



Research Article

# Relationship Quality and Loyalty: A Modeling of the Relationship through the Structural Equations Method

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## Abstract

Relationship quality is one of the key elements in helping firms to develop and maintain a lasting relationship with their customers. Although the concept of relationship quality is at the core of a rich and varied body of research, its conceptualization is still subject to discrepancy. The objective of this research work is to shed some light on the components of relationship quality which have an impact on customer loyalty in the parapharmaceutical industry.

**Keywords** : Relationship quality (RQ), loyalty, structural equations methods (SEM).

## Introduction

Relationship quality has always been at the center of any reflection on the practices and strategies targeting the improvement of a firm's performance. Indeed, customer loyalty is vital for the survival and competitiveness of the firm in an environment of tough competition, and this is not a trivial matter.

Professionals and theorists are well aware of this fact. That's why they have been

working on the improvement of their relationship quality with their customers. This is done particularly through the identification of the main elements that influence the nature, strength and quality of their relationship with customers, so as to propose actions and strategies that meet their needs and desires.

There is a prolific literature on relationship quality in the field of services (Crosby *et al.*, 1990; Storbacka *et al.*, 1994; Shamdasani and Balakrishnan, 2000; Hennig-Thurau *et*

*al.*, 2002; Roberts *et al.*, 2003; Woo and Ennew 2004; Tseng, 2005; Rauyrueen and Miller, 2007), in the field of automobile industry (Dwyer *et al.*, 1987; Kumar, *et al.*, 1995), in the banking sector and financial services (Wray *et al.*, 1994; Bejou *et al.*, 1996; Ndubisi, 2006; Vieira, 2001), in the B2B relationships (Kempeners, 1995; Kumar *et al.*, 1995; Boles *et al.*, 1997; Dorsch *et al.*, 1998; Naudé and Buttle, 2000; Walter *et al.*, 2003; Woo and Ennew, 2004; Ivens and Pardo, 2007). However, little research has been conducted in the sector of the parapharmaceutical industry.

The current study comes within this specific application framework and tries to shed light on the components of relationship quality that impact loyalty between the distributors of pharmaceutical products and their customers. The study more specifically aims at presenting a measure of relationship quality in the field of the parapharmaceutical industry and testing the causal links between relationship quality, its dimensions and customer loyalty.

To achieve these aims, we propose to present, first, the definitions and dimensions of relationship quality. We will then present the conceptual framework, the research hypothesis and the research methodology. Finally, we will discuss the empirical results and we will conclude with the contributions and limitations of the research.

## Literature Review

### **Relationship Quality**

Scholars in relationship marketing have always associated the notion of relationship quality to a description of the extent and the strength of the relationship between a firm and its customers. Johnson (1999), for example, defines it as an overall assessment of the nature of relationships between firms and their customers. It is an indicator that measures the strength on the relationship (Garbarino and Johnson, 1999). In the opinion of Bejou *et al.* (1996), it is a key element of the long-term success of the relationship with customers. Its goal

is to convert indifferent customers into loyal ones (Berry and Parasuraman, 1991, 2005).

Wong *et al.* (2007) describe it as an indicator of the intensity of the exchange relationship between the two parties. Roberts *et al.* (2003) qualify it as a measure of the extent to which a customer wishes to maintain his relationship with the firm. According to Smith (1998), the relationship quality is a manifestation of the positive outcomes that reflect the strength of the relationship and meets the needs and expectations of partners.

We can thus state that the relationship quality generally reflects the nature and depth of any relationship between a firm and its customers. Indeed, it is likened to "a process" that evolves over time and according to the relationship between the partners (Gronroos, 2007) and it is a customer's cognitive and affective evaluation based on the personal experience across all service episodes within the relationship (Keating *et al.*, 2011).

A review of the literature leaves us puzzled as to the different dimensions of relationship quality. Indeed, researchers who have studied relationship quality have identified several dimensions that are often confused with its determinants (Selnes, 1998; Wilson, 1995; Roberts *et al.*, 2003; Ben Naoui and Zaiem, 2010). This discrepancy is mainly accounted for by the objectives and areas of investigation of previous research.

