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EMPIRICAL ARTICLE

Using customer contact centres as relationship marketing instruments

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Abstract This article investigates whether, to what extent and how customer contact centres influence customer–firm relationships through customer contact centre quality. The proposed model compiles direct and indirect effects of this form of quality on focal relationship marketing constructs, including customer satisfaction, trust, affective commitment and customer loyalty. A survey of 1,589 customers of three service firms in different industries provides a test of the model. The results indicate that customer contact centre quality is a relational instrument with a positive, direct influence on relationship quality. Its substantial positive effect on customer loyalty is indirect, mediated by relationship quality.

1 Introduction

The importance of service delivery as a strategic differentiator in competitive markets has been growing rapidly. Organizations realize more and more that their products and prices can be copied in an instant, whereas the services they deliver are far more difficult to copy. Thus, service delivery, in terms of the resource based

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view represents a preeminent human capital resource of sustained competitive advantage (Barney 1991; Wright et al. 1993) and from a (relationship-) marketing perspective is an excellent tool for creating long-term customer relationships (Hennig-Thurau et al. 2002). Moreover, the quality of the service delivered strongly affects relationship quality (i.e. customer satisfaction, trust and affective commitment) and outcomes (customer loyalty, repurchase intentions and positive word of mouth), which puts even more pressure on organizations to deliver the best service possible (Rust et al. 1995; Sharma and Patterson 1999; Spreng and Mackoy 1996). To better understand customers' evaluations of service quality, researchers thus have devoted considerable effort to study service quality (e.g. Cronin and Taylor 1992; Parasuraman et al. 1985, 1988).

In this setting, many organizations use customer contact centres as important instruments for delivering their services, whether partially or totally (Anton 2000; Holman et al. 2007; Miciak and Desmarais 2001), and the number of customer contact centres is increasing substantially (Whitt 1999). Average growth rates in the customer contact centre industry for Europe, the Middle East and Africa are estimated to be around 130 % in the period from 1999 to 2005 (Datamonitor 2003). Such rapid growth coincides with a shift in the accessibility of organizations, such that fewer customers interact with a single contact person, such as a salesperson or an account manager, and many service companies have reduced or abandoned the idea of physical service encounters. Thus on average, 80 % of a firm's interactions with its customers take place through a customer contact centre, and 92 % of customers form opinions about an entire organization based solely on their experience with the customer contact centre (Anton et al. 2004).

The current situation thus appears somewhat paradoxical: scholars and practitioners alike agree that human interactions facilitate long-term customer relationships, but traditional, interpersonal means for establishing customer relationships, such as account managers and physical stores, are becoming scarcer. Tasks formerly performed by account managers or service encounters have been transferred to customer contact centres. Even without the benefits of physical proximity, customer contact centres must substitute for more traditional sales instruments and create long-term customer relationships. But how can they accomplish this task and through what mechanisms? Extant literature on customer contact centres has largely neglected this question.

The contribution of our article is fourfold. First, we address the importance of customer contact centres' changing role and show that as marketing instruments, these centres are in the midst of an inevitable transformation from transaction-oriented cost centres to relationship-oriented value centres. Second, we introduce and operationalize customer contact centre quality, as a new and specifically to this context adapted holistic concept, to explain customer contact centres' impact on customer–firm relationships. Third, by relying on relationship marketing theory and service quality research, we develop a model that incorporates the direct and indirect effects of customer contact centre quality on relationship quality and customer loyalty. Fourth, our extensive empirical study shows that the influence of customer contact centre quality on customer loyalty is fully mediated by relationship quality. New here, and contrary to existing research in the broader

field of service quality and loyalty, is that we show that customer contact centres per se cannot guarantee loyal customers; rather, they help improve relationship quality, which in the end leads to an increase in customer loyalty. Moreover, our study adds to the debate on how the changing face of customer contact centres leads to the necessity of developing holistic and context specific measurements of service quality and thereby help to more validly explain the impact of customer contact centre quality on customer–firm relationships.

2 The transformation from cost to value centres

In the mid-1980s, most customer contact centres started out as cost centres, so their primary objective was to handle customer contacts as efficiently as possible to save money for the organization (Gans et al. 2003).

Various changes in the service industry context and the increased expectations of customer contact centres call for changes in perspectives on customer contact centres. To create loyal customers, a concentration on low cost, short-term transactions is insufficient, and operational, transaction-oriented performance indicators have no relation with customers' satisfaction with the organization (Feinberg et al. 2000; Marr and Parry 2004). To create long-term customer relationships, organizations instead must implement relationship-oriented performance indicators, such as customer satisfaction, trust and affective commitment (Alexander and Colgate 2000; Coviello and Brodie 1998; Morgan and Hunt 1994). The customer contact centre needs to transform from a cost centre into a value centre, focused not only on transaction-oriented performance indicators, but also on relationship-oriented indicators that encourage long-term relationships with customers.

The evolution from a cost centre to a value centre perspective appears in prior research on customer contact centres as well, starting around 2000 (e.g. Burgers et al. 2000; Feinberg et al. 2000; de Ruyter and Wetzels 2000). The initial transaction-oriented perspective led to a focus on efficiency, so research primarily addressed (optimizing) performance indicators related to challenging issues such as handling time (Feinberg et al. 2000; Marr and Parry 2004), queuing (Avramidis et al. 2004; Bassamboo et al. 2006; Brown et al. 2005; Whitt 1999, 2005, 2006), forecasting (Avramidis et al. 2004; Whitt 1999) and staffing (Atlason et al. 2004; Whitt 2006). Then Feinberg et al. (2000), Miciak and Desmarais (2001), and Marr and Parry (2004) proposed that there was hardly any relationship between these cost-reduction performance indicators and customers' satisfaction. Moreover, the impact on a customer's experience with internal aspects, such as service levels, total calls and average talk time, is minimal (Feinberg et al. 2000; Heinen 2006; Holland 2003; Marr and Parry 2004; Miciak and Desmarais 2001). Apparently, satisfied customers result from determinants other than those studied from a cost centre approach; a value centre approach would be needed to address the determinants that actually ensure long-term customer relationships.

