimensions were operationalized using six items adapted from the work of Evrard and Aurier (1996), Oliver (1997) and N'goala (2000). These items were evaluated based on a Likert scale of 5 items ranging from totally disagree (1) to strongly agree (5).

The scale that we adopt to measure the loyalty of subjects who do their shopping on the Internet is that developed by Zeithaml and al (1996) and Oliver (1999). The chosen measure of precision is three-dimensional (dimension: word of mouth, size: complaint and dimension: repeat purchase intention). These three dimensions have been operationalized by means of twelve items. These items were evaluated based on a Likert scale ranging from 5 items totally disagree (1) to strongly agree (5). The Cronbach alphas of ranged from 0.71 to 0.90.

## **PRESENTATION AND DISCUSSION OF RESULTS**

To purify and test the homogeneity of the scales adopted and ensure the dimensional structure of the scale, we conducted a factor analysis for each of our scales, Zeller, (1994), Zeller and Carmines, (1976); Allen, (1974), Nunally, (1978). We used the method of maximum likelihood factor extraction with an orthogonal rotation (Varimax) (Dillon and Goldstein, 1984).

**Dimensionality and reliability of measurement scales**

Factor analysis shows that 12 items of the scale of Mehrabian and Russell (1974) can be grouped into two factors. Furthermore, item 7 is problematic and must be eliminated. Its removal led to an increase in alpha 0.701 to 0.835. The two factors explain 63,030% of the initial information. Indeed, the test adequate sampling indicates a value of 0.917 and the Bartlett test of sphericity is significant (Chi square = 2.645 with  $p = 0.000$ ).

Factor analysis reveals the existence of two factors with eigen values greater than one, are 3.674 and 3.259. The first factor includes items of pleasure and stimulation. Their Cronbach's alpha is 0.856. The second includes the items of dominance. Their alpha is 0.800. Factor scores were saved to represent the dimensions of emotional state.

Factor analysis shows that the data matrix of the measurement scale of perceived risk is factored. Indeed, the test adequate sampling indicates a value of 0.916 and the Bartlett test of sphericity is significant (Chi square = 4.233 with  $p = 0.000$ ). Similarly, factor analysis reveals the existence of three factors with eigenvalues greater than one, are 4.475, 3.320 and 2.357. These factors capture 59.867% of the initial information.

However, we eliminated items 3 and 4 with poor performances. Thus, item 7 was eliminated because it shows average correlations with both factors. Following their removal, the structure factor remains sort. The three factors had eigenvalues of 1.912, 1.736 and 1.886. They seize 62,871% of the initial information. The correlations of the items of the first factor ranged from 0.622 to 0.852. The first factor includes items of financial risk and performance. Their Cronbach's alpha is 0.714. The second includes the items overall risk and psychological risk. Their alpha is 0.630. The third factor includes items of social risk, with an alpha of 0.704. Factor scores were saved to represent the dimensions of perceived risk.

Factor analysis shows that the data matrix of the scale to measure satisfaction is factorized. Indeed, the test adequate sampling indicates a value of .590 and the Bartlett test of sphericity is significant (Chi square= 540,768 with  $p = 0.000$ ). Factor analysis shows that the six items of the scale Aurier and Evrard (1996), Oliver (1997) and N'goala (2000) can be grouped into three factors with eigenvalues greater than one, are 2.271, 1.287 and 1.167. These factors capture 78.748% of the initial information. However, we eliminated items 2 and 6 as they exhibit correlation with several factors. After the elimination, factor analysis emerges a single factor with eigenvalues greater than one, are 2.185. This factor seized 78% of the initial information. This factor includes items of satisfaction. Their Cronbach's alpha was 0.904.

Factor analysis shows that the data matrix of the measurement scale of fidelity is factorized. Indeed, the test adequate sampling indicates a value of .818 and the Bartlett test of sphericity is significant (Chi square = 838,176 with  $p = 0.000$ ). Factor analysis shows that 12 items of Zeithaml and al (1996) and Oliver (1999) can be grouped into a single factor with eigen value greater than one, or 2.944. This factor seized 73,595% of the initial information. A correlation of items with this factor varies between 0.828 and 0.876. Cronbach's alpha is 0.880.

