Satisfaction and loyalty with the Tunisian postal services

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Abstract
The principal reason which pushes us to make this study it is the appearance of the new service firms similar to the Tunisian post office especially concerning the postal parcels. The objective of this research is to study on the one hand, the impact of the quality perceived of the mail service on the consumer satisfaction. Of another share, to test the mediator effect of satisfaction on the level of loyalty of the customer. The data-gathering was carried out using an investigation by questionnaire managed in four post offices of the town of Sfax (Tunisia), which are post office ‘‘Bab Bahar’’, post office ‘‘Sfax news’’, post office ‘‘Sfax Hached’’ and post office ‘‘City El Bahri’’. The results show that the perception of the quality of service influences the consumer satisfaction positively. In the same way, satisfaction has a significant and positive impact on the loyalty of the consumer.

Key words: Perceived quality, satisfaction, loyalty, services, investigation, questionnaire and Tunisian post office.

Introduction
Although the quality has been widely studied and has led to many conceptual debates and the development of multiple tools, they rely on a traditional view of this topic. Many studies have focused on the conceptualization of quality. The researchers initially focused on the difference between objective quality (that based on the product and production) and perceived quality (based on the user) (Garvin, 1983). In the field of marketing services, creating models of perceived quality as Servqual (Parasuraman and al.1985, 1988) has given rise to much controversy. The majority of discussions around this dominant model focused on the measurement of perceived quality (Carman, 1990; Cronin and Taylor, 1992, 1994, Teas, 1993) and external validity of this model has been many attempts at replication in other areas (Babakus and Mangold, 1992, Brown and al. 1993, McDougall and Levesque, 1994) including in the retail trade (Dabholkar, 1994).

Companies bear the brunt of the nobilities of the economy, changes and globalization of markets and changes in consumer behavior. In this context, customer satisfaction has become critical and strategically essential: to survive, companies are required to satisfy their customers, their satisfaction that influence their subsequent behavior (repurchase, positive word of mouth) and corporate profits (Anderson, Fornell and Lehmann, 1992; Anderson, Fornell and Rust, 1997, Anderson and Sullivan, 1993, Cronin and Taylor, 1992; Fornell, 1992; Ngobo, 2000, Rust, Zahorik and Keiningham, 1995). Companies are switching to the development of products of superior quality and better service delivery to meet the increasing demands of consumers (Parasuraman, 1998; van der Haar, OMTA and Kemp, 2001). The intangible nature of services makes them difficult to imitate because their quality depends largely on the culture of the company and its staff (Day, 2000, Lambin and Chumpitaz, 2001, Rust and Oliver, 1994).

The relationship satisfaction-loyalty has been widely discussed in the literature. Indeed, as the basis for many quality policies (see ISO 9000, version 2000) and Marketing (CRM programs, satisfaction surveys), the existence and nature of this relationship has always been at the heart of academic concerns and managerial. Yet, many research have been devoted to converge or not its existence or its nature or its intensity: some current literature raise the question of whether the linearity of a link between satisfaction and loyalty (Agustin and Singh, 2005).
We come to recognize that the opening of the Tunisian post to the public and visitor satisfaction is a central issue in the commercial sector, that is to say that the introduction of a marketing logic is relevant in the management of the company. Indeed, very little research focuses on the study and understanding of the determinants of satisfaction and customer loyalty in the service sector. This lack of academic or professional work may be justified among others by the fact that Tunisia is a monopoly position in the Tunisian market for postal services, but currently it is not the case. Taking into account the specificities of the consumers of this type of service, we ask the question how we can build on the progress gained in the understanding of service quality to explain satisfaction and customer loyalty? To answer this question, we then propose a model of relations between perceived quality (of services), satisfaction and customer loyalty, a model that will be tested on samples of Tunisian postal customers.

1-The concept of perceived service quality

Service quality is widely studied by many researchers and practitioners. However, the definition of this concept is not clear because of the service characteristics: intangibility, variability, indivisibility, perishability. Researchers generally assume that service quality is a subjective assessment of the consumer, deals with the process and outcome of the service offering.

Lewis and Booms (1983), Grönroos (1984), Cronin and Taylor (1992) and Parasuraman and al. (1988) also defined service quality from consumer perceptions. According to Grönroos (1984), service quality is the result of the comparison between the expected service and perceived service. For Cronin and Taylor (1992), service quality is an attitude of the consumer, that is, an overall assessment. Parasuraman and al. (1988) also consider that it is difficult to assess the quality of service because of the simultaneous delivery and consumption.