From the value centre perspective, the research focus shifted to customers' perceptions. De Ruyter and Wetzels (2000) investigated employee performance, the

customer contact centre representative, and the specific impact of perceived listening by the representative on customer satisfaction with and trust in the organization. They define perceived listening according to three dimensions: attentiveness, perceptiveness, and responsiveness. Attentiveness and responsiveness both have direct impacts on customer satisfaction, and receptiveness and responsiveness have direct impacts on customer trust. The three dimensions likely influence customers' overall evaluations of the quality of the contact centre as well. Burgers et al. (2000) consider the role of the representative in a broader sense: what does the customer expect of a customer contact centre representative? They find four dimensions of customer expectations of customer contact centres: adaptiveness, assurance, empathy and authority. In addition to basic service aspects, such as solving the problem, being friendly and explaining the steps in the process, Dean (2004) identifies customer feedback and customer focus as two new dimensions of customer contact centre quality.

These studies thus concentrate on particular aspects of the quality of the customer contact centre, which have impacts on relationship quality. They were among the first to indicate that customer contact centre quality positively influences long-term customer relationships, which implies that they can function as value centres and therefore as key relationship marketing instruments.

3 Theoretical background

More and more organizations are experiencing scenarios in which creating long-term relationships with customers is ever more important (Alexander and Colgate 2000; Coviello and Brodie 1998). The customer relationship management perspective contends that long-term relationships are based on customer satisfaction, trust and affective commitment (Hennig-Thurau et al. 2002). Customer satisfaction with an organization is the result of a psychological comparison process in which the perceived benefits obtained from an organization get weighed against expectations (Oliver 1980; Yi 1990). Trust in our context encompasses the perceived credibility and benevolence of an organization (Doney and Cannon 1997). Affective commitment refers to a feeling of belonging to the organization and caring about its long-term success (Garbarino and Johnson 1999). Customer loyalty focuses on customers' future intentions, in the form of repurchase and positive word of mouth (Zeithaml et al. 1996). Several studies show that customer satisfaction, trust and affective commitment are important mediators in creating loyal customers (e.g. Caceres and Paparoidamis 2007; Garbarino and Johnson 1999; Morgan and Hunt 1994), through an attitudinal process in customers' minds, such that customers develop so-called true customer loyalty—a more sustainable form than the spurious customer loyalty created by inertia (Bloemer and Kasper 1995; Dick and Basu 1994).

Since customer contact centres are the key to service delivery processes, so their challenge is to fulfil their value-creating role by exerting a positive impact on long-term customer relationships through customer satisfaction, trust and affective commitment. Because customer contact centre quality aspects have a positive

impact on relationship quality, we introduce, conceptualize and operationalize the concept of customer contact centre quality as the main determinant of customer contacts centres' impact on long-term customer relationships.

3.1 Customer contact centre quality

We define customer contact centre quality as the overall evaluation of the customer contact centre, as perceived by customers. The theoretical basis of customer contact centre quality is analogous to the dominant conceptualization of service quality, namely, the confirmation–disconfirmation paradigm (Parasuraman et al. 1985). This paradigm also paved the way for the seminal work by Parasuraman et al. (1985, 1988) on service quality and its measurement with the SERVQUAL instrument.

Although SERVQUAL is generic and therefore, in principle, applicable to a wide field of services, the dimensions of service quality are less generalizable across contexts than the dominance of the SERVQUAL instrument might suggest (Grönroos 1990; Johnston 1995). Van Dun et al. (2012) take a holistic view of customer contact centre quality to study its dimensionality and recommend adapting the service quality construct to the customer contact centre context. Their proposed customer contact centre quality measurement scale consists of seven dimensions (see Table 1), each of which contributes to overall customer contact centre quality.

The first dimension is *reliability*, or the customer's sense that the customer contact centre performs at a constant level. It comprises aspects such as answering questions, being able to trust the employee's knowledge and consistency of information. The second dimension of customer contact centre quality, *empathy*, pertains to the ability of the employee to make the customer feel that he or she is taken seriously and that the employee is able to put him- or herself in the customer's shoes. It includes friendliness, listening and understanding.

As a third dimension, customer contact centre quality consists of *customer knowledge*. The customer should believe that the customer contact centre really knows him or her and uses information to benefit that customer. Its aspects make customers feel as if the organization knows them. The fourth dimension of customer contact centre quality instead pertains to *customer focus*, which shows the customer whether the customer contact centre has his or her interests at heart. It comprises giving proactive advice, providing information to enhance customer satisfaction and making sure the customers' questions get answered.

Accessibility, the fifth dimension of customer contact centre quality, indicates whether the customer contact centre is easy to access for customers when they need it, based on the ease of finding the phone number and the operating hours of the customer contact centre. Because some customers must wait for this access, the sixth dimension of customer contact centre quality is *waiting cost*. It involves the effort the customer must make to reach the centre, which includes not only waiting time, but also the cost of calling. Finally, the seventh dimension of customer contact centre quality is *user friendliness of the voice-response unit* (*VRU*). This dimension consists only of aspects related to the VRU, that is, the automated menu through which customers must proceed before they can speak to an employee.