## Hypothesis

### Impact of the emotional state of satisfaction with the site

Regression analysis shows that the three dimensions of the emotional state significantly and positively influence the satisfaction with the site. Indeed, these dimensions explain 36% of the variance of the e-cognitive satisfaction ( $R^2 = 0.360$ , adjusted  $R^2 = 0.125$ ). The overall regression model is significant because it shows a Fischer test value equal to 29,513 with a probability equal to 0.000. The constant is significant at the origin. The regression equation is written as follows.

$$\text{E-satisfaction cognitive} = 0.280 \text{ pleasure/stimulation} + 0.226 \text{ dominance} \\ (t = 5,977, p = 0.000) \quad (t = 4,827, p = 0.000)$$

Both these dimensions explain 38.2% of the variance of the e-emotional satisfaction ( $R^2 = 0.382$ , adjusted  $R^2 = 0.142$ ). The overall regression model is significant because it shows a Fischer test value equal to 33,949 with a probability equal to 0.000. The constant is significant at the origin. The regression equation is written as follows.

$$\text{E-satisfaction emotional} = 0.157 \text{ pleasure/stimulation} + 0.349 \text{ dominance} \\ (t = 3.179, p = 0.000) \quad (t = 7,515, p = 0.000)$$

Therefore, hypotheses H2.1, H2.2 and H2.3 respectively on the impact of the emotional dimensions (pleasure, stimulation and dominance) on cognitive and emotional e-satisfaction are confirmed.

### Impact of perceived risk on satisfaction with the site

The correlation matrix shows that there significant correlations between the dimensions of perceived risk. Therefore, a problem of multi collinearity occurs by performing a multiple regression between the dimensions of perceived risk and each dimension of satisfaction with the site. We conducted two simple regressions for the two dimensions of satisfaction with the dimensions of perceived risk.

Because satisfaction is two-dimensional, the impact of dimensions of perceived risk on satisfaction is verified by two regressions. Taking the cognitive satisfaction as the dependent variable, regression analysis shows that the risk associated with time significantly and negatively acts on the cognitive satisfaction to the site. Indeed, it explains 0.5% of the total variance ( $R^2 = 0.005$ , adjusted  $R^2 = -0.0002$ ). Thus, the regression model is written as follows:

$$\text{Cognitive e-satisfaction} = - 0.005 \text{ perceived risk related to time} \\ (T = - 1.00, p = 0921)$$

Similarly, taking the emotional satisfaction as the dependent variable, regression analysis shows that the risk related to time acts significantly and negatively on the emotional satisfaction to the site. Indeed, it explains 1.6% of the total variance ( $R^2 = 0.016$ , adjusted  $R^2 = -0.0002$ ). Thus, the regression model is written as follows:

$$\text{Emotional e-satisfaction} = - 0.016 \text{ perceived risk related to time} \\ (T = - 0,314, p = 0754)$$

However, the financial risk, social risk, physical risk, operational risk and psychological risk have no significant impact on the cognitive dimensions of satisfaction and effective relief.

Therefore, the hypothesis H1.3, respectively, relative to the influence of risk associated with time on satisfaction with the site is supported. By cons, hypotheses H1.1, H1.2, H1.4, H1.5, H1.6 and H1.7 and on the influence of financial risk, social risk, global risk, physical risk, psychological risk and functional risk are rejected.

### **Impact of e-satisfaction on e-loyalty**

The correlation matrix shows that there are significant correlations between the dimensions of loyalty to a site (word of mouth, complaint and repeat purchase intention). Therefore, a problem of multi collinearity occurs by performing a multiple regression between the dimensions of e-satisfaction and every dimension of loyalty to the site. We performed three simple regressions for the three dimensions of fidelity with the dimensions of satisfaction.