Ayala (1996) defines quality of service in its ability to meet consumer needs and the technical impeccability of the product / service. He also adds that the service provider must be able to offer consumers an appropriate service that can solve problems, in other words, quality service, while meeting consumer expectations. Zeithaml (1988) defines quality as assessed by the consumer of excellence or superiority overall service. Thus, according to the author, excellence or superiority of the service should be assessed by the ability to meet needs and satisfy consumer preferences. It also considers the quality has four characteristics.

First, service quality is subjective. Excellence can not be measured on the basis of previously determined as an objective quality. The quality of service varies from one consumer to another. Therefore, the objective quality does not really exist.

Second, service quality is an abstract concept. The consumer does not just judge on the basis of objective attributes of the product / service, but also on the basis of abstract information such as personal value. However, although the concept of quality is abstract, it is possible to measure it.

Third, the quality of service is similar to the attitude related to overall evaluation of the service. Lutz (1986) classifies quality in two aspects - quality cognitive and affective quality emphasizing that it is linked to the overall attitude.

Fourth, the quality of service is assessed by comparing several services. The consumer enjoys a relatively high level of service among the alternatives he considers. Although a service alternatives included in consumer buying is negatively evaluated in the process of information retrieval and comparison of alternatives, it can be positively evaluated when making purchasing decisions. Services not included in the consumer's alternatives will neither evaluate nor buy.

We define service quality as "a subjective assessment of the consumer relates to the overall excellence or superiority of a product or service" (Zeithaml, 1988). Therefore, although it is difficult to objectively assess the quality of service, you must define a point of view focuses on the consumer.

Should be compared, as in the evaluation of product quality, the expectation and perception of the consumer with the service to assess its quality, it is possible to use the attributes of exploration and experience, also used to classify product attributes. The attribute exploration is viewed by consumers as knowledge or information before buying the product / service. Instead, the attribute of experience is perceived by the consumer when purchasing and consumption or shortly after. Moreover, there is the attribute of conviction that is not perceived by the consumer during and after the purchase.
Generally, it is easy to assess the quality of the product/service whose attribute is the most important exploratory, so it is difficult to assess the quality of the product/service attribute which is the largest experiential. It turns out that it is also impossible to assess the quality of service attribute whose belief is the most important. Given that in case of service, the attribute exploration is less important than experience and belief, it is difficult to assess the quality of service in relation to the quality of product. In addition, Parasuraman and al. (1985) have noted that consumers often tend to rely on extreme experiential attributes in evaluating the quality of service.

- **The dimensions of service quality**

Grönroos (1990) insists that the quality of service has both technical and functional qualities. The perceived quality at the consumer is very important for a service binds tightly to human resources. Technical quality refers to what obtains finally the consumer through the consumption of service, whereas functional quality refers to how the quality of service is passed to the consumer in instrumental and methodological. The author evaluate the functional quality is more complex than the technical quality of the intervention of the subjectivity of the consumer.

According to Swan and Combes (1979), service quality is composed of instrumental performance and expressive performance, according Ovretveit (1992), it is made of the quality of the client, the expert and the management; according to Lehtinen and Lehtinen (1991), it consists of the physical quality of the business, that of interaction, quality of processes and that of output. In the same context, Harvey (1998) insists that quality is made up of performance and processes.

Although there are some differences between the studies of researchers on the dimension of service quality, it is clear that the result is the same. That is to say, as already explained Lehtinen and Lehtinen (1991) and Harvey (1998), the quality of service in terms of performance is measured objectively and subjectively measuring process.

However, it is impossible to identify all components of service quality because its size is related to unique features of the service itself, and the diversity of consumer and industry services. That's why Filiatrault, and Chebat Harvey (1996) point out that the management of quality of service must include all processes and all the performance such as planning, production and quality measurement.

Concerning the Tunisian post, actions to improve the quality of service has been strengthened by the development of integrated computer applications at the network of post offices to ensure the implementation of service in an instant way to profit citizens, in addition to the restructuring of the business of mail through the establishment of distribution centers that are specialized and equipped with IPS electronic tracking of shipments. All these actions have contributed to the encouraging results such as: Obtaining ISO 9001 certification by the Regional Directorates 5 and 7 post offices.
So in our work we will focus on the services of the Tunisian post which are the online payment of student grants, checks, postal savings services through post offices, the service term minute, secure messaging, parcels, postal checks though internet / ACP net, the network of ATMs, the mail, hybrid mail (invoices, account statements, mailing ...), the electronic payment service pensions , electronic transfers of money from abroad, electronic payments on the internet and exchange activities, and international service.