The most frequently cited dimensions, however, are trust, commitment and satisfaction (e.g. Crosby *et al.*, 1990; Morgan and Hunt, 1994; Kumar *et al.*, 1995; Smith, 1998; Ulaga and Eggert, 2006; Ivens and Pardo, 2007; Yang and Wu, 2008; Yang *et al.*, 2010; Lee *et al.*, 2011; Liang *et al.* 2012; Valta, 2013; Doma, 2013; etc.). Two other categories within the set of dimensions of relationship quality have been identified by Ben Naoui and Zaiem (2010). They involve, on the one hand, a group of indicators of behavioral intentions, such as ethical behavior,

conflict, opportunism, etc., and on the other hand, the consequences of any desired exchange relationship, such as benefits, mutual goals, customization, etc.

We restate the fact that one of the objectives of our research is to contribute to the development of relationship quality by providing specific and precise indicators to measure it through the application of our research. For this, we propose to build on the conceptualization of Roberts *et al.* (2003), which provides a sound theoretical and empirical framework. In fact, the originality of this conceptualization is the consideration of the concept of conflict in addition to the various classical aspects of relationship quality and the recognition of the emotional aspect and the dynamic character in its operationalization.

Thus, the relationship quality has been conceptualized according to these researchers as a multidimensional concept made up of the following five dimensions: trust in the partner's honesty, trust in the partner's benevolence, affective commitment, satisfaction and affective conflict.

### **Trust**

Trust is an important variable in building strong customer relationship (Dwyer *et al.*, 1987; Gundlach *et al.*, 1995; Urban *et al.*, 2000; Wong and Sohal, 2002) and the most useful dimension in the evaluations of the development, maintaining and strength of relationships between partners (Ndubisi, 2004; Yu, 2011). It is considered as "the most important component of the relationship quality" (Morgan and Hunt, 1994; Fournier, 1998; Roberts *et al.*, 2003; Kim and Han, 2008; Cater and Zabkar, 2009; Keating *et al.*, 2011; Kim *et al.*, 2011; Lee and Kang, 2012; Valta, 2013; Doma, 2013).

Roberts *et al.* (2003) have distinguished between the two facets of trust, honesty and benevolence. According to them, Trust in the partner's honesty is "the belief that one party of the relationship will fulfill needs and expectations of the others party". Trust in the partner's benevolence

is "the degree to which one of a partner is concerned for the partner's welfare".

### **Commitment**

Defined as an affective attachment to a partner and a persisting desire to maintain the relationship (Morgan and Hunt, 1994), commitment has been considered as a crucial construct for understanding the nature (Funk and Pritchard, 2006 cited by Hanaysha *et al.*, 2013), the strength (Morgan and Hunt, 1994) and the success of business relationships (Gundlach *et al.*, 1995). It has been underlined as a significant indicator for measuring the relationship quality (Morgan and Hunt, 1994; Fournier, 1998; Hennig-Thurau *et al.*, 2002; Roberts *et al.*, 2002; Ndubisi, 2007; Cater and Zabkar, 2009; Keating *et al.*, 2011; Kim *et al.*, 2011; Lee and Kang, 2012; Valta, 2013; Doma, 2013; etc.)

### **Satisfaction**

Satisfaction, a determinant key of the relationship quality (Hyun, 2010), was defined as an assurance perceived regarding the future performance of the partner of a business relationship based on satisfactory past performances (Crosby *et al.*, 1990; Naudé and Buttle, 2000). It has always been associated with the success of business relationships.

Several research studies have demonstrated the interest of the satisfaction concept in the assessing of the extent of relationships' quality (e.g. Dwyer *et al.*, 1987; Crosby *et al.*, 1990; Hennig-Thurau *et al.*, 2002; Roberts *et al.*, 2003; Lin and Ding, 2004; Ulaga and Eggert, 2006; Ivens and Pardo, 2007; Rauyruen and Miller, 2007; Kim and Han, 2008; Liu and Wu, 2009; Cater and Zabkar, 2009; Valta, 2013; Doma, 2013; etc.).

### **Conflict**

Despite the huge number of research studies relative to the concept of relationship quality, few of them have integrated the conflict in their conceptualization of relationship quality. Kumar *et al.* (1995); Naudé and Buttle

(2000), for example, have introduced the conflict as a dimension of the relationship quality in the case of B2B relationship. Motamedifar *et al.* (2013) have studied the conflict resolution as a facet of relationship quality.