Since the e-loyalty is three-dimensional, the impact of dimensions of e-satisfaction on e-loyalty is tested by three regressions. Taking word of mouth as the dependent variable, regression analysis shows that the cognitive satisfaction and emotional satisfaction significantly and positively acts on the size of mouth of the variable fidelity to the site. Indeed, it explains 66.3% of the total variance ( $R^2 = 0.663$ , adjusted  $R^2 = 0.0437$ ). Thus, the regression model is written as follows:

$$\text{Word of mouth} = 0.514 \text{ emotional satisfaction} + 0.419 \text{ cognitive satisfaction}$$

$$(T = 13,685, p = 0.000) \quad (t = 11,154, p = 0.000)$$

Similarly, taking the complaint as a dependent variable, regression analysis shows that the cognitive satisfaction and emotional satisfaction significantly and positively act on the dimension of the variable complaint loyalty to the site. Indeed, it explains 54.4% of the total variance ( $R^2 = 0.544$ , adjusted  $R^2 = 0.0292$ ). Thus, the regression model is written as follows:

$$\text{Complaint} = 0.408 \text{ emotional satisfaction} + 0.360 \text{ cognitive satisfaction}$$

$$(T = 9,685, p = 0.000) \quad (t = 8,546, p = 0.000)$$

In the end, taking the repeat purchase intention as the dependent variable, regression analysis shows that the cognitive satisfaction and emotional satisfaction significantly and positively acts on the size of repeat purchase intention of the variable fidelity to the site. Indeed, it explains 60.6% of the total variance ( $R = 0.606$ , adjusted  $R^2 = 0.364$ ). Thus, the regression model is written as follows:

$$\text{Intention to repeat purchase} = 0.469 \text{ emotional satisfaction} + 0.383 \text{ cognitive satisfaction}$$

$$(T = 11,742, p = 0.000) \quad (t = 9,593, p = 0.000)$$

Therefore, H3.1 and H3.2 assumptions respectively on the impact of cognitive and emotional e-satisfaction on e-loyalty are confirmed.

<b>H1.1:</b> The pleasure has a positive effect on e-satisfaction of cyber consumers.	<b>Validated</b>
<b>H1.2:</b> The stimulation has a positive effect on e-satisfaction of cyber consumers.	<b>Validated</b>
<b>H1.3:</b> The dominance has a positive effect on e-satisfaction of cyber consumers.	<b>Validated</b>
<b>H2.1:</b> The global risk associated with purchasing over the Internet has a negative impact on e-satisfaction.	<b>Rejected</b>
<b>H2.2:</b> The financial risk associated with Internet shopping has a negative impact on e-satisfaction.	<b>Rejected</b>
<b>H2.3:</b> The risk of loss of time associated with Internet shopping has a negative impact on e-satisfaction.	<b>Validated</b>
<b>H2.4:</b> The social risk associated with purchasing over the Internet has a negative impact on e-satisfaction.	<b>Rejected</b>
<b>H2.5:</b> The psychological risk associated with purchasing over the Internet has a negative impact on e-satisfaction.	<b>Rejected</b>
<b>H2.6:</b> The functional risk associated with Internet shopping has a negative impact on e-satisfaction.	<b>Rejected</b>
<b>H2.7:</b> The physical risk associated with Internet shopping has a negative impact on e-satisfaction.	<b>Rejected</b>
<b>H3.1:</b> The cognitive e-satisfaction has a positive effect on e-loyalty of cyber consumers.	<b>Validated</b>
<b>H.3.2:</b> The emotional e- satisfaction has a positive effect on e-loyalty of cyber consumers.	<b>Validated</b>

## CONCLUSION

Our concern is to check on the one hand, the impact of perceived risk associated with the purchase by the merchant site and the emotional state during Internet shopping on e-satisfaction. In addition, we tested the influence of e-satisfaction on e-loyalty.

To reflect the outcome of our research, customer satisfaction against a commercial site is positively influenced by the emotional state in Internet shopping. When the perceived risk associated with purchasing the site, only the risk related to time acts negatively on satisfaction with the site. This satisfaction, as determined by the emotional state and perceived risk, generates consumer loyalty to the merchant site.

This work aims to offer practitioners of e-commerce what measures and strategies for quality management of sites and the risks to bring the consumer to have satisfied and loyal to the merchant site. Indeed, companies must work to improve the image of the benefits of the services offered on the site in attitude, cognition and security, then switch these psychological problems. Thus, it is interesting for online merchants, to make a continued investment in terms of consumer psychology in informing and educating in the. Therefore, it is infinitely easier to stir up trouble in the minds of consumers as to create a climate of risk-free satisfaction and loyalty.