Much research has shown the existence of a causal relationship between perceived quality and satisfaction. Some author’s represent the dominant view that "the perceived quality precedes customer satisfaction", others believe that the direction of the relationship is reversed. According to Grönroos (1984), the perceived quality of service "is, in addition to the collection of variables of the marketing mix, its technical quality and functional .... It is also the result of a comparison between the expectations of client and his real life experiences with the service".

Perceived quality is another variable as one of the history of satisfaction (eg Cronin and Taylor, 1992; Gotlieb, Grewal and Brown, 1994; Oliver, 1994). Note that in the literature, researchers have objected on the causal relationship between consumer satisfaction (S) and perceived quality (Q). Thus, Parasuraman, and Berry Zeithalm (1988), for example, adopted the causal Q ⇒ S, while researchers such as Bolton and Drew (1991) and Bitner (1990) favored the reverse causal sequence. Measurements of the concepts used in these two studies, however, were open to criticism. Moreover, the empirical studies of Cronin and Taylor (1992), based on a sample multi-industries (banking, pest control service, dry cleaning and fast food), and Gotlieb, Grewal and Brown (1994) say after comparing the two models (Q versus S ⇒ S ⇒ Q) - in favor of causality Q ⇒ S. So our first hypothesis can be formulated as follows: The quality of service of the Tunisian post has a positive influence on customer satisfaction.

II-The concept of satisfaction

The literature review on research on satisfaction shows the difficulty to understand this concept. Satisfaction is "a complex term and a difficult concept" (Czepiel and Rosenberg, 1973). In 1976, Setton Dufer and claimed that no clear definition of the notion of satisfaction or dissatisfaction had yet been proposed. Even today, build up and the definitions are heterogeneous. Yi (1990) suggests a typology of different definitions.

The definitions characterize satisfaction as the result of a process (consumption experience) (Westbrook and Oliver, 1991, Bolton and Drew, 1991). Satisfaction is here seen as a final state. This state is distinct from the process leading to its formation. The definitions incorporating all or part of this process (and in particular comparative nature: the non-confirmation) (Howard and Sheth, 1969; Hunt, 1977; Engel and Blackwell 1982; Churchill and Surprenant, 1982; Tse and Wilton, 1988 ). The latter type of definition suffers from being contingent on certain explanatory theories of the formation of satisfaction (Evrard, 1993; Yi, 1990).

According to Evrard (1993) and Aurier and Evrard (1998): satisfaction is a psychological state, subsequent to the purchase and relative. The psychological nature, not directly observable, satisfaction between researchers who focus on cognitive assessment (Howard and Sheth, 1969) and those who view satisfaction as an emotional response (Day, 1982; Westbrook, 1987; Cadotte, Woodruff and Jenkins, 1987). Hunt (1977) endorses these two extreme views by stating that satisfaction is an evaluative judgments on experiences resulting from cognitive processes and incorporating affective elements (this is the evaluation of an emotion and not the emotion itself).

Some researchers go further. Oliver (1981), satisfaction is the evaluation of the surprise on the process of acquisition and consumption of a product. This is the psychological state of the consumer resulting from a comparison of expectations about the product and feelings experienced after the purchase and consumption of the product. Westbrook and Reilly (1983) remain in this logic: Satisfaction is the pleasant state of mind that comes from finding a product, service, outlet or consumer action led to the achievement of personal values. Evrard (1993) speaks of a psychological state resulting from the process of purchasing and consumption. We are registering in this approach, we believe that satisfaction is a cognitive and emotional state, transient resulting from a service experience, consumption or use of property.

Satisfaction is after the purchase: it is impossible to give the level of satisfaction with a product or service if the customer has not used, consumed or has not experienced the product or service. The assessment may cover the entire consumption experience (holistic approach) or parts of this process such as the act of buying itself for consumption, use of the product or service (analytical approach).
Finally, satisfaction is a relative one: its evaluation is a comparative process between the subjective experience by the customer and a standard of comparison the initial reference. The analysis of this comparison process is the basis for modeling the formation of satisfaction, grouped as the paradigm of "not-confirmation."

- **The dimensions of satisfaction**

If for the majority of researchers (Howard and Sheth, 1969 Nicosia, 1971, Rosenberg and Czepiel, 1977; Oliver, 1980; Woodruff, Cadotte and Jenkins, 1983; Westbrook, 1987), satisfaction is conceptualized as a continuum between one-dimensional two extremes: positive (very satisfied) and negative (very dissatisfied), consider some interesting work satisfaction is multidimensional.