Table 1 Confirmatory factor analysis of quantitative customer contact centre quality

Factors	Items	Loading	α	Average variance extracted
Accessibility	The phone number of the contact centre of organization X is easy to find	0.877	0.723	0.783
	The opening hours of the contact centre of organization X are sufficient	0.893		
Waiting	When I call the waiting time is made clear to me	0.588	0.674	0.608
	The waiting time of the contact centre of organization X is acceptable	0.891		
	The costs of calling the contact centre are acceptable	0.826		
Voice response unit	The VRU is logically ordered	0.934	0.898	0.831
	The VRU is clear	0.930		
	The VRU is not too long	0.869		
Knowing the customer	As soon as I talk to an employee, I notice that the employee:		0.860	0.589
	– Knows me as their customer	0.656		
	– Immediately has my data at his disposal	0.806		
	– Has insight into my personal data	0.833		
	– Has insight into my product data	0.831		
	– Knows when and why I contacted the contact centre previously	0.721		
	– Knows what other contacts I have had with the organization (e.g. letters, e-mail, visit to the office)	0.741		
Empathy	The employee I talk to:		0.966	0.715
	– Says his name	0.600		
	– Is friendly	0.788		
	– Is patient	0.842		
	– Understands me correctly	0.885		
	– Listens well	0.906		
	– Takes me seriously	0.907		
	– Puts himself in my situation	0.896		
	– Knows my needs	0.798		
	– Gives me personal attention	0.883		
	– Makes me feel my question is important	0.882		
	– Takes my level of knowledge into account	0.788		
	– Is solution oriented	0.879		
	– Thinks along with me	0.886		

Table 1 continued

Factors	Items	Loading	α	Average variance extracted
Reliability	The employee can quickly find the information to answer my question	0.855	0.942	0.633
	The employee tells me what I can expect	0.825		
	The employee knows his own organization well	0.835		
	I can trust the knowledge of the employee	0.893		
	The employee can answer all my questions	0.897		
	The employee can promise next steps that the organization actually follows through	0.822		
	I do not have to call more than once to receive an answer to my question	0.834		
	When I speak to an employee, my question is answered at once	0.853		
	When the employee is not able to answer my question, I am being redirected to an employee who can	0.785		
	I receive a written confirmation of important agreements	0.659		
	The employee asks the right questions to get to the heart of my question/ problem	0.807		
Customer focus	The employee asks me whether the answer is clear	0.736	0.879	0.544
	The employee asks me whether my question has been answered	0.721		
	The employee asks me whether I am satisfied at the end of the conversation	0.666		
	When I have had contact with the contact centre, some time after this contact I am being asked whether this contact was to my satisfaction	0.613		
	The contact centre of organization X learns from the signals it receives from its customers	0.802		
	I receive proactive advice on what products would suit my situation	0.717		
	The contact centre of organization X always keeps its promises	0.812		
	The information I receive is consistent, even when I talk to another employee	0.807		

Model fit: $\chi^2 = 3,840.275$, df = 946, confirmatory fit index = 0.932, nonnormed fit index = 0.922, incremental fit index = 0.932, root mean square error of approximation = 0.055

3.2 The consequences of customer contact centre quality

Instead of focusing on individual aspects or dimensions of customer contact centre quality, we investigate more comprehensively the impact of customer contact centre quality on long-term customer relationships. This approach can be regarded as more holistic, since it focuses both on direct and indirect impacts on relationship quality (customer satisfaction, trust and affective commitment) and customer loyalty (repurchase intentions and positive word of mouth; cf Chiou and Droge 2006; Fullerton 2005; Johnson et al. 2001; Sharma and Patterson 1999).

3.2.1 Satisfaction

In relationship marketing literature, most studies on service quality indicate a positive relationship between service quality and customer satisfaction (e.g. Rust et al. 1995; Spreng and Mackoy 1996). Studies that focus on aspects of customer contact centre quality also find positive relationships with customer satisfaction. For example, de Ruyter and Wetzels (2000) note the impact of a customer contact centre representative's listening skills on customer satisfaction. Customers value the feeling of being understood by the employee and the feeling of empathy they receive. Feinberg et al. (2000) find that the number of calls closed on first contact (i.e. first-time fixes) and average abandonment have positive impacts on customer satisfaction. The first-time fix measure appears in almost every performance management index for customer contact centres. Customers want an answer to their question or a resolution to their problem before they end the call. As derived from these aspects, customer contact centre quality should have a positive impact on customer satisfaction with the organization, because positive evaluations of customer contact centre quality improve overall attitudes towards the organization (Cronin and Taylor 1992). We propose:

H1 Customer contact centre quality has a positive impact on customer satisfaction with the organization.

3.2.2 Trust

Trust plays a crucial role in relationship marketing and beyond (Caceres and Paparoidamis 2007; Garbarino and Johnson 1999; Morgan and Hunt 1994). According to Sharma and Patterson (1999), a positive relationship exists between service quality (measured as functional and technical quality) and trust. Coulter and Coulter (2003) also find that personality- and performance-related dimensions of service quality have positive impacts on trust. Chiou and Droge (2006) confirm these findings by discovering that the impact of interactive service quality on trust is significant.

In the context of the customer contact centre, a customer's dependence plays a crucial role in strengthening or diminishing the feeling of trust in the organization. Many customers have nowhere else to go to, in that the customer contact centre is the only point of contact. During a moment of truth then, the customer contact centre utterly determines the trustworthiness of the organization.

When the customer contact centre fails to serve the customer well, such as by failing to resolve a problem, it damages customers' sense of trust in the entire organization. Alternatively, a high quality customer contact centre can enhance feelings of trust. For example, imagine that a customer has experienced a product failure that damaged his or her feeling of trust in the organization. When the customer contact centre responds correctly to this failure, trust in the organization can be restored. We therefore propose that customer contact centre quality has a positive impact on trust in the organization, because it positively reinforces trust-generating processes and thereby exerts a positive effect on evaluations of the perceived credibility and benevolence of the organization. Therefore, we posit:

H2 Customer contact centre quality has a positive impact on trust in the organization.