Our research has some limitations that are all avenues of research. The first limitation is the non-probability method used for the selection of respondents. Indeed, despite the fact that this method meets the needs of our research, it is an obstacle to the generalization of our results. The second limitation is related to invoke the fact that our study was conducted only for the case of two products and use only a single site, which is another obstacle to the generalization of our results. It is useful to replicate this study for other products and other sites and compare the results. Finally, this limitation is inherent in the nature of the sample. We administered the questionnaire, only face-to-face after the experiment. In order to overcome this limitation, it would be interesting to set up an online survey, to the highest level of expertise.

## REFERENCES

- Allagui Anis and Temessek Azza, (2005), « La fidélité des utilisateurs des services d'un portail Internet : Proposition et test d'un modèle intégrateur », Recherche et Application en Marketing, 19-23.
- Aurier P., Benavent C. and N'Goala G. (2001), « Validité discriminante et prédictive des composantes de la relation à la marque », Actes du 17e Congrès de l'Association Française du Marketing, Deauville, Université de Caen, éd. J. Brée, 156-159.
- Bauer, R.A. (1960), «Consumer behaviour as risk-taking, dynamic Marketing for changing world», American Marketing Association, Chicago, IL, 389-398.
- Bern, D. J. and A. Allen (1974), "On predicting some of the people some of the time: the search for cross-situational consistence in behavior", Psychological Review (81), 506-20.
- Bettman J. R. (1973), "Perceived risk and its components: a model and empirical test", Journal of Marketing Research, 10, 184-190.
- Bitner, M. J. (1992). "Services capes. The impact of physical surroundings on customers and employees". Journal of Marketing, 56, 57-71.
- Boulaire C. and Mathieu A., (2000), « La fidélité à un site Web : proposition d'un cadre conceptuel préliminaire », Actes du 16ème Congrès de l'Association Française de Marketing, Montréal, 303-312.
- Brooker G. (1984) "An assessment of an expanded measure of perceived risk". Assoc Consum Res 1984; 11, 439– 46.
- Carmines, Edward G.; Zeller, and Richard A. (1979) "Reliability and validity assessment". Quantitative applications in the social sciences, 17.Sage, Beverly Hills. P 71.
- Chandon P., Wansink B. and Laurent G. (2000), "A benefit congruency framework of sales promotion effectiveness", Journal of Marketing, 64, 65-81.
- Chiou, J. S. (2004), "The antecedents of consumers' loyalty toward Internet Service Providers", Information & Management 41(6), 685.
- Cox D.F. and Rich S.U. (1964), "Perceived and consumer decision making – the case of telephone shopping", Journal of Marketing Research, 1, 32-39.
- Crie D. and Ladwein, (1998), « La lettre de réclamation au regard de la théorie de l'engagement: Une approche empirique dans la vente par correspondance », Cahier de Recherche de l'IAE de Lille, n°2.
- Cristou C., (2001), "Définition, mesure et modélisation de l'attachement à une marque comme la conjonction de deux dimensions distinctes et concomitantes : La dépendance et l'amitié vis-à-vis de la marque », Centres d'études et de