In support of this latter design, Herzberg (Herzberg and al. 1959) proposes in its two-factor theory of satisfaction in the work to consider the satisfaction and dissatisfaction as two different concepts: satisfaction is opposed to the non-satisfaction, and dissatisfaction with the non-dissatisfaction. A person can simultaneously be very satisfied and very satisfied for a given stimulus. Leavitt (1977) referring to work in industrial psychology, calls for an analysis highlighting two continua similar to those of Herzberg: the first, satisfaction is the opposite of the lack of satisfaction, while dissatisfaction is In contrast to the absence of dissatisfaction. These designs are known in the theory of two factors (Two Factor Theory) developed by Maddox in 1981 (Evrard, 1993).

Research based on a two-dimensional vision of the satisfaction / dissatisfaction were often abandoned in recent work. Can be invoked measurement difficulties: they are difficult to questionnaires based on rating scales and often require the use of the critical incident technique, however, laborious method when collecting data and the interpretation is subjective (Grigaliunas and Herzberg, 1971, Evrard 1993).

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. In this context, 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). For N'gobo (1997), it is an "overall assessment of the continuing ability of the company or brand to provide the benefits sought by the customer." As for De Wulf and al. (2001), they present it as "the actual state of the consumer resulting from an overall assessment of its relationship with the company." In this way, the move towards relationship marketing requires consideration as an object of satisfaction or dissatisfaction rather than the instant transaction but all past consumption experiences that are responsible for the creation of a relationship with a given partner (N'goala, 2000).

In our research, we use the relational approach satisfaction based on the paradigm of relationship marketing and the theory of commitment-trust. This approach satisfaction as "a constructed abstract describes the experience cumulative total (cumulative) consumption of a product or service" (Johnson and al, 1995). According to Wulf and al, (2001), it is thus an effective state resulting from an overall assessment of the relationship with the company. Hence, the move towards relationship marketing requires consideration as an object of satisfaction or dissatisfaction rather than the instant transaction but all past consumption experiences that are responsible for the creation of a relationship with a given partner.

The relationship between satisfaction and loyalty has been the subject of numerous studies. Several researchers reported a linear relationship between satisfaction and loyalty. Satisfaction is thus associated with greater fidelity on the part of consumers (Bitner, 1990; Fornell and al, 1996; Host and Knie-Andersen, 2004; Taylor and Baker, 1994). Oliver (1980) reported that satisfaction has an indirect effect on repurchase intentions. Bitner (1990) reported the direct and indirect effects of satisfaction on loyalty. So our second hypothesis can be formulated as follows: **The satisfaction of service of the Tunisian post positively influences customer loyalty.**

- **III- The concept of loyalty**

Before defining the concept of loyalty, it seems necessary first to note the different areas of study of the latter. The models developed in research on loyalty are mainly devoted to the field of brand loyalty (Cunningham, 1961; Kent Ehrenberg1984; Bellenger and al. 1976).
This allowed to study in other contexts such as fidelity to the point of sale (East and al.1995, Robinson, 1995; Charlton, 1973), the service context (Oliver 1999, Chiou and al.2002; of Ruyther and al.1998), fidelity in a relationship (Bajozzi 1978, Dwyer and al 1987, Sheth and Parvatiyer 1995, Morgan and Hunt, 1994).

Customer loyalty is a concept whose definition and operationalization vary widely in the literature (Jacoby & Kyner, 1973). Indeed, a variety of definitions has been proposed over the years and no consensus exists on the issue so far (Ha, 1998). We will, therefore, an overview of the definitions most popular and most relevant to our study. Two major trends prevail with regard to the definition of customer loyalty (Hallowell, 1996). The first dates from the early studies of consumer loyalty (Caruana, 2002). Its proponents conceive loyalty as only behavioral (Caruana, 2002; Cunningham, 1956, Jacoby & Kyner, 1973 Oliver, 1997; Tucker, 1964; Wetzels, de Ruyter, Lemmink, and Koelmeijer, 1995). As a guide, Tucker (1964) speaks of the relative frequency with which the product is selected from its competitors. Similarly, Cunningham (1956) speaks of a proportion of purchases. In other words, in this line of thought, loyalty is seen as a repeat purchase behavior. For example, if the consumer has the choice of ten brands (or companies), and eight out of ten he chose the same, it will be considered accurate. Others will say rather that it is accurate to 80% or it has a high degree of fidelity.