3.2.3 Affective commitment

Affective commitment has a crucial role in relationship marketing (Caceres and Paparoidamis 2007; Garbarino and Johnson 1999; Morgan and Hunt 1994). Sharma and Patterson (1999) recognize that technical quality has a positive impact on commitment, and the impact of service quality on affective commitment appears in studies by Fullerton (2005), Harrison-Walker (2001), and Johnson et al. (2001).

Affective commitment entails an emotional bond between the customer and the organization. The customer feels that he or she belongs to the organization and cares about its long-term success. The quality of the customer contact centre might enhance or diminish this affective commitment, especially if the relationship features the use of pledges. According to Anderson and Weitz (1992), pledges have a significant effect on the degree to which parties are committed to relationship partners. Customers regard the provision of a certain level of customer contact centre quality as an idiosyncratic investment in the customer–firm relationship, which should encourage their affective commitment to the organization. Therefore, we propose:

H3 Customer contact centre quality has a positive impact on affective commitment to the organization.

3.2.4 Customer loyalty

According to Bloemer et al. (1998), Cronin and Taylor (1992), Dabholkar et al. (2000), Patterson et al. (1997), Olson (2002), Sivadas and Baker-Prewitt (2000), and Zeithaml (2000), relationship quality mediates the relationship between service quality and customer loyalty. This indirect impact can be explained by the cognition–affect–behaviour hierarchy in expectancy value theory (Eagly and Chaiken 1993), and is supported as well by the cumulative satisfaction approach (Johnson et al. 2001) and the loyalty phase framework (Oliver 1999). In line with these findings and theories, we propose a model in which customer contact centre quality has an indirect impact on customer loyalty. We thus anticipate that customer contact centre quality affects customer loyalty through organizational customer

satisfaction, trust, and affective commitment, but not on customer loyalty directly (full mediation). Customers use their evaluations of customer contact centre quality as input to determine their satisfaction with, trust in and affective commitment towards the organization. Although a direct impact of service quality on customer loyalty has been presumed and found in earlier research as well, we argue that for directly driving true loyalty towards the organization (i.e. repurchase intentions and positive word of mouth), the impact of customer contact centre quality is, due to the physical distance and the specific characteristics of the service delivery process in this context too limited. We therefore expect that customer contact centre quality has no direct impact on loyalty towards the organization. Since it is unusual to formulate an hypothesis when no effect is expected, we do not do so for the unexpected direct relationship between customer contact centre quality and true loyalty. An indirect relationship between customer contact centre quality and true loyalty via satisfaction, trust and affective commitment might be shown through testing our complete conceptual model.

3.3 Relationships between customer satisfaction, trust, affective commitment and customer loyalty

Many studies have focused on the relationships of the key components of relationship marketing and customer loyalty (Chiou and Droge 2006; Coelho and Henseler 2012; Garbarino and Johnson 1999; Lam et al. 2004). Although some studies find that trust and affective commitment mediate the relationship between customer satisfaction and customer loyalty (e.g. Bansal et al. 2004; Morgan and Hunt 1994), others indicate that customer satisfaction has a direct impact on affective commitment (Garbarino and Johnson 1999) or customer loyalty (Chiou and Droge 2006; Lam et al. 2004). Because our goal is to explore the impact of customer contact centre quality on customer satisfaction, trust, affective commitment and customer loyalty, we do not discuss the details of these relationships, but instead use previously proposed interrelationships (Caceres and Paparoidamis 2007; Eshghi et al. 2007; Lai et al. 2009; Nijssen et al. 2003) as a starting point to explore the relationships among the four key components. We propose:

H4 Customer satisfaction with the organization has a positive influence on trust in the organization.

H5 Customer satisfaction with the organization has a positive influence on affective commitment towards the organization.

H6 Customer satisfaction with the organization has a positive influence on customer loyalty towards the organization.

H7 Trust in the organization has a positive influence on affective commitment towards the organization.

H8 Trust in the organization has a positive influence on customer loyalty towards the organization.
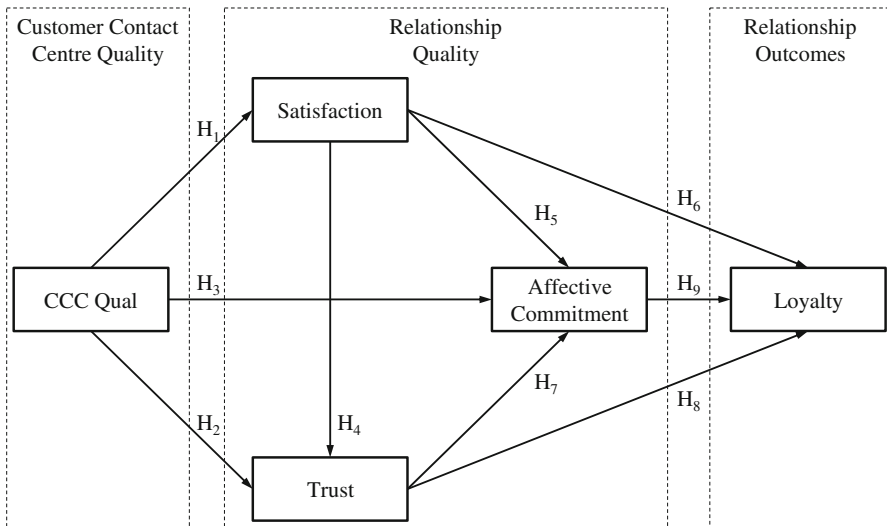
Fig. 1 Conceptual framework of the impact of customer contact centre quality

H9 Affective commitment towards the organization has a positive influence on customer loyalty towards the organization.

