



Does relationship quality matter in e-services? A comparison of online and offline retailing

Gianfranco Walsh^{a,*}, Thorsten Hennig-Thurau^{b,c,1}, Kai Sassenberg^{d,2}, Daniel Bornemann^e

^a Institute for Management, University of Koblenz-Landau and University of Strathclyde Business School, Glasgow, Universitätsstrasse 1, 56070 Koblenz, Germany

^b School of Media, Bauhaus-University of Weimar, Helmholtzstr. 15, 99425 Weimar, Germany

^c Cass Business School, City University London, 106 Bunhill Row, London EC1Y 8TZ, UK

^d Knowledge Media Research Center, Konrad-Adenauer-Str. 40 72072 Tübingen, Germany

^e Simon-Kucher & Partners, Bonn, Germany

ARTICLE INFO

Keywords:

Customer loyalty intentions

Internet

Structural equation modeling

Multi-group analysis

Relationship quality

ABSTRACT

The quality of the relationship between customers and service firms has been found to be a major driver of customer loyalty in traditional (i.e., offline) service contexts. The increasing use of electronic services, or e-services, raises questions concerning the extent to which the relationship quality-customer loyalty link holds in an e-service context. Based on an extended model of relationship quality and by applying the social information processing perspective, this research tests the relevance of relationship quality for online relationships and explores differences of the relationship quality-loyalty link between online and offline retailers. To test the model, a large-scale study is conducted on both online and offline relationships for two service contexts (media and travel retailing). Using multi-group structural equation modeling, the authors identify differences between the online and offline environment in both service contexts. Results show that (1) relationship quality is similarly important for retaining customers online and offline and (2) differences in the impact of relationship-quality dimensions strongly depends on the service context.

© 2009 Elsevier Ltd. All rights reserved.

1. Introduction

Consistent with the old management adage “money follows customers”, ever more service firms are shifting marketing budgets from traditional business to online business. As more money is spent on acquiring and retaining online customers, it is important for service firms to understand the principles that determine successful relationship management in the new environment and to which extent existing knowledge from the offline world can be transferred into the online context.

For offline service firms, a lawlike generalization in marketing is building and nurturing strong relationships with loyal customers is strongly linked to company success (Heskett et al., 1997; Homburg et al., 2009; Paul et al., 2009). Although numerous loyalty drivers have been identified, it is widely recognized that the quality of the relationship plays a pivotal role for customer

loyalty (De Wulf et al., 2001; Hennig-Thurau et al., 2002; Palmatier et al., 2006).

Relationship quality (RQ) is widely considered a higher-order concept that consists of customer satisfaction, trust, and commitment. The concept's relevance for maintaining successful relationships with customers has been discussed widely in relation to the offline environment (cf. Athanasopoulou, 2009; Vieira et al., 2008). However, there is much less research considering the RQ-loyalty link in the online service context. Although facets of the relationship-quality concept have been studied in an Internet environment (e.g., Castelfranchi and Tan, 2002; Evanschitzky et al., 2004; Schoenbachler and Gordon, 2002), these studies do not address RQ as a whole and develop their own conceptualizations (e.g., Reibstein, 2002; Srinivasan et al., 2002), which limits the comparability of results.

In addressing these research gaps, this study links RQ with the online environment and systematically compares RQ's role for offline and online service firms. Consistent with previous research (e.g., Hennig-Thurau et al., 2002), we examine the effects of the core RQ dimensions of customer satisfaction, competence trust, benevolence trust, and commitment on customer loyalty, rather than the effect of overall RQ. We hypothesize that the dimensions that constitute RQ in traditional settings are identical to those on the Internet (cf. Walther et al., 1994), while the intensity of the

* Corresponding author. Tel.: +49 261 287 2852; fax: +49 261 287 2851.

E-mail addresses: walsh@uni-koblenz.de (G. Walsh), thorsten@hennig-thurau.de, t.hennig-thurau@city.ac.uk (T. Hennig-Thurau), k.sassenberg@iwm-kmrc.de (K. Sassenberg), daniel.bornemann@gmail.com (D. Bornemann).

¹ Tel.: +49 3643 58 3822, +44 20 7040 0289; fax: +49 3643 58 3791, +44 20 7040 8328.

² Tel.: +49 7071 979 220; fax: +49 7071 979 200

impact of the RQ dimensions on customer loyalty should differ systematically between the online and offline environment, owing particularly to the absence of face-to-face interactions between service employee and customer.

We first provide an overview of the literature on RQ and its application in both offline and online environments. We then present a conceptual model of the link between RQ and customer loyalty. Drawing on the social information processing perspective, hypotheses addressing the similarities and differences between environments in which RQ impacts loyalty intentions are offered, which we test with structural equation modeling and multi-group analysis for two different service contexts (media retailers and travel agencies) against a sample of 587 online customers and 514 offline customers. As service research can benefit from an improved understanding of relationship quality's predictive power across different service contexts we selected services that belong to opposite ends of the search, experience, credence (SEC)³ framework (Darby and Karni, 1973; Nelson, 1970), as called for by Athanasopoulou (2009). The SEC framework is used frequently in services marketing to conceptualize customers' evaluation of offers that differ in terms of tangibility (e.g., Galetzka et al., 2006). We categorize media products (CDs, books, etc.) as high in search qualities and travel services, which are largely intangible in nature, high in credence qualities. In addition to being theoretically interesting, this research is relevant for managerial practice; in many service industries, customer retention is a primary goal which implies that the identification of drivers of customer loyalty should be part of service firms' customer relationship management efforts.

2. The state of relationship quality research

Table 1 provides an overview of the state of relationship-quality-related research. It lists studies that have addressed RQ either online or offline and their conceptualizations of the construct.

2.1. The role of relationship quality for offline services

While most researchers would agree with Hennig-Thurau and Klee's (1997, p. 751) definition of RQ as "the degree of appropriateness of a relationship to fulfill the needs of the customers associated with that relationship," this cannot be said for the construct's inner structure. It has been argued that RQ is unidimensional (e.g., Grégoire and Fisher, 2008), two-dimensional (e.g., Crosby, 1991; Crosby et al., 1990), three-dimensional (e.g., De Wulf et al., 2001; Vieira et al., 2008) or even four-dimensional (Rauyruen and Miller, 2007). Although most researchers view RQ as a meta-construct with more than one first-order dimension, there is limited consensus concerning the central constructs (or dimensions) comprising RQ. Three constructs that have been mentioned by several authors are customers' satisfaction with the service provider's performance (Crosby et al., 1990; Dorsch et al., 1998), their trust in the service provider, and customers' commitment to the relationship with the service firm (e.g., Dorsch et al., 1998; Hewett et al., 2002; Hibbard et al., 2001; Kumar et al., 1995).

Regarding the impact of RQ on loyalty, Palmatier et al.'s (2006) meta-analysis on the factors influencing the effectiveness of

relationship marketing shows commitment and trust to have the strongest effect on loyalty. However, some authors have questioned the existence of a direct impact of trust on loyalty intentions (e.g., Hennig-Thurau et al., 2001; Moorman et al., 1992). These doubts may be due to the multi-dimensional character of trust which has not found its way into the conceptualization of relationship quality so far.