The second school of thought, which brings together more researchers, considers customer loyalty as more than just behavior. She had a behavioral component of course, but also a psychological component. This vision of loyalty appeared later as some authors were incomplete and reductive definition strictly behavioral. Day (1969) is one of the researchers who most supported the definition of loyalty. He argues that customer loyalty is not limited only to behavior and suggests the existence in the sense of attitudinal dimension.

Faced with limitations, the literature has been the rise of a third approach that takes into account together the behavioral and attitudinal dimension of loyalty. Proponents of this approach state on the one hand, a positive attitude seems simple enough to ensure resistance to competing offers and acceptance point of dissatisfaction. The favorable attitude towards a brand does not seem sufficient to ensure repeat purchase of the brand. On the other hand, simply repeat purchase is not synonymous with a true brand loyalty. A composite approach that includes behavior and attitude seems necessary to identify the real customer loyalty.

However, the majority of studies undertaken in this current state that the true loyalty translates into exclusive purchase (Dick and Basu, 1994). However, this traditional acceptance of faithfulness gives a simplistic view of reality and piecemeal. In fact, the customer is usually multi-brand (O'Malley, 1988). So the notion of exclusive loyalty does not reflect the complexity of the relationship between the consumer and the product or brand (Fournier, 1998).

Another multidimensional view of the concept of customer loyalty has become popular is that of Dick and Basu (1994). They define loyalty as the strength of the relationship between the attitude of the individual face, for example, a brand, and the behavior pattern of acquisition of the brand. It should be noted that we might as well talk about loyalty to a product rather than loyalty to a company or store. In this case, fidelity refers to a relatively high frequency of purchase of a product and a positive attitude towards this product. Finally, to better understand the level of consumer loyalty, Dick and Basu (1994) also propose to rely on the loyalty is to say, the comparison between the level of brand loyalty and the level of fidelity to competing brands.

- **The dimensions of loyalty**

For a long time, fidelity was measured using three types of indices: behavioral indices are based on the frequency, the proportion and the likelihood of purchasing observed indices examine attitudinal predispositions, intentions and purchasing preferences consumers and finally the composite indices that combine the attitude and behavior (Jacoby and Chestnut, 1978).

Thus, beyond the intention of repeat purchase, a consumer loyalty can be expressed by caring behavior manifested a great desire to maintain the relationship such as the tendency to claim constructive or word-of-mouth expressing a willingness to join others in their choice (Cristou, 2001). Cristou, (2001), proposes three aspects of fidelity that are now widely accepted and used by researchers.

Oliver (1999) further proposes that loyalty develops in four stages progressive and cumulative, is in order, the phase cognitive, affective, conative and action. In our research we will adopt this proposal.
• **Fidelity cognitive**
In this phase, the consumer compares and evaluates the information it has on the brands (or companies) competitive. This is a rational process, whose outcome will be repeated the purchase of that brand. For example, if the video store A offers better prices and better choice than the video store B, then it is likely that consumers will be more faithful to the video store A than to the video store B.

• **The emotional loyalty**
During this phase, fidelity refers not only to cognition but also to affect. In fact, she wants redemption behavior with a cognitive and emotional commitment to the company or brand. In his model of consumer loyalty, Oliver (1997) considers the emotional phase of his model as the equivalent of the affective component of satisfaction and attitudes towards the company. This form of loyalty results in a deeper commitment to the company. Cognition are more prone to arguments against so that the affect is immutable. Despite this, the author mentions that the degree of attachment is not sufficient to ensure consumer loyalty. He cites, for example, that consumers who like to attend a store did not always remain faithful and do not necessarily.

• **The conative loyalty**
This phase is characterized as a behavioral intention to buy. It is defined as a state of loyalty when the consumer feels a deep desire to repurchase (behavioral commitment). In particular, the consumer beyond the emotional attachment and becomes motivated and willing to buy the brand (or buy from the company). This step results in a high degree of commitment of the consumer to the brand or company.

• **The fidelity of action**
This phase represents what the author calls a real loyalty. At this stage, the consumer is already true to the cognitive, affective and conative. At this point, it becomes true through action. He bought a persistent and overcomes barriers that may affect the link “intention - action.” This is a strong and persistent attachment of the consumer to the company.

We have presented the conceptual debate on each of our concepts and the justification of our assumptions. 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.