Figure 1 depicts our conceptual model, including the links between customer contact centre quality and focal relationship quality components (customer satisfaction, trust and affective commitment) and outcomes (customer loyalty: repurchase intentions and positive word of mouth).

4 Research design and method

Considering our conceptualization of customer contact centre quality as a perceptional construct, the most appropriate research method is a survey. As our unit of analysis, we use an individual customer who recently experienced the performance of a customer contact centre. To ensure our results are generalizable across different service industries, we selected customers from three service industry organizations: health insurance, financial services and telecom. The three industries differ on several levels. For example, health insurance for most customers is something they deal with incidentally and rarely, so there are relatively few touch points between customers and health insurers. If customers have no health concerns over the course of a year, their yearly premium offer might be their only contact with the insurer. The telecom branch represents the opposite scenario: these firms offer Internet, telephony and television services, so customers likely engage in multiple contacts pertaining to all three services. Finally, the contact rate with financial services should lie between these two extremes. Most banks have Internet banking, and many customers use these services on a daily, weekly or monthly

basis. However, a professional Internet channel also can minimize the amount of customer contacts to ask questions. Most banks are in the midst of their transformation to offering full services through the Internet. Because our focus is customer contact centres, testing our results across these three industries should strongly enhance the external validity of our results.

4.1 Measures

We adopted the 47-item scale of customer contact centre quality from van Dun et al. (2012) to measure customers' perceptions of customer contact centre quality. Adapting this scale to the service industries in our research was not necessary since the scale was developed in the context telecommunication, health insurance and banking. The measures of the key components of relationship quality and outcomes are based on existing scales that had been proven valid and reliable as well. Customer satisfaction uses one item, 'I am satisfied with company X as a whole'. This single-item measurement appears reasonable here, because customer satisfaction is a concrete marketing construct that is easy to understand and assess for customers (Bergkvist and Rossiter 2007; Rossiter 2002). For trust, we build on Garbarino and Johnson (1999) and use three measurement items. For affective commitment, we again turn to Garbarino and Johnson (1999) and adopt their four-item scale. For the operationalization of customer loyalty, we use the scale developed by Zeithaml et al. (1996), which features three items for word of mouth and two items for repurchase intentions.

For all items in our questionnaire, we used seven-point Likert-type scales ranging from 1 ('completely disagree') to 7 ('completely agree'). For an overview of these items, see the Appendix.

4.2 Sampling and data collection

The employees of organizations in the three service industries were asked, during a specific period, to ask customers who contacted the contact centre to provide their e-mail addresses, so that we could approach them for our study. The time between the request for their e-mail address and arrival of the e-mailed survey was never longer than 1 week, so their evaluations should be recent in their minds. Ultimately, 7,535 customers agreed to provide their e-mail address, and we received in response to personalized e-mails with a link to the online survey 1,589 responses: 472 pertaining to telecom, 558 to health insurance and 559 to financial services. Of the respondents, 65 % were men, and their ages ranged from 18 to 86 with an average age of 46 years.

In principle, the sampling scheme would make it possible that customers at the opposite extremes of the satisfaction spectrum are over represented. In order to rule out sampling problems of this type, we examined the histograms of satisfaction as depicted in Fig. 2. Figure 2 shows that the satisfaction of customers with the companies of three service industries is strongly left skewed. These empirical distributions parallel those of general customer satisfaction studies that used more
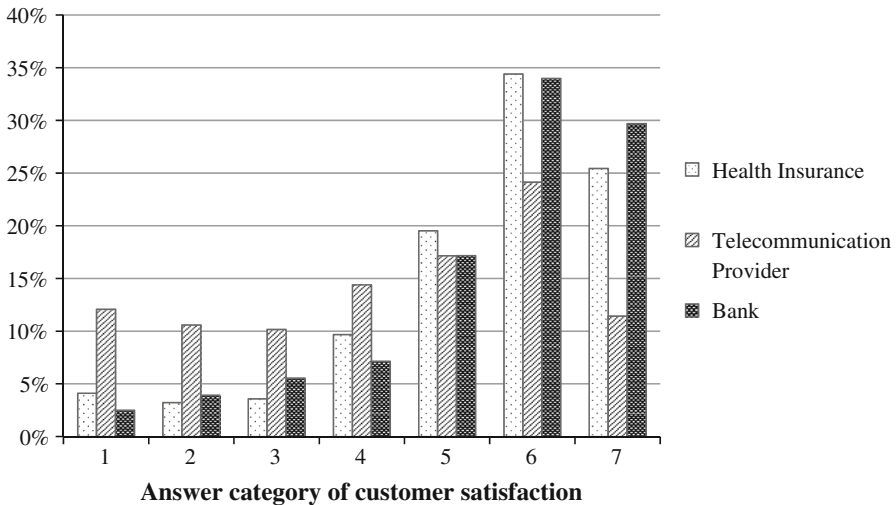
Fig. 2 Distribution of satisfaction

Table 2 Significance of differences in covariance structure across three samples

Models	df	CMIN	p	ΔNFI	ΔIFI	ΔRFI	ΔNNFI
Equal loadings	172	37.648	1.000	0.001	0.001	−0.008	−0.009
Equal structural covariances	240	250.825	0.303	0.006	0.006	−0.006	−0.007
Equal measurement residuals	364	1,761.362	0.000	0.040	0.043	0.023	0.024

elaborate sampling schemes (e.g. Fornell 1995). We therefore conclude that sampling problems are unlikely.