2.2. The role of relationship quality for electronic services

Streams of literature on Internet-based service delivery have developed around or in coordination with the three key RQ dimensions, especially for satisfaction and trust (for an overview see Evanschitzky and Iyer, 2007; Urban et al., 2009). Shankar et al. (2003) compare the impact of satisfaction on loyalty in the online and offline context for lodging industry customers. Using a simultaneous equation model, they find a stronger impact of satisfaction on loyalty online than offline which they explain with the ease of consumption on the Internet. As other dimensions of RQ have not been considered in this study, the direct and indirect character of this relationship cannot be separated.

In previous studies, trust has been proven to be an important determinant of customers' online shopping behavior (e.g., Lee and Turban, 2001; McKnight et al., 2002). However, as trust tends to be the only dimension of RQ considered in these studies, and as data was only collected in the online environment, it remains unclear whether trust impacts relevant outcomes directly or indirectly and whether the impact is stronger or weaker than in the 'real world'. The findings of these studies would be more meaningful if they were to account for a three-dimensional conceptualization of RQ and compared traditional with online service delivery contexts.

3. A model of relationship quality's impact on customer loyalty intentions in both offline and online environments

Most studies addressing the drivers of customer loyalty online stress the differences between the online and the offline environment. These studies develop context-specific models of loyalty drivers instead of applying existing (offline) models to the online context. For example, Srinivasan et al. (2002) identify eight factors (which they label the "8Cs") that are modeled as determinants of "e-loyalty". Their list of determinants includes care, cultivation, and character, but does not include any of the relationship-quality dimensions of satisfaction, trust, or commitment.

In line with Evanschitzky et al. (2004, p. 240) who argue that important marketing constructs and their "consequent effects appear to remain intact even in e-commerce settings," we propose (1) that relationships between consumers and service firms are determined by an identical set of constructs offline and online, and (2) that some of the relationships among these determinants and their impact on customer loyalty differ in intensity between the offline and the online environment. Our first argument is based on the belief that the consumer's loyalty with a service provider is determined by a limited set of transactional and relational factors both of which exist regardless of the relationship environment, because the psychological mechanisms underlying relationship formation are not media-dependent (Walther, 1996). For example, if customers are satisfied with a service provider they will continue to do business with the service firm irrespective of whether the service was performed in a store or on the Internet. This, however, does not imply that the level of satisfaction, trust, and commitment consumers perceive will be the same online and offline (Shankar

³ Goods and services high in search qualities can be evaluated easily even prior to purchase; experience qualities require personal experience or consumption before they can be evaluated at all; credence qualities can never be evaluated fully by customers, such that even after purchase, these qualities can only be accepted only on faith.

Table 1
Review of studies on relationship quality.

Authors	Definition	Dimensions	Context	Modelling of inter-dimension relationships?	Is conceptualization empirically tested?
Crosby et al. (1990); Crosby (1991)	"High relationship quality means that the customer is able to rely on the salesperson's integrity and has confidence in the salesperson's future performance" (Crosby et al., 1990, p. 70)	Relationship quality "is conceived as a two-dimensional construct consisting of customer satisfaction and trust in the salesperson" (Crosby et al., 1990, p. 69)	Offline-services relationships; focus is on life insurances	No	No
De Cannière et al. (2009)	None; the authors draw on the work by De Wulf et al. (2001)	Trust, commitment and satisfaction (measured as unidimensional construct)	Offline-Belgian apparel retailer	No	Yes
De Wulf et al. (2001)	Relationship quality "can be considered an overall assessment of the strength of a relationship" (p. 36)	Relationship satisfaction, trust, and relationship commitment	Offline-retailer–consumer relationships	No	No
Dorsch et al. (1998)	Relationship quality "[is] a higher-order construct that encompasses trust, satisfaction, commitment, minimal opportunism, customer orientation, and ethical profile"	Trust, customer satisfaction, commitment, minimal opportunism, customer orientation, and ethical profile	Offline-buyer–vendor relationships; for definition also studies from other fields are considered	No	No
Gummesson (1987)	Relationship quality "is a concept which has been formed to stress that skilled handling of relations between buyer and seller is part of customer-perceived quality"	No	Offline–no specific kinds of relationships	No	No
Hennig-Thurau and Klee (1997)	"Relationship quality can be seen generally as the degree of appropriateness of a relationship to fulfill the needs of the customer associated with that relationship" (p. 751)	Product- or service-related quality perception, trust, and commitment	Offline–no specific kinds of relationships	Yes	No
Hennig-Thurau et al. (2001)	None	Trust, quality of service, three kinds of commitment	Offline-higher education relationships	Yes	Yes
Hewett et al. (2002)	Relationship quality "is defined in this study as a buyer's level of trust and commitment to a seller firm" (p. 231)	"We conceptualize the quality of the buyer–seller relationship as a higher order construct with trust and commitment as first-order constructs" (p. 231)	Offline-industrial buyer–seller relationships	No	No
Hibbard et al. (2001)	None	Trust and commitment	Offline-channel relationships	No	No
Kumar et al. (1995)	None	"We see relationship quality as encompassing conflict, trust, commitment (...) willingness to invest in the relationship and expectation of continuity"	Offline-buyer–seller relationships in business-to-business markets	No	No
Moorman et al. (1992)	None	No; quality of interaction, commitment and customer involvement as "elements" of "relationship process" which is implicitly interpreted as being synonymous to relationship quality	Offline-relationships between market research firms and their customers ("professional services")	No	No
Palmer and Bejou (1994)	None	No	Offline-services relationships, in particular "investment services"	No	No
Rauyruen and Miller (2007)	None	Service quality, satisfaction, trust and commitment	Offline-Australian SME	No	Yes
Roberts et al. (2003)	None	Trust, satisfaction, commitment, and affective conflict	Offline-services relationships	No	No
Smith (1998)	Relationship quality "is a higher-order construct comprised of a variety of positive relationship outcomes that reflect the overall strength of a relationship and the extent to which it meets the needs and expectations of the parties"	Not explicitly, but: "Relationship quality is being manifested in at least the three related constructs of trust, satisfaction, and commitment"	Offline-empirical study from services sector	No	Partially
Vieira et al. (2008)	None; the authors draw on the definition by Holmlund (2001, p. 15): Relationship quality is "the cognitive evaluation of business interactions by key individuals in the dyad, comparatively with potential alternative interactions" (p. 273)	Trust, satisfaction, commitment	(literature review)	No	No

et al., 2003). These differences are due to the fact that the requirements for relationship formation are less available in an online than in an offline sales environment. Our second argument is based on structural differences between the two contexts which will influence the intensity of some of the model relationships. Most importantly, the lack of social information due to the absence of face-to-face contact (i.e., non-verbal communication such as eye contact) in the case of online services is expected to reduce the impact that such affective components (e.g., affective commitment) have on customer loyalty intentions (Sassenberg and Boos, 2003; Walther et al., 1994).