- recherche sur les organisations et la gestion, IAE d'Aixen- Provence.
- Dandouau J.-C. (2001), « Recherche d'information sur Internet et expérience de consultation », Recherche et Applications en Marketing, 16, 3, 9-23.
- De Wulf, Kristof, Odekerken-Shröder Gaby and Iacobucci Dawn (2001), "Investments in Consumer Relationships: A Cross-Country and Cross-industry Exploration", Journal of Marketing, 65, (oct), 33-55.
- Dick A.S, and Basu K., (1994), "Customer Loyalty: Toward an Integrated Conceptual Framework", Journal of the Academy of Marketing Science, n°22, 99-113.
- Dillon William R. and Matthew Goldstein, (1984), Multivariate Analysis: Methods and Applications, New York: John Wiley & Son.
- Dowling G.R. and Uncles M. (1997), "Do customer loyalty programs really work ?", Sloan Management Review, Summer, 71-82.
- Dubé, L. and Maute, M.F. (1998) "Defensive strategies for managing satisfaction and loyalty in the service industry", Psychology and Marketing, Vol. 16, No. 8, 775-91.
- Dwyer F.R., Schurr P.H. and OH S., (1987), "Developing buyer-seller relationships", Journal of Marketing, n°51, April, 11-27.
- Evans J.R, and Laskin R.L., (1994), "The relationship marketing process: a conceptualization and application", Industrial Marketing Management, 23, 439-452.
- Evrard. Y and Aurier. P. (1996), "Identification and validation of the components of the person-object relationship", Journal of business research, Vol. 37, 127-134.
- Evrard Y., (1989), "From involvement to satisfaction in media consumption", Journal of Consumer Satisfaction, Dissatisfaction and complaining behaviour, 2, 70-74.
- Festervand, T. A., Snyder, D. R, and Tsalikis, J. D. (1986), "Influence of Catalog vs. Store Shopping and Prior Satisfaction on Perceived Risk", Journal of the Academy of Marketing Science, 14, 4, 28-36.
- Forsythe S.M and Shi, B (2003), "Consumer patronage and risk perceptions in Internet shopping", Journal of Business Research, 56, 867-875.
- Frisou J. (1998), « Vers une théorie éclectique de la fidélité des clients. Le cas des services de télécommunication », XIVème Congrès International de l'Association Française du Marketing. Actes de l'Association Française du Marketing, 731-752.
- Garner S.J. (1986), "Perceived risk and information sources in services purchasing". Mid-Atl J Bus 1986; 24, 49-58 (Summer).
- Gould, G. (1995). "Why it is customer loyalty that counts and how to measure it".

Managing Service Quality, 5 (1), 15–19.

Gremler, D.D. and Stephen W. B., (1994), "Word-of-Mouth communication and customer loyalty to service providers", in AMA Summer Educators' Conference Proceedings: enhancing knowledge development in marketing, Vol. 5, R. Achrol and A. Mitchell, eds. Chicago: American Marketing Association, 331-32.

Hennig-Thurau T., Gwinner, K. P., and Gremier D. D., (2002), "Understanding relationship marketing outcomes: An integration of relational benefits and relationship quality", *Journal of Service Research*, 4(3), 230-247.

Jacoby J. and L. Kaplan (1972), "The Components of Perceived Risk", *Advances in Consumer Research*, 287-291.

Jacoby Jacob and Robert W. Chesnut (1978), "Brand Loyalty Measurement and Management", John Wiley and Sons, New York.

Johnson M.D., E.W. Anderson and C. Fornell, (1995), "Rational and adaptive performance expectations in a customer satisfaction framework", *Journal of Consumer Research*, 21, 695-707.

Kamakura W. and alii (2004), "Choice Models and Customer Relationship Management", Summary Paper for the Sixth Choice Symposium, Estes Park, Colorado.

Kinncar T. C., Taylor J. R., Ahmed S. A. (1974), "Ecologically Concerned Consumers: Who Are They?" *Journal of Marketing*, Vol. 38, N°2, 20 - 24.

Lutz, R. and Reilly, P. (1973), "An exploration of the effects of perceived social and performance risk on consumer information acquisition", *Advances in Consumer Research*, Vol. 1, 393-405.

Maute, M.F, and Dube, L. (1999). « Patterns of emotional responses and behavioral consequences of dissatisfaction». *Applied Psychology: An International Review*. 48:3, 349-366.

Mehrabian Albert and James A. Russell, (1973), "A measure of arousal seeking tendency", *Environment and Behavior*, vol. 5, 315-333.

Mehrabian Albert, (1970), "A semantic space of nonverbal behavior", *Journal of Consulting and Clinical Psychology*, vol. 35, 248-257.

Mehrabian Albert, (1977), "Individual differences in stimulus screening and arousability", *Journal of Personality*, vol. 45, 237-250.

Mehrabian, Albert and James A. Russell, (1974), "An approach to environmental psychology", Cambridge, MA: The MIT Press.

Mehrabian, Albert and James A. Russell, (1975), "The mediating role of emotions in environmental psychology", in C. S. Richard (Ed), *Psychology and Environment*

in the 1980s, Symposium at the University of Missouri, Columbia.