Roberts *et al.* (2003) have shown that affective conflict is an important dimension of relationship quality between service providers and their clients. They defined it as “a tension due to the incompatibilities of actual and desired responses”.

### Loyalty

The concept of loyalty has always been associated with a behavior or an act of purchase that is repeated over time (Ben Naoui and Zaiem, 2010) and with a dedication and a favorable attitude toward a brand, product or firm (Lehu, 2004; Belaid and Temessek, 2005). Indeed, Olivier (2007) defined it as “a deeply held commitment to buy a preferred product or a service consistently in the future”. According to Bowen and Shoemaker (2003), loyalty “measures the probability that the customer will return and is ready to perform partnering activities such as referrals, in terms of repeated purchases”.

In general, the concept of loyalty has been defined by integrating the two main components, the behavioral and the attitudinal component. The behavioral component refers, in fact, to the intentions to repurchase the product and to continue the relationship with the supplier (Chaudhuri and Holbrook, 2001; Bowen and Shoemaker, 2003; Seth and Mittal, 2003; Woo and Ennew, 2004; Zeithaml *et al.*, 2006; Rauyruen and Miller, 2007). The attitudinal component, in turn, is based on the partner’s preferences (Sheth and Mittal, 2003) and it refers to the level of the customer’s psychological attachments and attitudinal advocacy toward the relationship (Chaudhuri and Holbrook, 2001; Rauyruen and Miller, 2007).

### The Research Hypothesis

Several studies have shown that relationship quality is an important

determinant of customer loyalty (Hennig-Thurau *et al.*, 2002; Roberts *et al.*, 2003; Liang and Wang, 2004; Lin and Ding, 2005, 2009; Ben Naoui and Zaiem, 2010). Mimouni and Volle (2003); Wong and Sohal (2006) further demonstrated empirically that relationship quality has a significant and positive impact on customer loyalty. Hung (2012) showed that relationship quality can result in customer loyalty through increasing customer satisfaction. Besides, the works of Shaimaa and Doma (2013), conducted in a BtoB setting of the shipping and freight delivery services industry, showed that relationship quality has a significant and positive effect on customer loyalty. Vesel and Zabkar (2010) have also showed that relationship quality influences the customer loyalty in a distribution context.

From these theoretical pieces of evidence, we propose to state the first research hypothesis

**H.1:** “Relationship quality has a positive and significant impact on the customer loyalty”.

Trust has always been associated to the creation and the development of customer loyalty (Harris and Goode, 2004 ; Ndubisi, 2007). Several research studies have shown empirically that trust has a positive and significant impact on customer loyalty (Garbarino and Johnson, 1999; Singh and Sirdeshmukh, 2000; Morgan *et al.*, 2000; Chaudhuri and Holbrook, 2001; Sirdeshmukh *et al.*, 2002; Roberts *et al.*, 2003; Dixon *et al.*, 2005; Rauyruen and Miller, 2009; Auruskeviciene *et al.*, 2010; Shaimaa and Doma, 2013; Motamedifar *et al.*, 2013).

Based on the research studies of Roberts *et al.* (2003) who distinguished between the two dimensions of trust, benevolence and honesty, and from the theoretical pieces of evidence cited above, we propose to state the second and the third research hypothesis:

**H.2:** “Trust in the partner’s honesty has a positive and significant impact on customer loyalty

**H.3:** “Trust in the partner’s benevolence has a positive and significant impact on customer loyalty”.

Previous research works have shown that customer commitment contributes to future purchase intentions, to intentions to stay in the relationship (Gilliland and Bello, 2002; Fullerton, 2003) and to customer loyalty (Allagui and Temessek, 2005; Ndubisi, 2007; Rauyruen and Miller, 2007; Lee *et al.*, 2011; Shaimaa and Doma, 2013). Besides, Roberts *et al.* (2003); Hennig-Thurau *et al.* (2004) have shown that commitment based on emotions has a positive and significant impact on customer loyalty.