To test our assumptions, we draw on the dominant conceptualization of RQ consisting of satisfaction, trust and commitment (De Wulf et al., 2001; Garbarino and Johnson, 1999; Smith, 1998; Vieira et al., 2008) and present a model of relationship-quality dimensions as customer loyalty determinants that we believe will hold for both the online and offline environment (see Fig. 1).

4. Model relationships and hypotheses

In the following, we offer two different types of hypotheses. The first type refers to the existence of significant paths between model variables and is tested via structural equation modeling. The second type addresses differences in intensity between a model path in the online and the offline environment and is tested via multi-group structural equation modeling. In developing the hypotheses, we draw on social information processing theory (Joinson, 2003).

4.1. Customer satisfaction

Satisfaction can be defined as the “consumer’s fulfillment response” (Oliver, 1997, p. 13) and refers to customers’ assessment of the firm’s overall performance in previous encounters. A favorable service evaluation supports the customer’s belief that the service provider is competent and benevolent and hence can be trusted and relied upon. Competence trust refers to the firm’s ability to meet customers’ expectations and fulfill their promises, as perceived by customers, while benevolence trust is understood as a firm’s intention to “hold consumers’ interest ahead of their self-interest” (Singh and Sirdeshmukh, 2000), again viewed from the customer’s perspective. We propose that satisfaction has a positive impact on the competence and the benevolence dimensions of consumer trust in both environments (e.g., Singh and Sirdeshmukh, 2000; Bansal et al., 2004).

Regarding the intensity of satisfaction’s impact on trust we do not expect the effect of satisfaction to be any different online or offline in the case of competence trust, as the customer’s perceived competence of a service provider can be based on both the service personnel’s behavior and other sources, such as technological, functional, and logistical performance (e.g., the time it takes *amazon.com* to ship purchases). These sources are similarly available in both environments, so that the lack of personnel in the online environment will not hinder the development of competence trust. Moreover, Internet firms can use external cues and quality surrogates (e.g., security certificates), thereby offsetting the disadvantage of operating in a virtual environment.

The impersonal character of online services makes the development of consumer benevolence trust a critical issue on the Internet. This said, in the offline environment the customer’s satisfaction with the firm’s performance might lead to higher benevolence trust through the personal interaction of the customer with the service personnel, as employees’ communication and behavior is considered an important source of benevolence trust. On the Internet, employees are substituted by technology and are largely unavailable for the customer, hindering the development of benevolence trust even in the case of high satisfaction. Firm-customer communication in e-services is mainly text-based, more impersonal, anonymous, automated and generally devoid of face-to-face interactions. Therefore, we expect the impact of satisfaction on benevolence trust to be stronger in the case of offline than online services.

H1a. Customer satisfaction has a positive impact on competence trust.

H1b. The impact of customer satisfaction on competence trust does not differ significantly between the offline and the online context.

H2a. Customer satisfaction has a positive impact on benevolence trust.

H2b. The impact of customer satisfaction on benevolence trust is stronger in the offline than in the online context.

Satisfaction is also expected to positively influence customers’ affective commitment toward the service provider in both environments. A high level of satisfaction provides customers with a repeated positive affective reinforcement, thus creating commitment-inducing emotional bonds (Garbarino and Johnson, 1999). Paralleling the argument for benevolence trust, we argue

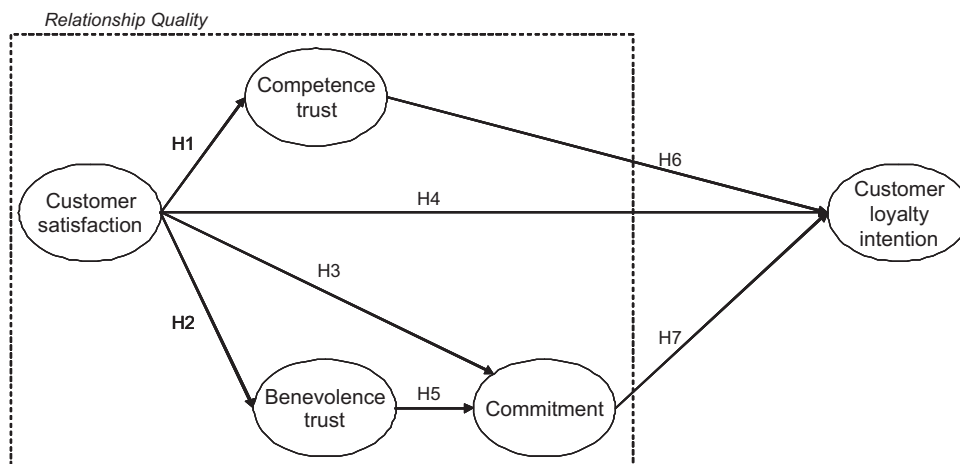


Fig. 1. Conceptual model of customer loyalty determinants.

that the impact of satisfaction on commitment differs in strength between online and offline environments. Specifically, affective commitment is primarily an emotional concept that involves the customer developing rapport with the service employee. As affective components of a relationship are more easily developed in a socially rich offline than in an online context, a high level of customer satisfaction will affect commitment more strongly in the offline environment where the performance is delivered by service employees.

H3a. Customer satisfaction has a positive impact on affective commitment.

H3b. The impact of customer satisfaction on affective commitment is stronger in the offline context than in the online context.

The positive link between customer satisfaction and customer loyalty intentions is a fundamental axiom of the relationship-management concept (Bolton, 1998; Rust and Zahorik, 1993). The satisfaction-loyalty link has been repeatedly examined and confirmed for e-services (e.g., Anderson and Srinivasan, 2003; Fassnacht and Köse, 2007).

With other service providers being just a mouse click away, we expect consumers to explore other firms' services more often in the online environment despite being satisfied with their current service provider. We believe that this "switching-opportunity-based" effect will outweigh the "convenience-based" effect stressed by Shankar et al. (2003), who argue that consumers have to spend less effort online than offline for making choices (e.g., by placing future orders today) when satisfied with a service provider. Also, in the offline environment switching barriers exist that are not yet as prevalent amongst and more difficult to implement for Internet firms. For example, Burnham et al. (2003) distinguish between financial, procedural, and relational switching barriers. In the absence of personal social interactions between service employees and customers it is more difficult for an Internet service firm to create relational switching barriers. Consequently, we expect the impact of satisfaction on loyalty to be lower in the online than the offline environment.

H4a. Customer satisfaction has a positive impact on customer loyalty intentions.

H4b. The impact of customer satisfaction on customer loyalty intentions is stronger in the offline than in the online context.

4.2. Trust

Trust is defined as the consumer's willingness to rely upon her expectations about a firm's future behavior (Rousseau et al., 1998) and is conceptualized as two-dimensional (e.g., Ganesan and Hess, 1997; Shankar et al., 2002), comprising of competence and benevolence (Sirdeshmukh et al., 2002). This conceptualization of trust is consistent with those of McAllister (1995) and McKnight et al. (2002) who view trust as a multi-dimensional construct.