5 Analysis and results

We relied on covariance-based structural equation modelling, which can provide unbiased estimates of direct and indirect effects between latent variables (Henseler 2012). Before estimating the structural model using AMOS 16, we examined whether the three samples could be pooled or demanded three separate analyses. The results of a multi-group comparison in Table 2 indicate metric invariance, which implies that the three samples represent the same general population. Therefore, we proceed with an analysis based on pooled data.

First, we assessed the validity of the measurements and find support for internal consistency on the basis of the Cronbach's α values. As we show in Table 3, all coefficient α values are greater than the 0.7 threshold (Nunnally and Bernstein 1994). Composite reliability represents the shared variance among a set of observed variables that measure underlying constructs (Fornell and Larcker 1981). The

Table 3 Measurement information

Construct	Number of items	Cronbach's α	Composite reliability	Average variance extracted
Customer contact centre quality				
Accessibility	2	0.72	0.88	0.72
Waiting cost	3	0.67	0.81	0.61
User friendliness of VRU	3	0.90	0.94	0.83
Customer knowledge	6	0.86	0.90	0.59
Empathy	13	0.97	0.97	0.72
Reliability	11	0.94	0.95	0.63
Customer focus	8	0.88	0.90	0.54
Affective commitment	4	0.96	0.97	0.90
Customer loyalty	5	0.92	0.94	0.75
Customer satisfaction	1	–	–	–
Trust	3	0.91	0.94	0.85

requirement of a composite reliability of at least 0.6 (Bagozzi and Yi 1988) and the average variance extracted threshold of 0.5 (Fornell and Larcker 1981) is met by all our factors.

We also tested for discriminant validity by comparing the squared factor correlations with the two values of each average variance extracted pair. All squared correlations are below the average variance extracted (Fornell and Larcker 1981), in support of the discriminant validity of the constructs. We provide the factor correlation matrix in Table 4. Overall, the measurement model meets conventional psychometric requirements.

5.1 Hypotheses tests

The overall fit values indicate that the proposed model represents the data structure well: $\chi^2(68) = 567.568$, $p = 0.000$, goodness-of-fit index $= 0.949$, comparative fit index $= 0.980$ and root mean square error of approximation $= 0.068$. The results we obtained by estimating the hypothesized model are in Table 5.

We tested all hypotheses by examining the significance of the respective path coefficients. Direct positive effects of customer contact centre quality on customer satisfaction, trust and affective commitment emerge, in support of H1–H3. Customer contact centre quality has the greatest impact on customer satisfaction ($\beta = 0.697$) and trust ($\beta = 0.322$). The impact of customer contact centre quality on affective commitment, though significant at the 0.1 level, is very low ($\beta = 0.051$). That is, customer contact centre quality clearly strengthens the level of customer satisfaction throughout the organization and has a positive impact on trust. However, its influence on affective commitment to the organization is limited. In addition, all paths describing the interrelationships among customer satisfaction, trust, affective commitment and customer loyalty are significant, in support of H4–H9.

Table 4 Factor correlation matrix

	1	2	3	4	5
(1) Customer contact centre quality	1				
(2) Affective commitment	0.63	1			
(3) Customer loyalty	0.66	0.80	1		
(4) Customer satisfaction	0.72	0.69	0.75	1	
(5) Trust	0.75	0.74	0.81	0.82	1

Table 5 Structural equation modelling results

Hypothesis	Paths	Model 1		Model 2	
		β	t value	β	t value
1	Customer contact centre quality → satisfaction	0.697	38.706***	0.697	38.706***
2	Customer contact centre quality → trust	0.322	17.059***	0.321	16.865***
3	Customer contact centre quality → affective commitment	0.051	1.861*	0.051	1.883*
4	Satisfaction → trust	0.627	31.840***	0.628	31.756***
5	Satisfaction → affective commitment	0.115	3.253***	0.115	3.259***
6	Satisfaction → loyalty	0.100	3.773***	0.100	3.759***
7	Trust → affective commitment	0.637	14.988***	0.636	14.991***
8	Trust → loyalty	0.577	15.088***	0.570	13.861***
9	Affective commitment → loyalty	0.280	11.786***	0.280	11.797***
10	*Customer contact centre quality → loyalty*			*0.009*	*0.460 (ns)*
	Fit indices				
	χ^2	567.568		567.357	
	df	68		67	
	Comparative fit index	0.98		0.98	
	Goodness-of-fit index	0.95		0.95	
	Root mean squared error of approximation	0.07		0.07	

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

ns non significant

Relationship quality mediates the effect of customer contact centre quality on customer loyalty; to verify this effect, we tested a second model (Model 2) in which we add a direct path between customer contact centre quality and customer loyalty. The comparison between models reveals that omitting the direct relationship between customer contact centre quality and customer loyalty does not lead to a significantly worse fit, as confirmed by the model fit indices, which barely differ across models. Moreover, the indirect effect of customer contact centre quality on customer loyalty is significant ($p < 0.001$), according to bootstrapping tests (Preacher and Hayes 2008). Relationship quality thus mediates the relationship between customer contact centre quality and customer loyalty, confirming our

premonition that the customer contact centre is a crucial instrument that can create customer loyalty through its positive direct impact on relationship quality.

6 Discussion

We began this article by arguing that customer contact centres are important instruments for organizations to deliver services to customers. They increasingly substitute for traditional sales instruments to create long-term customer relationships as traditional means for relationship management, such as account managers and physical stores, are becoming scarce. We therefore pose two questions: how can customer contact centres accomplish this task, and what mechanism is at work? In answering these questions, we make a fourfold contribution to service marketing literature.