Consequently, the fourth hypothesis of this study will be worded as follows:

**H.4:** “Affective commitment has a positive and significant impact on customer loyalty”.

The research works in relationship marketing have demonstrated the crucial role of the satisfaction in the formation and maintaining of customer loyalty. They have shown, more precisely, that customer satisfaction has a positive and significant impact on loyalty (eg. Roberts *et al.*, 2003; Harris and Goode, 2004; Auh, 2005; Flavian and Guinaliu, 2006; Ndubisi *et al.*, 2007; Rauyruen *et al.*, 2009; Auruskeviciene *et al.*, 2010; Huang, 2012; Shaimaa and Doma, 2013). Hence, the fifth research hypothesis is the following:

**H.5:** “Satisfaction has a positive and significant impact on customer loyalty”.

According to Kumar *et al.* (1995); Naudé and Buttle (2000); Roberts *et al.* (2003), conflict is an important indicator of the measure of relationship quality. Motamedifar *et al.* (2013) have studied the conflict resolution as a facet of relationship quality. They have shown that it positively influences the customer loyalty. Furthermore, Roberts *et al.* (2003) have shown empirically that affective conflict between services providers and consumers has a negative and significant impact on customer loyalty.

This allows us to state the following research hypothesis:

**H.6:** “affective conflict has a negative and significant impact on customer loyalty”.

### Research Methodology

We reiterate that the main objective of our research is to contribute to the development of relationship quality by devising specific and precise indicators to measure it in a specific application context, namely the parapharmaceutical industry. To achieve this goal, we relied on the relationship quality measurement scale developed by Roberts *et al.* (2003) according to a rigorous scientific approach.

We note that the loyalty measurement tool is the 4-items, one-dimensional scale devised by Parasuraman *et al.* (1994).

Attention given to this sector is primarily accounted for by the intricacy of the relationships between partners in commercial exchanges, by the specificity of the sector and by the difficulty of decision making in the purchase of pharmaceutical products that are sold to final customers without medical prescription.

Data collection was conducted by submitting a face-to-face questionnaire to purchase and supply outlet managers, operating in the parapharmaceutical industry. Respondents were asked to think about one distributor of pharmaceutical products of their choice and express their degree of agreement or disagreement (within a 7-point scale) concerning the set of items of the questionnaire.

We collected 280 responses from purchase and supply outlet managers. 43% of them are men and 57% are women. 22% of them are aged less than 35 years, 40% are aged between 31 and 45 years old, finally, 38% are aged more than 45 years old.

### Empirical Study

We hereafter suggest in a first step to check the reliability and validity of the measurement scales of relationship quality

(RQ) and loyalty, then to check the hierarchical structure of RQ, and ultimately to test the causal links between RQ and loyalty in the field of parapharmaceutical industry.

### Reliability and validity of the Measurement Instruments

To validate the measurement scales used in our research, we started with an exploratory factor analysis (EFA) which allowed us to check the factorization of data and determine reliability at an exploratory level. The results of this analysis were then subjected to a confirmatory factor analysis (CFA) through the structural equation method (SEM). The goal was to provide final factor structures that are reliable and valid. This allowed us to validate the structural model and test the causal link between RQ and customer loyalty.

### *The measurement scale of relationship quality*

A first principal components analysis (PCA) with varimax rotation made it possible to eliminate the third item of the affective commitment which presented a very low representation quality (well below 0.5). A second PCA was started without this item and resulted in factorial contributions and

satisfactory qualities of representation and reliability.

In addition to the EFA, we conducted a CFA to verify the quality of fit of the measurement model of RQ and check its good reliability and validity. We note that we used the method of Maximum Likelihood (ML) as a method of data estimation.

The results of the CFA reveal a violation of the data normality assumption (the Mardia index is superior to 3). To make up for this problem, we used the Bollen Stine Bootstrap procedure by comparing the difference between the probabilities of the model's Chi-square without bootstrap and its probability with bootstrap. The difference was too slight for the violation of normal distribution to have any effect on the results.

Besides, and in order to check data stability, we compared the estimated values of the parameters of the ML method to those of the bootstrap method (N = 250). As the differences were not significant, we relied on the results reached through the ML method.

We suggest the introduction of the RQ model fit indices in the table below. These indices are satisfactory on the whole.