Benevolence trust is expected to positively influence the customer's affective commitment toward the service provider in both environments (Geyskens et al., 1998). Benevolence trust is largely based on a subjective judgment prompted by the customer's positive or negative emotional feelings toward the service firm, which can be expected to stimulate the customer's emotional commitment to the service firm. As with the impact of satisfaction on commitment, we draw on the argument that affective commitment is more difficult to establish in the online environment, which is primarily impersonal. Consequently, the effect of the consumer's benevolence trust on affective commitment will be smaller online than offline.

H5a. Benevolence trust has a positive impact on affective commitment.

H5b. The impact of benevolence trust on affective commitment is stronger in the offline than in the online context.

Competence trust is cognitive and objective in nature and based on rational, methodical processes (Sirdeshmukh et al., 2002) that result in a judgment that a service is trustworthy. Consumers rationalize about the service received and when the judgment is positive, the ensuing competence trust will directly and positively affect customer loyalty intentions both online and offline. In detail, a consumer's judgment that a service firm is able to meet her expectations today and in the future will increase the probability that the customer will return to this service firm, as the degree of expected need fulfillment is usually considered the ultimate driver of consumer behavior (McKnight et al., 2002).⁴

Moreover, we expect the impact of competence trust on loyalty intentions to be stronger in the online environment. Due to the lack of face-to-face interactions with service personnel and physical surroundings, consumers are likely to perceive higher levels of uncertainty toward an online service firm's ability to provide a satisfactory service (Forsythe and Shi, 2003). Consequently, the existence of competence trust will be valued more highly by consumers and have a stronger impact on future buying decisions when an Internet service firm manages to reduce consumer uncertainty (e.g., through powerful payment security and fulfillment methods) than when the exchange partner is an offline service provider where risk is generally perceived as lower by the consumer (Forsythe and Shi, 2003).

H6a. Competence trust has a positive impact on customer loyalty intentions.

H6b. The impact of competence trust on customer loyalty intentions is stronger in the online than in the offline context.

4.3. Commitment

Commitment is the customer's long-term orientation toward a business relationship (Geyskens et al., 1996; Moorman et al., 1992). We focus on the affective dimension of commitment and do not consider calculative (or cognitive/continuance) commitment (e.g., Hibbard et al., 2001). Bansal et al. (2004) define affective commitment as binding the consumer to the service provider out of desire. Affective commitment develops through perceptions of satisfaction and trust.⁵ Consistent with previous studies, affective commitment is considered a determinant of customer loyalty in both environments (Garbarino and Johnson, 1999; Pritchard et al., 1999). This relationship suggests that consumers who have developed a high level of emotional commitment toward a service firm will prefer to keep taking their business to a firm they like and are emotionally attached to (Garbarino and Johnson, 1999; Morgan and Hunt, 1994).

In contrast to H3 and H5, which explain the development of commitment, the relationship between commitment and loyalty intentions assumes a certain level of commitment to exist in the consumer regardless of how this commitment was established.

⁴ No such direct effect is modeled for benevolence trust, because of its emotional dominance the effect of benevolence trust on loyalty is mediated through affective commitment and will be of an indirect kind. At the same time, no effect from competence trust on commitment is postulated.

⁵ Bansal et al. (2004) also distinguish affective commitment from normative (binding the consumer to the service provider out of perceived obligation) and continuance (binding the consumer to the service provider out of need) commitment. These dimensions of commitment reflect different underlying psychological states concerning one's relationship with the target of interest.

We argue that when such level of commitment has been attained, its impact on customer loyalty intentions will not systematically differ between the online and the offline environment.

H7a. Affective commitment has a positive impact on customer loyalty intentions.

H7b. The impact of affective commitment on customer loyalty intentions does not differ significantly between the offline and the online context.

5. An empirical two-environments two-services test of the relationship-quality model

5.1. Data collection and sample

To test our hypotheses, we collected data on online and offline consumer-service firm relationships by asking consumers to fill out an Internet questionnaire. We surveyed consumers in relation to two service contexts, namely, media retailers (i.e., books, CDs, videos/DVDs) and travel agencies which represent well-accepted services in both the online and the offline environment. Specifically, online media retailers and travel agencies are among the most heavily frequented online services (Wikinvest, 2009).

For each of the four research contexts (i.e., online media retailers, offline media retailers, online travel agencies, offline travel agencies), a slightly modified version of the questionnaire was generated, addressing the individual characteristics of each context. Each respondent was randomly assigned to one of the four contexts. To increase validity, each respondent was first asked about the service firm he or she has most recently used in the respective service category. Based on this information, the remainder of the questionnaire was individualized and the retailer's name was added to each item (e.g., "I am a loyal customer of *amazon.com*"). The service firm used most recently by the individual consumer was preferred to the customer's favorite service provider to avoid the inclusion of intense and strong relationships only.

Seventy students majoring in management from two universities were instructed to recruit twenty people to fill out the survey. The students were equipped with a personal questionnaire website and were asked to distribute the URL of the website to 20 respondents each. At least 10 of these 20 people had to be non-students and represent a range of ages, genders, and professions. Students were motivated through credit points for their course work. This procedure resulted in a sample size of 1101, with 300 valid responses for online media retailers (assessing 38 different stores), 332 for offline media retailers (103 different stores), 255 for online travel agencies (69 different stores), and 214 for offline travel agencies (84 different stores). Multiple surveys sent from the same IP address and those that were completed in less than 12 min were dropped from the sample. The 12 min cut-off criterion was chosen based on the authors' and other test persons' personal experiences with the questionnaire. The sample characteristics are reported in Appendix A.

5.2. Measures and pretest

All model variables were measured with items adapted from previous research (see Appendix B). The two trust dimensions and the satisfaction measure were each measured with four items. Commitment and customer loyalty intentions were also measured with four items. All items were measured on a 7-point scale, ranging from 1="I totally agree" to 7="I totally disagree".

To increase measurement reliability, a pretest study was carried out. In this pretest, 410 undergraduate students were asked to fill out a preliminary version of the questionnaire. A total of 273 questionnaires were completed, with the following distribution between contexts: 133 pertaining to online retailers (87 for books, CDs, and DVDs, 46 for travel products) and 140 to offline retailers (74 for books, CDs, and DVDs, 66 for travel products). Alpha scores were above .70 for all constructs and subsamples (Nunnally, 1978, p. 245). One item for customer satisfaction was reworded to increase scale homogeneity.

5.3. Measurement model results

To assess the reliability and validity of the constructs, a five-factor measurement model was assessed through confirmatory factor analysis (CFA) based on the sample variance-covariance matrix and maximum likelihood estimation. This measurement model revealed an adequate fit, with $\chi^2(145)=772.30$, $p < .001$, CFI=.98, RMR=.065, RMSEA=.046, according to the usual conventions (Hu and Bentler, 1999). The χ^2/df ratio exceeds the acceptable threshold of 4; however, a satisfactory fit can be indicated by a larger χ^2/df value if sample size is large (Hu and Bentler, 1999), which in the present study exceeded 1100. This is why it is appropriate to assess the fit of a model using the comparative fit index (CFI) because it is least sensitive to sample size (Bentler, 1990). Model identification was also achieved when the data pertaining to the two online and offline service contexts were analyzed separately (CFI=.98/.98, RMR=.047/.079, RMSEA=.083/.053 $\chi^2/df=3.27/3.76$). Basic descriptive statistics, correlations and alpha values for the model variables are listed in Table 2 for all four subsamples (online and offline media retailing, online and offline travel agencies). Alpha values were again all clearly above .70 for all constructs and sub-samples.