First, we show that the customer contact centre as a service marketing instrument is transitioning, from a transaction-oriented cost centre to a relationship-oriented value centre. Recent studies that adopt a value perspective on customer contact centres indicate that specific aspects of customer contact centre quality positively influence long-term customer relationships (de Ruyter and Wetzels 2000). They show that customer contact centres might be able to function as relationship-oriented value centres and key relationship marketing instruments; we extend their efforts by offering a holistic view of customer contact centre quality.

Second, we introduce, conceptualize and operationalize the concept of customer contact centre quality to explain customer contact centres' impact on long-term customer relationships. Customer contact centre quality serves as the major explanans of customer contact centres' impact on customer relationships. In line with van Dun et al. (2012), we take a holistic view and conceptualize and operationalize the construct according to the scale they developed.

Third, incorporating relationship marketing theory and service quality research, we develop a model of the direct and indirect effects of customer contact centre quality on relationship quality and customer loyalty. We argue that customer contact centre quality has a direct impact on relationship quality in the form of customer satisfaction (Cronin and Taylor 1992), trust (Doney and Cannon 1997) and affective commitment (Anderson and Weitz 1992), as well as an indirect impact on customer loyalty in the form of repurchase intentions and positive word of mouth (Eagly and Chaiken 1993; Johnson et al. 2001; Oliver 1999).

Fourth, our extensive empirical study confirms our hypothesized relationships. We thus add to the understanding of a customer contact centre's quality and its impact on customer loyalty, which is fully mediated by relationship quality. Customer contact centres may not guarantee loyal customers, but they help improve relationship quality, which then increases customer loyalty. This finding is clearly in line with our theoretical arguments and reinforces prior studies that report mediating effects of satisfaction, trust and affective commitment in the relationship between quality and loyalty (Bloemer et al. 1998; Cronin and Taylor 1992; Dabholkar et al. 2002; Olson 2002; Patterson et al. 1997; Sivadas and Baker-Prewitt 2000; Zeithaml 2000). Furthermore, we detail the direct impacts of customer contact centre quality

on customer satisfaction, trust and commitment. Although the impact on satisfaction is clearly the strongest, the effect on trust within the organization is substantial too, whereas the influence on affective commitment, though significant, is limited. These results are in line with expectations based on expectancy value theory (Eagly and Chaiken 1993) and with research that indicates a diminishing effect of quality on customer satisfaction, trust and affective commitment (Garbarino and Johnson 1999; Morgan and Hunt 1994).

The main contribution of this article therefore lies in its clarification of whether and how a customer contact centre, as a service delivery instrument, can contribute to long-term customer relationships. Customer contact centre quality enhances positive evaluations in terms of customer satisfaction with the organization as a whole. It creates a feeling of trust in the organization for customers who depend on the customer contact centre for service and problem solving. Moreover, customers feel as if they belong to the organization, feel proud of the organization and care about its long-term success. Because satisfaction, trust and affective commitment towards an organization are enhanced by greater customer contact centre quality, we confirm that customer contact centre quality is instrumental in developing, maintaining and enhancing long-term customer loyalty towards the organization, based on relationship quality as opposed to short-term customer loyalty based on inertia.

6.1 Managerial implications

Our study provides important implications for service marketing strategy, marketing management and customer contact centre management. From a service marketing strategy perspective, our most important finding is the importance of customer contact centre quality for the whole organization. Investing in customer contact centre quality is more than worthwhile for the firm. Organizations that want to create long-term customer relationships should implement a customer contact centre and deliver service through it with a focus on its relational, not transactional, role. Customer contact centres cannot be perceived as an obligation for organizations. Instead, they are marketing instruments that can support the achievement of marketing objectives, such as long-term customer relationships.

Our findings also offer marketing managers insight into how customer contact centre quality contributes to customer relationship quality and customer loyalty. Customer contact centres play pivotal roles for organizations that strive to develop, maintain and enhance customer–firm relationships. Every contact can be a 'moment of truth', so its role in increasing customer satisfaction, trust and affective commitment cannot ever be overlooked. Moreover, the effectiveness of customer contact centres as relationship marketing instruments depends on customer contact centre quality, so marketing and sales budget allocation decisions should account for optimal configurations and levels of customer contact centre quality.

Whereas generic technology-based service quality dimensions have demonstrated to have direct effects on loyalty (cf. Ganguli and Roy 2011), this is not the case for customer contact centre quality. The full mediation that we found entails that managers cannot expect to successfully take shortcuts: an increase in customer

contact centre quality will only have an effect on loyalty if it increases relationship quality at the same time.

To exploit the potential of customer contact centres as relationship marketing instruments, managers should pay attention to all dimensions of customer contact centre quality if they hope to maximize customer satisfaction, trust and affective commitment, and thus customer loyalty. In so doing, they should transform the customer contact centre into a true value centre. The customer contact centre quality scale gives managers concrete insights in each aspect they should manage. All seven dimensions should be addressed to improve customer contact centre quality and help the customer contact centre fulfil its relational role optimally. For customer contact centre quality to have a positive impact on relationship quality and customer loyalty, customers must evaluate all of the dimensions of the customer contact centre favourably (i.e. reliability, empathy, customer knowledge, customer focus, accessibility, waiting cost and user friendliness of VRU). For example, the customer contact centre should systematically monitor its quality to ensure that the customer can easily find the customer service phone number, does not have to wait too long for service, and finds the VRU clear and easy to use.

Using these seven dimensions of customer contact centre quality, managers might create sustainable value for the entire organization and move away from the constant cost discussion, to focus on value creation. An efficiency- and transaction-oriented cost perspective cannot do justice to the role of customer contact centre quality. But this measure is an important instrument for enhancing customer satisfaction, trust and affective commitment, and the customer contact centre can serve as a value creator and key relationship marketing instrument that improves long-term customer relationships.