The diagram (1) below shows the conceptual model that we wish to test.

![Conceptual model of research](image)

**Figure 1: Conceptual model of research**

**IV- Research Methodology**
In order to test our hypotheses on empirical and obtain reliable and valid measures, we followed the traditional general proposed by Churchill (1979), while ensuring complete the comments and developments made in relation to this procedure and to adapt it to current statistical tools of analysis (Cohen and al, 1990).

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 sampling method and then the justification for the choice of scales for measuring concepts of our model.

The data collection method adopted is a questionnaire measuring the perceived quality of postal services, satisfaction and customer loyalty. This method consists in administering the questionnaire respondents according to their past experiences with the services of the Tunisian Post. We used the method to select non-probability sampling units. Specifically, we chose the sampling method of convenience. This is a choice driven primarily by convenience and time constraints associated with this investigation. He is questioning anyone who might respond and provide information concerning the study. This method includes a set of advantages and disadvantages.
The major advantage is the ease of information gathering but the disadvantage is that the sample selection was performed in a subjective way. The study was conducted in August and September 2011.

- **Justification for the choice of the method**

The objectives and nature of our research led us to choose this method. Indeed our research is explanatory and requires a questionnaire survey. Thus, several researchers have used in the context of similar problems this method of data collection. In addition, Parasuraman, and Berry Zeithalm (1988), Bolton and Drew (1991), Bitner (1990), Cronin and Taylor (1992) and Gotlieb, Grewal and Brown (1994) have used this method to study a variety of sample (sector banking, pest control service, dry cleaning and fast food).

Our sample consists of 200 clients at four post offices that are post office "Bab Bahar", post office "new Sfax", Post Office " Sfax Hached" and post office "City of El Bahri" the city of Sfax (second capital of Tunisia). The sample has the following characteristics: 58.8% are female, 37% are aged 20 to 30, 64.5% are single and 47% have income between 200 and 400 Tunisian dinars per month.

- **Reasons for choice of sector**

With continuity and increased level of fashion and lifestyle and purchasing power of the Tunisian consumer, an effort was made from a few years to achieve modernization of the service sector in general and especially the area the Tunisian post to promote this type of service and améliorer perceived quality and brand image of the company. This was brought through the introduction of technologies of information and communications to better serve the customer. In this context the choice of service was increased on all services of the Tunisian post. Indeed, these services are consumed by a large number of Tunisian consumers whether their sexes, ages, and back regions.

**V- Measure concepts**

The variables will be understood by measurement scales have been used previously in the literature and whose psychometric properties were satisfactory. All measures used in this study were estimated on the Likert-type scales. In addition, and in order to facilitate the work of the respondents generally we will only use 5-point scale with a neutral point located in the middle. The scale measuring the perceived quality of service used is that of Chandon and al. (1997). We adapted this scale to postal services we want measured. While this scale is one-dimensional 5 items Likert type ranging from completely disagree (1) to strongly agree (5).

The chosen measure of satisfaction is two-dimensional (cognitive satisfaction and emotional satisfaction). These two dimensions have been operationalized with seven 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 ranging from 5 items totally disagree (1) to strongly agree (5). The chosen measure of fidelity is four dimensions (cognitive loyalty, affective loyalty, conative loyalty and action loyalty). These four dimensions were operationalized using sixteen items adapted from the work of Harris and Good (2004). These items were evaluated based on a Likert scale ranging from 5 items totally disagree (1) to strongly agree (5).

**VI-Presentation and discussion of results**

We used the SPSS (version 16.0), 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 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 the data matrix of the scale measuring the perceived quality of service is factorized. Indeed, the test adequate sampling indicates a value of .941 and the Bartlett test of sphericity is significant (Chi square = 743,555 with p = .620). Factor analysis shows that the fourteen items on the scale of Chandon and al. (1997). Can be grouped into five factors with an eigen value greater than one. These factors include the items in the perceived quality of postal services. These factors seized 67.391% of the initial information. However, we have removed the item because it shows 6 medium and low correlations. After eliminating the Cronbach's alpha amounted to 0.886. Table 1 below shows the eigen values and the variances captured by these factors.
Factor analysis shows that the data matrix of the scale for measuring satisfaction is factorized. Indeed, the test adequate sampling indicates a value of .865 and the Bartlett test of sphericity is significant (Chi square = 764,644 with p = .789). Factor analysis shows that the seven items of the scale Aurier and Evrard (1996), Oliver (1997) and Ngoala (2000) can be grouped into three factors with eigenvalues greater than one. These factors include the items of satisfaction with postal services. These factors seized 72.827% of the initial information. Their Cronbach's alpha was 0.819. Table 2 below shows the eigen values and the variances captured by these factors.