The use of same source data raises the potential for common method bias. Thus, a CFA was conducted based on Harman's single-factor approach to examine this (Podsakoff et al., 2003). If common method bias poses a threat, a single latent factor should yield a better fit compared to the five-factor measurement model. Our examination indicates a worse fit for a single-factor model as against our five-factor model, confirming that a common factor bias does not pose an important threat here, with the fit of the single-factor model (where all items load to one common factor) being CFI=.97, RMR=.18, RMSEA=.061, $\chi^2/df=8.58$.

Looking at the mean values in Table 2, it is interesting to see that the higher level of customer loyalty intentions with online service providers compared to traditional offline services reported by Shankar et al. (2003) is *not* confirmed in our study. In fact, the level of loyalty intentions was clearly higher for offline customers in both service contexts ($p < .001$).

5.4. Structural model results

The hypotheses were tested with single-group structural equation modeling and multi-group analysis, applying version 8.5 of the LISREL software for both tasks. Using maximum likelihood estimation based on covariance matrices, global and local fit indices were good for all subsamples. Specifically, the CFI was between .99 and .98, the RMR ranged from .038 to .044 and the RMSEA was between .053 and .065.⁶ The average variance

⁶ In detail, the fit indices were as follows in the case of media retailing: CFI (offline: .99/online: .99), RMR (offline: .044/online: .040) and RMSEA (offline: .065/online: .053). For the travel agencies subsample, the fit was as follows: CFI (offline: .99/online: .99), RMR (offline: .038/online: .440) and RMSEA (offline: .059/online: .053).

Table 2
Descriptive statistics, scale homogeneity, and correlations.^a

	No. of items	Mean	SD	Competence trust	Benevolence trust	Satisfaction	Commitment	Customer loyalty
Competence trust	4	2.60/2.58 2.62/2.50	.96/.91 .94/.98	.88/.85 .89/.90				
Benevolence trust	4	2.97/2.88 2.92/2.66	1.11/1.15 1.04/1.04	.73/.75 .73/.74	.86/.88 .85/.88			
Satisfaction	4	2.54/2.74 2.79/2.59	1.13/1.20 1.25/1.21	.69/.75 .79/.80	.65/.74 .70/.76	.90/.93 .94/.95		
Commitment	4	4.77/4.38 4.76/4.53	1.38/1.47 1.35/1.58	.48/.54 .51/.57	.57/.63 .53/.61	.47/.57 .51/.61	.84/.87 .83/.90	
Customer loyalty	4	4.65/3.87 4.64/4.14	1.69/1.64 1.52/1.64	.49/.52 .57/.56	.47/.49 .50/.51	.43/.53 .57/.61	.62/.61 .59/.67	.94/.94 .92/.93

^a All items are measured on 7-point scales ranging from 1 = "I fully agree" to 7 = "I do not agree at all". The values in the upper row refer to the media retailers, while the numbers in the lower row refer to the travel industry. In both cases, values before the slash refer to the online subsample while numbers after the slash refer to the offline subsample. Numbers in the diagonal are Cronbach's Alphas.

extracted (AVE) was above .50 for all latent constructs in all subsamples, and all items had coefficients of determination of .40 or higher except one commitment item which had lower values in three of the four subsamples (see Appendix B for a complete list of AVEs and coefficients of determination). All factor loadings were significant, suggesting that convergent validity exists (Fornell and Larcker, 1981). Discriminant validity was also established. Specifically, for all pairs of constructs in all four subsamples the AVEs for each construct were higher than the squared correlation of two constructs (Fornell and Larcker, 1981). The correlations range from .43 to .95 (see Table 2).

5.4.1. The media products retailing subsample

In the case of media retailing, all path but one coefficient were significant, providing support for H1a, H2a, H3a, H5a, H6a, and H7a. Unlike predicted, the direct impact of customer satisfaction on customer loyalty intentions was not significant for the media retailing subsample in both environments (i.e., online and offline), forcing us to reject H4a for media retailing. Regardless of context, the customers' commitment to the service provider was found to be the strongest driver of customer loyalty intentions, followed by competence trust.

Despite the somewhat unexpected lack of a direct impact of satisfaction on loyalty intentions in this service context, satisfaction is found to play a major role in terms of increasing customer loyalty intentions. In terms of total effects, customer satisfaction has the second-strongest total effect on customer loyalty intentions of all constructs in the online sample (.51), only surpassed by commitment (.58), but clearly stronger than the total impact of benevolence trust (.30) and competence trust (.14). For the offline sample, the impact of satisfaction on loyalty intentions (.56) exceeds the one by commitment (.47), benevolence trust (.24) and competence trust (.23), with satisfaction having the strongest total impact of all RQ dimensions on customers' future buying decisions. Detailed results are given in Table 3.

When considering the unstandardized path coefficients for the media retailing online and offline subsamples, differences between the two samples are rather minor (see Table 3). To test whether the differences between the two samples are statistically significant, we employed multi-group structural equation modeling (MGSEM). In MGSEM, two distinct samples are used to calculate a joint structural equation model. By releasing single paths of the structural model and letting the analysis calculate these path coefficients separately, it is possible to compare the difference in χ^2 between the joint model and the partially released model, as this difference is itself χ^2 distributed. The MGSEM findings provide support for the lack of a significant difference between offline and online environments regarding the impact of satisfaction on competence trust (H1b) and the impact

of commitment on loyalty intentions (H7b). Consistent with H2b, a significant difference was found for the impact of satisfaction on benevolence trust, which was higher in the offline than the online environment. However, the differences between all other pairs of constructs were non-significant, leading to the rejection of H3b, H4b, H5b, and H6b for the media retailing subsample.

Overall, the explanatory power of the model with regard to customer loyalty intentions was slightly higher for the online than the offline sample, with as much as 51.3 percent of customer loyalty intentions explained online and 47.3 percent explained offline. The degree of variance explanation was also higher offline than online for both trust dimensions (competence: 69.9 percent vs. 59.1 percent; benevolence: 66.2 percent vs. 57.9 percent).

5.4.2. The travel agencies subsample

When turning to the travel agencies subsample, results are notably different (see Table 3). In the offline context, six of the seven model paths, including the one from customer satisfaction to customer loyalty intentions, are significant, providing support for H1a–H5a, and H7a. The only exception here is the non-significant path from competence trust to loyalty intentions, leading to the rejection of H6a for this subsample. In contrast, for the online travel agencies subsample, H6a is supported by the data, but satisfaction does not exert a significant direct impact on loyalty intentions in the online environment; the same is true for both media retailing subsamples (i.e., rejection of H4a). In addition, despite a path coefficient of .22, the impact of satisfaction on affective commitment is also non-significant in this context (H3a). When indirect effects are also considered, the dominant role of customer satisfaction found in the offline media retailing sample also holds for both travel agency subsamples. Specifically, we learn that customer satisfaction has the strongest total impact on loyalty intentions of all RQ (.61 online and .65 offline), followed by commitment regardless of context (.43 online and .47 offline). While in the offline sample benevolence trust (.16) has a stronger impact than competence trust (.08), competence (.29) dominates benevolence (.19) in the online environment.