**Table 1: The RQ model fit indices**

Chi-Square	GFI	AGFI	RMR	RMSEA	CFI	TLI
2.975	0.906	0.853	0.081	0.048	0.981	0.974

We later checked the reliability at the confirmatory level with the Rhô of Jorekög index and the validity of each of the dimensions of the RQ using the approach of

Fornell and Larker (1981) (see table 3 and 4)

**Table 2: The reliability and the convergent validity of the relationship quality**

Dimensions	Rhô of Jorekög	Rhô of the convergent validity
Honesty	0.941	0.841
Benevolence	0.943	0.848
Affective commitment	0.907	0.830
Satisfaction	0.984	0.954
Affective conflict	0.989	0.967

**Table: 3 The discriminant validity of the relationship quality**

	1	2	3	4	5
1.Honesty	<b>0.841</b>				
2.Benevolence	0.747	<b>0.848</b>			
3.Affective commitment	0.742	0.723	<b>0.830</b>		
4.Satisfaction	0.735	0.752	0.647	<b>0.954</b>	
5.Affective conflict	-0.654	-0.650	-0.615	-0.638	<b>0.967</b>

We will hereafter check whether the multidimensional structure of RQ will allow us to move to a hierarchical confirmatory analysis. As a matter of fact, the literature shows that the higher order of RQ has been justified by many researchers, including Roberts *et al.* (2003).

We will further proceed with a comparison between the model of the first order and that of the second order in terms of quality of fit to the data, through the calculation of the Target Coefficient Index (TCI). The TCI  $[(199.311 / 215.454) = 0.9250]$  shows that 92.5% of the covariance among first-order factors can be explained in terms of second-order factors. Consequently, the model structure of the RQ converges toward a higher order.

This second order structure shows a satisfactory fit with good fit indices. However, the multinormality conditions are similar to those of the first order confirmatory analysis with a Mardia value equal to 72.017, which led us to apply the

procedure of Bollen Stine Bootstrap. The gap between the Chi-square probability of the model without bootstrap and that of the model with bootstrap was very narrow. This means that the violation of the normal distribution will have no impact on the results.

In addition, the data proved to be stable since the difference between the values estimated by the ML method and those of the bootstrap method is not significant.

Therefore, the results of the ML method are the ones that will be interpreted.

Finally, the results of the checking of reliability and validity, both convergent and discriminating, confirm the second order factor structure of RQ.

#### ***The measurement scale of loyalty***

We performed an exploratory factor analysis (EFA) of the scale of loyalty, using an analysis of the main components. Findings led us to conclude the following:

- The KMO measure and the Bartlett test (KMO = 0.832;  $p = 0.000$ ), which indicate acceptable values, confirm the data factorization.
- The values of the qualities of representation and the factor contributions are satisfactory (they all exceed 0.5).
- The scale of loyalty has a one-dimensional factor structure. Indeed, the explained variance percentage (94.376%) made it possible to select a single component with a proper value equal to 3.775.
- Cronbach's Alpha reveals the good internal consistency of the scale.

In a second step, we conducted a CFA. Findings show that the Kurtosis and Skewness indices meet the thresholds set by the empirical studies. The Mardia index, however, exceeds by far the limit set at 3. To overcome the violation of the assumption of data normality, we relied on the Bollen Stine Bootstrap procedure, to make sure that the violation of the normal law has no effect on the results.

By comparing the values of the estimated parameters of the ML method to those of the bootstrap method (N = 250), we found that the results were steady as the gaps were not significant. Thus, we relied on the results of the ML method which revealed that the fourth item (fidel4) has a low SMC value. Hence, we decided to eliminate it.

Following purification, the scale comprises three items. So it is considered as being an

exactly identified scale, which means that it contains enough information to estimate the parameters.

The reliability and convergent validity of the loyalty scale are very satisfactory, with values of 0.988 for the Jöreskog's  $\text{Rh}\hat{o}$ , and 0.964 for the  $\text{Rh}\hat{o}$  of the convergent validity.

**Table 5: The CFA Results of the Loyalty Measurement Scale**

Items	Standardized factorial Contributions	SMC	CR	P
Fidel1	0.986	0.940	22.973	0.000
Fidel2	0.990	0.980	23.600	0.000
Fidel3	0.969	0.973	22.226	0.000
<b>Rh<math>\hat{o}</math> of Jöreskog = 0.988</b>				
<b>convergent validity = 0.964</b>				

#### Reliability and validity of the global measurement model

We used the Bootstrap procedure (N = 250) in order to resolve problems related to the violation of the data normality (Mardia index exceeds 3) and to check the robustness of our model. The differences between the values of the parameters estimated by the ML method and those of

the bootstrapped method were significant. Consequently, the results reached through the ML method were interpreted.