### Table 2: the values of the factors of satisfaction

<table>
<thead>
<tr>
<th>Factors</th>
<th>Eigen values</th>
<th>% Of variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.806</td>
<td>30.093</td>
<td>30.093</td>
</tr>
<tr>
<td>2</td>
<td>1.329</td>
<td>22.146</td>
<td>52.239</td>
</tr>
<tr>
<td>3</td>
<td>1.235</td>
<td>20.588</td>
<td>72.827</td>
</tr>
</tbody>
</table>

Factor analysis shows that the data matrix of the scale measuring fidelity is factorized. Indeed, the test adequate sampling indicates a value of .653 and the Bartlett test of sphericity is significant (Chi square = 542,632 with p = .811). Factor analysis shows that the sixteen items of the scale Good and Harris (2004) can be grouped into four factors with eigen values greater than one. These factors include items of loyalty to postal services. These factors seized 62.857% of the initial information. Their Cronbach's alpha was 0.763. Table 2 below shows the eigen values and the variances captured by these factors.

### Table 3: the values of the factors of loyalty

<table>
<thead>
<tr>
<th>Factors</th>
<th>Eigen values</th>
<th>% Of variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.933</td>
<td>13.804</td>
<td>28.860</td>
</tr>
<tr>
<td>2</td>
<td>1.841</td>
<td>13.151</td>
<td>42.011</td>
</tr>
<tr>
<td>3</td>
<td>1.578</td>
<td>11.274</td>
<td>53.284</td>
</tr>
<tr>
<td>4</td>
<td>1.340</td>
<td>9.572</td>
<td>62.857</td>
</tr>
</tbody>
</table>

- **Hypothesis**

**Impact of perceived quality on satisfaction**

We note from the table of analysis of correlations between the dimensions of the perceived quality of postal services and the satisfaction that satisfaction is strongly and positively correlated with the majority of services offered by the Tunisian post.

### Table 4: Table of correlations between service quality and satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction cognitive</th>
<th>Satisfaction affective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Online payment of scholarships to students</td>
<td>0.446*</td>
<td>0.498*</td>
</tr>
<tr>
<td>2. Cheques post</td>
<td>0.443**</td>
<td>0.563**</td>
</tr>
<tr>
<td>3. Services savings through post offices</td>
<td>0.710**</td>
<td>0.620*</td>
</tr>
<tr>
<td>4. Terms of Service Minute</td>
<td>0.683**</td>
<td>0.732**</td>
</tr>
<tr>
<td>5. Secure Messaging</td>
<td>0.768**</td>
<td>0.922**</td>
</tr>
<tr>
<td>6. The Parcel</td>
<td>0.592*</td>
<td>0.634*</td>
</tr>
<tr>
<td>7. The Cheques post over the Internet / CCPNET</td>
<td>0.651*</td>
<td>0.541*</td>
</tr>
<tr>
<td>8. The network of ATMs</td>
<td>0.527*</td>
<td>0.815**</td>
</tr>
<tr>
<td>9. Mailings</td>
<td>0.511*</td>
<td>0.726*</td>
</tr>
<tr>
<td>10. Hybrid mail (invoices, account statements, mailing ...)</td>
<td>0.413*</td>
<td>0.911*</td>
</tr>
<tr>
<td>11. The electronic payment service pensions</td>
<td>0.513**</td>
<td>0.788**</td>
</tr>
<tr>
<td>12. Electronic transfers of money from abroad</td>
<td>0.637*</td>
<td>0.577*</td>
</tr>
<tr>
<td>13. Exchange activity and international service</td>
<td>0.797*</td>
<td>0.821**</td>
</tr>
<tr>
<td>14. Electronic payments over the Internet</td>
<td>0.843*</td>
<td>0.542*</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (bilateral). * Correlation is significant at the 0.05 level (bilateral).**
The results show that the services of the postal bank are positively correlated with satisfaction with the cognitive and emotional satisfaction. This implies that customer satisfaction is best explained by perceptions of quality of service of the Tunisian post. Therefore, the hypothesis H1, respectively, relative to the positive impact the quality of postal services Tunisian customer satisfaction is confirmed.

**Impact of satisfaction on loyalty**

We note from the table of analysis of correlations between satisfaction and loyalty of the Tunisian post that satisfaction is strongly and positively correlated with loyalty to that institution.