MGSEM shows significant differences between the offline and the online context for four of the seven model relationships, providing support for H1b, H3b, H4b, H6b, and H7b. Specifically, the impact of satisfaction on commitment and on customer loyalty intentions is about twice as strong offline than online. As anticipated in H6b, competence trust affects loyalty intentions more strongly in the online environment. The impact of benevolence trust on affective commitment differs between the two contexts, but unlike predicted, the impact is stronger online than offline.

Finally, in the travel agencies context the explanatory power of RQ with regard to customer loyalty intentions is slightly higher

offline than online (54.2 percent vs. 52.7 percent). The degree of explained variance is slightly higher for the travel agencies than the media retailing subsample. Similarly, for commitment (47.0 percent vs. 39.8 percent) and both trust dimensions (competence: 75.0 percent vs. 72.8 percent; benevolence: 74.1 percent vs. 67.7 percent) the explained variance is higher offline than online. While in the case of consumer trust more variance is explained in the travel industry, a larger amount of commitment is explained in media retailing.

6. Discussion of results

Table 4 summarizes the results of the hypotheses testing procedure for the different environments and contexts. Overall,

for the media-retailing subsample 9 out of 14 hypotheses were fully supported, while 5 had to be rejected. For the travel agencies subsample 8 of the 14 hypotheses were fully supported, 3 were supported for either the online or the offline context, and 3 had to be rejected. Moreover, 13 out of 14 hypotheses were at least partly supported, with 7 being completely supported. Only Hypothesis 5b had to be fully rejected.

Our results provide interesting insights into the generalizability of the RQ construct across service contexts and for online and offline services. A key finding of this research is that the relationship-quality construct is a similarly powerful determinant of customer loyalty behavior in both online and offline environments. With about 50 percent of customer loyalty intentions explained by its dimensions in both environments, RQ deserves special attention

Table 3
Results of structural equation modeling for two service industries.

Hypothesis	Effects of	On	Media retailing			Travel agencies		
			Offline standardized (unstandardized) estimates	Online standardized (unstandardized) estimates	Is difference significant?	Offline standardized (unstandardized) estimates	Online standardized (unstandardized) estimates	Is difference significant?
H1	Customer satisfaction	Competence trust	.84 (1.52)	.77 (1.20)	n.s.	.87 (1.73)	.85 (1.64)	n.s.
H2	Customer satisfaction	Benevolence trust	.81 (1.40)	.76 (1.17)	<i>p</i> < .10	.86 (1.69)	.82 (1.45)	n.s.
H3	Customer satisfaction	Affective commitment	.24 (.35)	.16 (.22)	n.s.	.37 (.50)	.22 (.29)	<i>p</i> < .01
H4	Customer satisfaction	Customer loyalty	.06 (.08)	.08 (.11)	n.s.	.26 (.39)	.11 (.16)	<i>p</i> < .01
H5	Benevolence trust	Affective commitment	.52 (.44)	.53 (.45)	n.s.	.35 (.24)	.44 (.32)	<i>p</i> < .01
H6	Competence trust	Customer loyalty	.23 (.17)	.14 (.13)	n.s.	.08 (.06)	.29 (.22)	<i>p</i> < .01
H7	Affective commitment	Customer loyalty	.47 (.45)	.58 (.62)	n.s.	.47 (.50)	.43 (.48)	n.s.

Note: Numbers (for paths) in italics are non-significant at *p* < .05.

Table 4
Results of structural equation modeling for two service industries.

Hypotheses	Media retailing subsample	Travel agencies subsample
H1a Customer satisfaction has a positive impact on competence trust	Supported online and offline	Supported online and offline
H1b The impact of customer satisfaction on competence trust does not differ significantly between the offline and the online context	Supported	Supported
H2a Customer satisfaction has a positive impact on benevolence trust	Supported online and offline	Supported online and offline
H2b The impact of customer satisfaction on benevolence trust is stronger in the offline context than in the online context	Supported	Not supported
H3a Customer satisfaction has a positive impact on affective commitment	Supported online and offline	Supported offline only
H3b The impact of customer satisfaction on affective commitment is stronger in the offline context than in the online context	Not supported	Supported
H4a Customer satisfaction has a positive impact on customer loyalty intentions	Not supported online and offline	Supported offline only
H4b The impact of customer satisfaction on customer loyalty intentions is stronger in the offline than in the online context	Not supported	Supported
H5a Benevolence trust has a positive impact on affective commitment	Supported online and offline	Supported online and offline
H5b The impact of benevolence trust on affective commitment is stronger in the offline than in the online context	Not supported	Not supported
H6a Competence trust has a positive impact on customer loyalty intentions	Supported online and offline	Supported online only
H6b The impact of competence trust on customer loyalty intentions is stronger in the online than in the offline context	Not supported	Supported
H7a Affective commitment has a positive impact on customer loyalty intentions	Supported online and offline	Supported online and offline
H7b The impact of affective commitment on customer loyalty intentions does not differ significantly between the offline and the online context	Supported	Supported

from both offline and online service providers when developing and maintaining consumer relationships.

Regarding the relevance of the individual relationship-quality dimensions for customer loyalty intentions, satisfaction and commitment are found to play a major role in all four models. The direct impact of commitment is the strongest in all four subsamples, followed by competence trust in three of the four subsamples and by satisfaction in the offline travel agencies subsample. Perhaps the most surprising and counterintuitive finding is the lack of a direct impact of customer satisfaction on loyalty intentions in three subsamples. However, when considering also the indirect effects, customer satisfaction becomes the most influential driver of customer loyalty intentions in three subsamples (except in the online media retailing subsample). Commitment remains a strong influencer of loyalty intentions in all subsamples, with standardized total effects between .43 and .58. The impact of trust on loyalty intentions is significant, but somewhat limited in most cases. Benevolence trust impacts consumers' loyalty intentions decision more strongly than competence trust; except for the online travel agencies subsample. The separation of trust into its two dimensions of benevolence and competence helped to gain a more thorough understanding of its role in service relationships and of trust's interrelations with other relationship-quality dimensions.

Regarding the differences between the offline and the online environment, with one exception, all hypothesized differential effects were found in at least one service context. Therefore, the results suggest that the relevance of RQ dimensions for retaining customers differs between the offline and the online environment under certain circumstances. The one exception is the impact of benevolence trust on affective commitment (H5b) which we proposed to be stronger offline than online. However, our data shows that the impact did not differ significantly between the online and the offline context for media products, and in the case of travel agencies, a stronger impact was found online than offline. A possible explanation for the non-existent difference we found for both media products subsamples is that although the level of benevolence and affective commitment is higher in the offline environment on average, once a consumer has actually developed a high level of benevolence trust in an Internet service provider, the consumer has overcome existing obstacles (i.e., lack of personal interaction) so that this emotional judgment will have a similar effect on her emotional commitment to the service provider as it does in the offline environment. Consistent with the social information processing perspective, our results suggest that a sense of trust is not only harder to develop online, but may also be harder to destroy, which will in some cases even lead to inadequately strong trust (Walther, 1996). For travel agencies, the findings suggests that building benevolence trust is even more effective in the online environment in terms of loyalty intentions. This might be due to the perceived higher levels of risk associated with purchasing complex services online such as a holiday (Forsythe and Shi, 2003), suggesting that in the context of Internet transactions trustworthy exchange partners are more important to consumers than when purchasing high-involvement products offline.