Mitchell V-W. (1992), "Understanding consumers' behavior: can perceived risk theory help? Management Science, 30, 3, 26-31.

Moulins Jean-Louis (1998), « Des communications interpersonnelles à la fidélité à la marque: essai de modélisation », Recherche et Application Marketing, 13, 3, 21-42.

Murray K. B. and J. L. Schlacter, (1990), "The Impact of Services Versus Goods on Consumer's Assessment of Perceived Risk and Variability", Journal of the Academy of Marketing Science, vol. 18, No 1, 51-65.

Murray, K. B. (1991), « A Test of Services Marketing Theory Consumer Information Acquisition Activities». Journal of Marketing, vol. 55, n° 1, 10-25.

N'goala G. (2003), « Mesurer la fidélité du consommateur à la marque dans une perspective relationnelle », 3ème Congrès sur les Tendances du Marketing, ESCP-EAP.

N'goala Gilles, (2000), "Une approche fonctionnelle de la relation à la marque: De la valeur perçue des produits à la fidélité des consommateurs", Thèse de doctorat, Université de Montpellier II.

Nunnally (1978), "Psychometric Theory", 2ème Ed., New York, McGraw-Hill Book Company.

Oliver Richard L. (1980), "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions", Journal of Marketing Research, Vol.17, November, 460-469.

Oliver Richard L. (1999), "Whence Customer Loyalty?" Journal of Marketing, Vol.63 (Special Issue), 33-44.

Oliver, R. L. (1997), "Satisfaction: Behavioral Perspective on the Consumer", McGraw-Hill International Editions.

Ouzaka Idir (2002), « Les consommateurs et leurs marques : Etude de la prédisposition du consommateur à s'engager dans la relation », papier de recherche n°649, Novembre.

Peter J. P. and Ryan M. J. (1976), "An investigation of perceived risk at the brand level", Journal of Marketing Research, 13, 184-188.

Peter J. P. and Tarpey L. X. (1975), "A comparative analysis of three consumer decision strategies", Journal of Consumer Research, 2, 1, 29-37.

Prim I. and Pras B., (1999), "Friendly complaining behaviors: toward a relational approach", Journal of Market-Focused Management, 3, 3-4, 331-350.

Prim-A.I. and Sabadie W., (2003), « Les Apports de la théorie de la justice pour une

- meilleure gestion des réclamations clients », Actes du Congrès de l'AFM, Tunis, 1179-1203.
- Roselius T. (1971), "Consumer rankings of risk reduction methods", *Journal of Marketing*, 30, 56-61.
- Schiffman LG, and Kanuk LL.( 1994) "Consumer behavior". Englewood Cliffs (NJ): Prentice-Hall, 1994.
- Spence H. E., J. F. Engel and R. D. Blackwell, (1970), "Perceived Risk in Mail-Order and Retail Store Buying", *Journal of Marketing Research*, vol. 7, No 3, 363-369.
- Stone E. and al. (1983), "A field experiment comparing information-privacy values, beliefs and attitudes across several types of organizations", *Journal of Applied Psychology*, 68, 3, 459-468.
- Taylor S.A., and Hunter G.L., (2003), "The impact of loyalty with e-CRM software and e-services", *International Journal of Service Industry Management*, 13, 5, 452-474
- 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.
- Zajonc, R. B. (1980), "Feeling and Thinking: Preference needs no Inferences," *American Psychologist*, 35, 151-175.
- Zajonc, R. B. (1984), "On the Primacy of Affect," *American Psychologist*, 39, 117-123.
- Zajonc, R., and Markus, H. (1982). "Affective and cognitive factors in preferences". *Journal of Consumer Research*, 9, 123-131.
- Zeithaml Valerie A., Leonard L. Berry and A. Parasuraman (1996), "The Behavioral Consequences of Service Quality", *Journal of Marketing*, Vol.60, April, 31– 46.
- Zeller R. A. and E. G. Carmines, (1976), "Factor scaling, external consistency, and the measurement of theoretical constructs", *Political Methodology*, vol. 3, 215-252.