The global measurement model presents satisfactory fit indices (table 6). Results of the reliability at the confirmatory level and the convergent and discriminant validity using the approach of Fornell and Larcker (1981) are shown in table 6 and 7.

**Table 6: The global measurement model fit indices**

Chi-Square	GFI	AGFI	RMR	RMSEA	NFI	CFI	TLI
3.961	0.850	0.836	0.056	0.054	0.953	0.945	0.929

**Table 6: Reliability and convergent validity of the variables of the global measurement model**

	Rh $\hat{o}$ of Jöreskog P $\xi$	Convergent validity
1. Trust in partner's honesty	0.942	0.843
2. Trust in partner's benevolence	0.968	0.909
3. Affective Commitment	0.906	0.829
4. Satisfaction	0.986	0.959
5. Affective conflict	0.989	0.968
6. Loyalty	0.978	0.936



**Table 7: The discriminant validity of the measurement model**

	1	2	3	4	5	6
<b>1. Trust in partner's honesty</b>	<b>0.843</b>					
<b>2. Trust in partner's benevolence</b>	0.676	<b>0.909</b>				
<b>3. Affective Commitment</b>	0.658	0.580	<b>0.829</b>			
<b>4. Satisfaction</b>	0.612	0.678	0.663	<b>0.959</b>		
<b>5. Affective conflict</b>	- 0.427	- 0.411	- 0.318	- 0.566	<b>0.968</b>	
<b>6. Loyalty</b>	0.604	0.556	0.540	0.602	-0.358	<b>0.936</b>

### Causal measurement model and hypothesis tests

The structural model presents satisfactory fit indices (see Table 6). Indeed, the GFI and AGFI indices are slightly lower than 0.9 but higher than 0.8. The TLI and CFI indices are above 0.9. The RMR and RMSEA indices have low values. Finally, the model meets the parsimony conditions with a Chi-square value of 3.191.

We note that we used the Bootstrap procedure (N = 250) to check the robustness of our model and address the issue of the violation of data normality (the Mardia index exceeds 3). The aim was to ensure that the gap between the values of the parameters estimated by the ML method and those of the bootstrapped samples is not significant (Akrouf, 2010).

**Table 8: The model fit of the of the causal measurement model**

Chi-deux	GFI	AGFI	RMR	RMSEA	CFI	TLI
3.191	0.856	0.843	0.058	0.052	0.972	0.959

**Table 9: Results of the causal links between RQ, its dimensions and the loyalty**

Causal links	CR	P	Conclusions
Loyalty ← QR	6.967	0.000	H.1 is validated
Loyalty ← Honesty	6.504	0.000	H.2 is validated
Loyalty ← Benevolence	3.976	0.000	H.3 is validated
Loyalty ← Commitment	3.858	0.000	H.4 is validated
Loyalty ← Satisfaction	6.819	0.000	H.5 is validated
Loyalty ← Affective Conflict	- 4.755	0.000	H.6 is validated

We used the Structural Equations Method to test and validate the research hypothesis. In Table 7, we present a synthesis of the results of the causal links between RQ, its various dimensions, and loyalty. Structural links are significant at the 5% threshold, and the absolute values of the Student tests are above 1.96. This allowed us to validate

the research hypothesis H.1, H.2, H.3, H.4, H.5 and H.6.

Hence, we can confirm that in the context of the parapharmaceutical industry, RQ has a significant and positive impact on customer loyalty at a threshold of 5%. By further analyzing the relationship between the

dimensions of RQ and loyalty, we found that trust in the partner's honesty and benevolence, affective commitment and satisfaction have positive and significant impacts on the customer loyalty. These results are consistent with those reached by the works of Roberts *et al.* (2003). Consequently, the indicators of RQ identified by Roberts *et al.* (2003) apply in a service delivery context as well as in the context of parapharmaceutical industry.

### Conclusions

The objectives of this research were to present the main features, definitions and dimensions of relationship quality. A literature review showed us that relationship quality generally reflects the nature and depth of any exchange relationship between partners in a commercial exchange. It is a multidimensional concept, characterized by a dynamic nature, as it evolves over time and with interactions (Gronroos, 2007), and that can only be defined by the set of dimensions that compose it.