Moreover, findings are identical for both services concerning the impact of satisfaction on competence trust and the impact of affective commitment on loyalty intentions (in both cases, no significant difference between online and offline exists for both services). However, some of the proposed effects were found for only one of the two service industries. Differential effects-related findings differ between the media products retailing and the travel agencies subsample for 5 out of 7 relationships.

As expected, the impact of customer satisfaction on benevolence trust is stronger offline than online for media products retailing (H2b), but no such difference is found for travel agencies.

Maybe customers are conscious of the role of travel agents—travel agents sell the holidays, but they are not responsible for the service fulfillment. The fulfillment is the responsibility of hotels and airlines and the benevolence trust may therefore arise during the holiday and may not be attributed to the travel agent. Another possible explanation is that the moderating role of service personnel for the satisfaction-benevolence link is limited to lower involvement products and services (e.g., books and CDs), while in the case of high involvement products/services (such as travel products) the consumer uses the satisfactory performance of a service provider as a signal for this provider's willingness to behave in a customer-oriented manner which is independent of environment. As benevolence refers to the consumer's belief that a partner will not act in an opportunistic way, an on-time-as-promised delivery by an online travel agency is interpreted as the provider's willingness to not engage in such opportunistic behavior. Consequently, satisfaction will impact benevolence trust regardless of the existence of service employees under these conditions. In contrast, opportunistic behavior does not make much sense for relatively inexpensive products such as books and CDs, so that a satisfactory performance of an Internet media retailer does not necessarily impact the consumer's benevolence trust as this would be the case in an offline context.

Furthermore, the impact of customer satisfaction on affective commitment is stronger offline than online for travel agencies as expressed in H3b, but we found no such difference for media products retailing. Maybe this difference results from the limited personal contact between consumers and service personnel in most media retailing outlets (e.g., *Barnes and Nobles*). This limited personal interaction might hinder building affective commitment which is somewhat similar to the limited interaction opportunities online media retailers, such as *amazon.com*, offer their customers. In contrast, personal interaction is usually more frequent and intense in the case of travel agencies but limited to the offline environment, offering a stronger potential for building affective commitment.

The impact of customer satisfaction on customer loyalty intentions is found to be stronger offline than online for travel agencies, but not for media retailers where no significant impact of satisfaction on loyalty intentions exists in both environments (H4b). Unlike Shankar et al. (2003), who report a stronger impact of satisfaction *online* than offline in a lodging industry context, it appears that the impact of the two contradictory effects at work here (i.e., switching opportunity-based effect vs. convenience-based effect) is moderated by service-type factors that have not been understood well enough so far.

We find the impact of competence trust on customer loyalty intentions to be stronger online than offline for travel agencies, which is in accordance with H6b, but no such differences are found for media retailing. This divergence might be explained in part by the largely homogeneous and standardized way media retailers' websites are designed today. Market concentration has been strong in this industry (especially when compared to the more fragmented online travel industry), with a small number of retailers (*amazon.com*, *barnesandnobles.com*) owning a large share of the market. A possible consequence of this is that consumers shopping for media products on the Internet take a retailer's competence for granted, which reduces the perceived risk of Internet shopping and, consequently, the impact of competence on loyalty intentions.

Finally, our study shows that the level of customer loyalty intentions is higher offline than online, which is inconsistent with Shankar et al. (2003) who report a higher level of loyalty intentions in the online context based mainly on a "cognitive lock-in" and the consumer's opportunity to visit the service provider 24 h a day, 7 days a week. We believe that these effects also exist in our sample, but that they are dominated by the much lower transaction costs for

consumers on the Internet which enable consumers to switch between different service providers more easily. Considering also the difficulty of building affective commitment without personal interactions between service employees and customers, retaining customers can be seen as a highly complex and demanding task in the online environment. However, additional research is needed to better understand the factors that determine the contradictory effects that are at work here.

7. Implications for researchers and management

The overarching theme of this research is that (a) managing customer–firm relationships and (b) building customer loyalty involve investments in processes that lead to high levels of relationship quality. The question whether such investments would be advantageous for online and traditional service providers inspired this research.

To date most of the findings about RQ have been obtained with respect to bricks-and-mortar firms. Building on previous research, this study demonstrates that RQ is a strong driver of the important marketing outcome of customer loyalty in both service contexts high in search qualities (i.e., media retailing) and in service contexts high in credence qualities (i.e., travel services). The empirical results of our comparative study have implications for management research and practice. The majority of previous studies on RQ are concerned with offline environments and focus on consumer–service provider or inter-firm relationships (Athanasopoulou, 2009). As firms are increasingly implementing RQ strategies in their online business, the present results provide insights for “real-world” as well as online service firms that seek ways to develop high levels of customer loyalty intentions. Although the findings vary in detail, key RQ dimensions remain the same across samples. For example, customer satisfaction has been found to be an important driver of consumer buying behavior regardless of environment and service context, with a dominantly indirect impact (i.e., mediated by other RQ dimensions). For management theorists, we therefore recommend that future research on e-loyalty should aim at the modification of the relationship-quality construct for Internet-specific aspects rather than developing completely new frameworks as has been suggested (Srinivasan et al., 2002). At the same time, we found the impact of some constructs of the relationship-quality model to differ between subsamples, so that an effective management of customer loyalty requires service firms to take into account the differing intensity of RQ dimensions across environments (i.e., online and offline) and service industries.

As we seek to understand the value of RQ, there is a need for additional research. Also, our research is not free of limitations, which introduce future research options. A particularly important task can be seen in the identification of variables that moderate the relationship between the RQ dimensions and customer loyalty. For example, Anderson and Srinivasan (2003) identify consumers' convenience motivation and perceived value as moderators of the relationship between e-satisfaction and e-loyalty. Also, Internet service firms have been shown to differ with regard to their corporate reputation, which is associated with customer trust and loyalty (Walsh et al., 2009), suggesting that corporate reputation might moderate RQ-outcomes relationships.

Athanasopoulou (2009) calls for more research on RQ in services, especially retailing settings. We heed her call, however, future research incorporating data from other service contexts, such as financial services or telecommunications is also needed to better understand the industry-specific findings presented here. This is especially relevant for the impact of customer satisfaction on customer loyalty intentions for which we identified two contradictory effects (i.e., switching opportunity-based vs. con-

venience-based effect) whose strength apparently depends on industry factors that yet need to be explored. Future research would also benefit from more research on context-specific antecedents of RQ (cf. Meng and Elliott, 2008; Vieira et al., 2008).