Customer contact centres transition from cost centres to value centres' has implications also important implications for human resource management. The conundrum for customer contact centres is how to motivate staff to sustain the relationship with customers in work that is often repetitive, intense and low paid. Next to motivation, also performance evaluation has a major impact on competitiveness (Ferreira et al. 2011). In the 1990s, various mechanisms of control were used, including close supervision, target setting and contingent pay; it was likened to an 'assembly line in the head' (Taylor and Bain 1999) within an 'electronic panopticon' (Fernie and Metcalf 1998), resulting in high turnover and poor service, at great expense. More recent studies found that organizations have become more sophisticated in how they recruit, train, reward and manage staff, as well as organize the work to provide more complexity and variety (Lankshear et al. 2001; Holman et al. 2002). Van der Aa et al. (2012) suggest companies to focus on customer contact centre job quality, because this concept has shown to influence focal human resource management outcomes, such job satisfaction and turnover intentions (see also Jun and Cai 2010).

6.2 Limitations and further research

Some limitations of our study should be taken into account when interpreting our results. First, the organizations that participated in our study represent just three industries,

health care, financial services and telecom. Further research might include other industries to confirm or challenge the generalizability of our findings. Second, in order to avoid confounding effects evoked by the service recovery paradox (see Kau and Loh 2006 for a discussion), we excluded customers who called the contact centre with a complaint. Their state of mind and emotions differ substantially from those of customers with questions, so our results apply only to customers who have a question or a remark, not to those with a complaint. Further research might address complaint handling by the customer contact centre, explore to what extent customer contact centre quality can explain the service recovery paradox, and investigate whether the seven identified dimensions of customer contact centre quality are applicable in a complaint setting. Third, our study specifically focuses on so-called in-house contact centres, not outsourced versions. We did not take into account possible differences even though extant literature has highlighted several peculiarities of outsourced customer contact centres (Aron and Singh 2005). Additional research should investigate the extent to which our findings apply to outsourced customer contact centres. Fourth, our study is based on a survey that yields cross-sectional data. Further research with a longitudinal approach would offer an even better understanding of the effect of customer contact centre quality on long-term customer relationships. Finally, future research might also utilize a qualitative or a mixed methods approach to provide added depth to the understanding of customer experiences and perceptions.

Despite these limitations, our study contributes to service management and relationship marketing literature by showing that customer contact centre quality is a key explanation of customers' satisfaction with, trust in, and affective commitment towards service companies. By improving the quality of customer–firm relationships, customer contact centre quality increases customer loyalty, thereby adding to a company's market success. Customer contact centres should no longer be regarded as mere cost centres that solve customers' issues. Instead, customer contact centres are viable relationship marketing instruments that can help service organizations create value and achieve their market objectives.

Appendix

See Table 6.

Table 6 Scale items used for the measures

Construct	Measurement items
Customer contact centre quality	
Accessibility	The phone number of the contact centre of organization X is easy to find
	The opening hours of the contact centre of organization X are sufficient
Waiting cost	When I call the waiting time is made clear to me
	The waiting time of the contact centre of organization X is acceptable
	The costs of calling the contact centre are acceptable

Table 6 continued

Construct	Measurement items
User friendliness of voice response unit	The VRU is logically ordered
	The VRU is clear
	The VRU is not too long
Customer knowledge	As soon as I talk to an employee, I notice that the employee:
	…knows me as their customer
	…immediately has my data at his disposal
	…has insight into my personal data
	…has insight into my product data
	…knows when and why I contacted the contact centre previously
	…knows what other contacts I have had with the organization (letters, e-mail, visit to the office)
Empathy	The employee I talk to:
	…says his name
	…is friendly
	…is patient
	…understands me correctly
	…listens well
	…takes me seriously
	…puts himself in my situation
	…knows my needs
	…gives me personal attention
	…makes me feel my question is important
	…takes my level of knowledge into account
	…is solution oriented
	…thinks along with me
Reliability	The employee can quickly find the information to answer my question
	The employee tells me what I can expect
	The employee knows his own organization well
	I can trust the knowledge of the employee
	The employee can answer all my questions
	The employee can promise next steps that the organization actually follows through
	I do not have to call more than once to receive an answer to my question
	When I speak to an employee, my question is answered at once
	When the employee is not able to answer my question, I am being redirected to an employee who can
	I receive a written confirmation of important agreements
	The employee asks the right questions to get to the heart of my question/problem

Table 6 continued

Construct	Measurement items
Customer focus	The employee asks me whether the answer is clear
	The employee asks me whether my question has been answered
	The employee asks me whether I am satisfied at the end of the conversation
	When I have had contact with the contact centre, some time after this contact I am being asked whether this contact was to my satisfaction
	The contact centre of organization X learns from the signals it receives from its customers
	I receive proactive advice on what products would suit my situation
	The contact centre of organization X always keeps its promises
	The information I receive is consistent, even when I talk to another employee
Satisfaction	I am satisfied with organization X as a whole
Trust	The performance of organization X always meets my expectations
	Organization X can be counted on to deliver good service
	I cannot always trust the performance of organization X
	Organization X is a reliable bank/Internet provider
Affective commitment	I am proud to belong to organization X
	I feel a sense of belonging to organization X
	I care about the long-term success of organization X
	I am a loyal patron of organization X
Customer loyalty	
Word of mouth	I will say positive things about organization X to other people
	I will recommend organization X to someone who seeks my advice
	I encourage friends and relatives to do business with organization X
Repurchase intention	I consider organization X my first choice to buy services
	I will do more business with organization X in the next few years

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