In order to provide a measure of relationship quality in the field of the parapharmaceutical industry and to identify the different dimensions of the relationship quality that impact customer loyalty, we used the relationship quality measurement instrument developed by Roberts *et al.* (2003). The interest of this operationalization is the involvement of the concept of conflict in addition to various classical aspects of RQ and the recognition of the emotional aspect and of its dynamic character.

The empirical results show that the measurement scale developed by Roberts *et al.* (2003) is reliable, valid and relevant both in the service sector and in the parapharmaceutical industry. In addition, the results of the tests of the causal links between relationship quality and loyalty are supporting the literature that demonstrates the important role of relationship quality as major determinants of customer loyalty (Hennig-Thurau *et al.*, 2002; Roberts *et al.*, 2003; Mimouni and Volle, 2003; Liang and Wang, 2004; Lin and Ding, 2005, 2009;

Wong and Sohal, 2006; Vesel and Zabkar, 2010; Hung, 2012; Shaimaa and Doma, 2013).

Furthermore, trust in partner's honesty and benevolence has positive and significant impacts on customer loyalty in the specific context of the parapharmaceutical industry. This result is in keeping with previous findings in the works of Garbarino and Johnson (1999); Singh and Sirdeshmukh (2000); Morgan *et al.* (2000); Chaudhuri and Holbrook (2001); Sirdeshmukh *et al.* (2002); Roberts *et al.* (2003); Dixon *et al.* (2005); Rauyruen and Miller (2009); Auruskeviciene *et al.* (2010); Shaimaa and Doma (2013); Motamedifar *et al.* (2013).

Moreover, the empirical results revealed that affective commitment has a positive and significant impact on customer loyalty. This is in concomitant with the previous research studies (e.g. Roberts *et al.*, 2003; Hennig-Thurau *et al.*, 2004; Allagui and Temessek, 2005; Ndubisi, 2007; Rauyruen and Miller, 2007; Lee *et al.*, 2011; Shaimaa and Doma, 2013). Besides, satisfaction has a positive and significant impact on customer loyalty. This finding converges with those in the literature, notably with works of Roberts *et al.* (2003); Harris and Goode (2004); Auh (2005); Flavian and Guinaliu (2006); Ndubisi *et al.* (2007); Rauyruen *et al.* (2009); Auruskeviciene *et al.* (2010); Huang (2012); Shaimaa and Doma (2013). However, the manifestation of any affective conflict impacts customer loyalty negatively as shown by Roberts *et al.* (2003).

### Contributions, limitations and futures researches

The main contribution of our research is to present a measure of the relationship quality taking into account the dynamic and affective character of this concept. Thus, based on the measurement scale developed by Roberts *et al.* (2003), we checked its reliability and validity in the case of parapharmaceutical industry.

A confirmatory factor analysis conducted through the method of structural equations (SEM) was performed in addition to an exploratory factor analysis to check the reliability, validity and hierarchical

structure of the measurement instrument. We mention that the use of the modeling by SEM is a considerable methodological contribution. Besides, the second order confirmatory analysis facilitates the determination of the hierarchical structure of relationship quality.

Our research presents some managerial contributions. It helps to identify the variables that generate customer loyalty and to determine strategies that lead to higher relationship quality. Consequently and in order to develop and maintain relationships with their customers, professionals should necessarily focus all their efforts on improving each component of relational quality. They should also be careful in handling potential conflicts that may arise with their clients. Indeed, the manner and the speed in handling and resolving problems reflect the attention given to the client, and the extent of relational commitment.

Our research has some limitations pertaining to the operationalization of customer loyalty, which has not considered the effect of time. In fact, we conceptualized loyalty as a lasting reaction. Whereas in reality, the behavioral manifestations of individuals change over time and according to the interactions between partners in a relationship. As a matter of fact, Frisou (2005) referred to this weakness in the conventional operationalization of loyalty, and emphasized the need to integrate the effect of time in the theoretical as well as in the empirical definitions.

Therefore, it is interesting to investigate this track in future research, and to broaden the scope of the investigations by focusing on each stage of development of the relationship between partners, taking into account the importance of experiences and previous interactions, and examining possible variations in the causal links between the different dimensions of relationship quality and loyalty.

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