**Table 5: Table of correlations between service quality and loyalty**

<table>
<thead>
<tr>
<th></th>
<th>Loyalty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>cognitive loyalty</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.948</td>
</tr>
</tbody>
</table>

Correlation is significant at the 0.01 level (bilateral). * Correlation is significant at the 0.05 level (bilateral).

The results show that customer satisfaction to the postal bank is positively correlated with cognitive loyalty, affective, conative and action against this facility. This means that customer loyalty to the Tunisian post is explained by the higher level of satisfaction of services. Therefore, the hypothesis H2, respectively, relative to the positive impact of satisfaction with services of the Tunisian post on customer loyalty is confirmed.

**Conclusions**

**Conclusions and managerial implications**

The primary objective was to assess the impact of the quality of postal services Tunisian satisfaction and customer loyalty of the public entity. We chose the Tunisian post since it was the first to be convinced by improving the quality of services. In addition, this public company was a model for many other public and private. Indeed, it has included among its services the option of paying remote water bills, electricity, fixed and mobile telephony, to enroll in universities, to pay subscription fees to urban transport,... So the objective of this research was to test an explanatory model of the effect of the perceived quality of postal services on satisfaction and customer loyalty.

Using previous research, we have provided definitions and statement of hypotheses of links between the different variables, such as the link between the perception of service quality and satisfaction, and the link between satisfaction and loyalty clients. These assumptions were then verified empirically on a sample of four post offices in the city of Sfax (second capital of Tunisia). Following this analysis, we found the results can be concluded that the perception of service quality has a positive and significant impact on the level of customer satisfaction of the Tunisian post. And say also that the level of satisfaction positively and significantly influence the level of customer loyalty to the service provider.

Finally, this research highlights the existence of causal relationships between perceived service quality, satisfaction and loyalty. What should be noted that the study of the effect of the quality of services to a dual role, on the one hand, it influences the commercial success of the company, on the other hand, it helps managers companies to choose properly the elements of services, the diversity and range of services, speed and reliability of services, choice of personal contact, ancillary services and positioning strategy based services (positioning in the minds of consumers and corporate positioning in the market) ... and so on because the choice of such an element must be justified and must take into account the preferences and perceptions of consumers.

**Limitations of our work**

From a conceptual point of view, we use a compensatory model of customer loyalty, which explicitly assumes that the contribution of different backgrounds such as satisfaction and perceived quality of service are the same and equal. But in reality, it’s all about arbitration, arbitration will be the type of consumer, consumption pattern of service, evaluation service, emphasis on service, as service delivery and how perception of quality. Based on these elements, should be given a greater or lesser weight to each dimension of service in the evaluation of satisfaction and customer loyalty. From a methodological point of view, we do not resort to the structural equation modeling to explain the relationship between latent variables in our model because the sample size is small.
Also, we used the correlation technique to study the relationships between different variables, this technique assumes that the links are linear: a good evaluation of a single dimension of service can automatically lead to a perception of good quality and an increase in quality would automatically lead to increased satisfaction and a subsequent increase in fidelity. The reality reminds us every day that it's far from the case. There certainly are limits beyond which even if the assessment of service is good, the perception of the quality no longer changes or not in the same way and if the quality increases further, the satisfaction and loyalty no longer changes or not in the same way. We can not therefore speak of the representativeness of the sample and the quality of results emerged, because our sample is limited to the region of Sfax (second capital of Tunisia) only, and this amounts to practical reasons and time. As well, our study focuses on the services offered by post offices only by neglecting the role of other services offered by agencies of parcels, the agency quickly post and postal distribution centers. Finally, the use of a single sector of the Tunisian post (post office) does not verify the relationship between the total or full service hotel and the perception of quality.

Pathways for future research

For this study, we wish to clarify the importance of service quality and to demonstrate its role in the commercial success of the Tunisian post. To generalize our findings, further research must be created on other services such as postal distribution centers, service agencies and parcel post services agencies quick post. Similarly it would be interesting to check our model with a sample more representative and heterogeneous for reliable results and make a probabilistic method for sample selection. In addition, this work should be complemented by other perspectives as future research to study the impact of information technology and communication and especially the Internet on the quality of postal services in Tunisia. Finally, different variables may have influenced the perceived quality of postal service deserve to be included in the model we have considered as the image of the company's involvement in the service, commitment and perceived value of the service, perceived risk and trust in the position to address a more comprehensive model.

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