In the present study, we adopted the dominant view when developing our hypotheses, for example, on the satisfaction–trust link (i.e., satisfaction was modeled as a determinant of trust). However, alternative conceptualizations are possible (e.g., Singh and Sirdeshmukh, 2000) which could be explored further in the future. To show causation whilst ruling out reverse causality, additional longitudinal research may be necessary. For example, the customer's assessment over time that the continuous business relationship with a service firm (i.e., loyalty) is worthwhile may itself lead to affective commitment rather than be itself the product of affective commitment. The cross-sectional nature of our data precluded examining such effects. However, adding such an aspect in future research could shed light on how trust and affective commitment develop in these relationships and on the two-way causation it may have with the nature of the firm–customer relationship and its impact.

Another important research question relates to a firm's ability to influence affective commitment and other emotive relational factors through more personal services. Specifically, can service firms influence the impact of affective commitment on loyalty intentions, or is the impact determined by the type of products and services offered (e.g., books: tangible vs. travel: intangible)? If commitment's impact is unmodifiable, offering a more personalized service would increase costs without increasing customer loyalty.

For managers, our findings offer insight into managing customer loyalty in online and offline environments. RQ constructs, particularly customer satisfaction and benevolence trust, are critical to increase customer loyalty regardless of environment. The results also indicate that differences between the drivers of customer loyalty online and offline are strongly influenced by service-type characteristics which should be considered by relationship managers. As affective commitment has been shown to be a key driver of loyalty (De Wulf et al., 2001), the lack of personal interaction in the case of offline media retailers and its consequences for building affective commitment deserve particular attention. Providers of offline services should be aware that the more they offer services with fewer personnel, the more offline and online services become interchangeable. With growing numbers of self-service technologies in services (Weijters et al., 2007), this is likely to become an important issue. Such personnel-replacing technologies increase the danger of consumers substituting offline with online services. At the same time, understanding the differences in effects between online and offline services might enable firms to benefit from this development. For example, while most banks have been reducing their personal treatment of customers to lower costs, *CitiCorp* (part of Citigroup) has been emphasizing personalized customer care and has profited from this strategy (until the onset of the recent credit crisis). This might be of relevance for a large number of service industries that have been reducing their staff (and hence personal customer care) in response to Internet-induced competition to decrease costs (e.g., book stores).

Whilst the Internet continues to be an important channel for the delivery of services, the quality of e-services tends to be perceived to be inferior to traditional face-to-face services (Yang et al., 2004). Research shows that social presence (i.e., warmth and sociability within a website) has desirable consequences in terms of customer outcomes in an online context (Gefen and Straub, 2004). Service managers therefore need to think creatively about how they can exploit the cost–benefits of online service delivery, whilst at the same time not sacrificing customer loyalty. Using computer-generated text-to-speech voice or 3D avatars could be a way of embodying service employees, thereby

enriching the interactive experiences of their customers and creating affective commitment in online service delivery (e.g., Qiu and Benbasat, 2005).

Appendix A. Demographic profile of the sample

See Table A1 for details.

Table A1

	Overall sample in % (n=1101)	Online sample media (n=300)	Offline sample media (n=332)	Offline sample travel (n=214)	Online sample travel (n=255)
<i>Age</i>					
< 20	4.1	8.7	2.7	2.8	1.6
20-29	48.9	49.0	50.6	51.4	44.5
30-39	24.5	20.6	25.9	21.0	30.3
40-49	9.3	8.7	8.1	12.7	8.6
> 50	13.2	13.0	12.7	12.1	15.0
<i>Gender</i>					
Male	62.9	64.1	60.7	60.1	66.7
Female	37.1	35.9	39.3	39.3	33.3
<i>Education</i>					
Some high school or less/	5.2	6.0	3.9	5.7	5.5
High school graduate	13.4	16.1	8.8	12.2	17.4
Vocational school/some college	46.8	50.0	47.4	48.8	41.1
College graduate/graduate school	34.5	27.9	39.9	33.8	36.0

Table A2

Item ^a	Adapted from	Indicator reliability/average variance extracted in SEM			
		Media retailing online	Media retailing offline	Travel online	Travel offline
<i>Customer satisfaction</i>					
I am fully satisfied with \$	Lau and Lee (1999)	.85	.82	.88	.91
\$ always comes up to my expectations	Garbarino and Johnson (1999)	.86	.78	.91	.88
\$ has never disappointed me so far	Garbarino and Johnson (1999)	.51	.63	.62	.64
My experiences with \$ are excellent	Lau and Lee (1999)	.61	.80	.71	.79
<i>Competence trust</i>					
\$ performance always meets my expectations	Garbarino and Johnson (1999)	.67	.60	.71	.76
\$ is a capable and proficient firm	McKnight and Chervany (2002)	.66	.57	.60	.77
\$ is very competent	Sirdeshmukh et al. (2002)	.77	.87	.76	.78
\$ is effective in providing customers what they are looking for	McKnight and Chervany (2002)	.62	.44	.69	.62
<i>Benevolence trust</i>					
\$ would always act in my best interest	McKnight and Chervany (2002)	.69	.703	.51	.74
\$ will never try to cheat me	Lau and Lee (1999)	.47	.55	.43	.50
\$ would do its best to help me	McKnight and Chervany (2002)	.57	.59	.67	.60
\$ is interested in the customers' well-being	New item	.66	.76	.74	.77
<i>Commitment</i>					
I am very committed to \$	Morgan and Hunt (1994)	.57	.66	.60	.79
My relationship with \$ means a lot to me	Johnson and Grayson (2005)	.65	.66	.64	.82
If \$ would not exist any longer, this is a hard loss for me	Johnson and Grayson (2005)	.71	.60	.59	.81
I would turn a blind eye to a minor mistake of \$	New item	.29	.45	.27	.39
<i>Customer loyalty intentions</i>					
I will buy most % at \$ in the future	Sirdeshmukh et al. (2002)	.80	.81	.73	.87
I am a loyal customer of \$	New item	.69	.62	.61	.61
My next buy of % will take place at \$	Sirdeshmukh et al. (2002)	.84	.83	.80	.85
\$ is my first choice when it comes to buy %	Zeithaml et al. (1996)	.83	.90	.86	.85

^a \$ represents the company name; % is the service category.

Appendix B. operationalization of variables and local fit indices for SEM

See Table A2 for details.

References

- Anderson, R.E., Srinivasan, S.S., 2003. E-satisfaction and e-loyalty: a contingency framework. *Psychology and Marketing* 20 (February), 123–138.
- Athanasopoulou, P., 2009. Relationship quality: a critical literature review and research agenda. *European Journal of Marketing* 43 (5/6), 583–610.
- Bansal, H.S., McDougall, G.H.G., Dikolli, S.S., Sedatole, K.L., 2004. Relating e-satisfaction to behavioral outcomes: an empirical study. *Journal of Services Marketing* 18 (4), 290–302.
- Bentler, P.M., 1990. Comparative fit indexes in structural models. *Psychological Bulletin* 107 (2), 238–246.
- Bolton, R.N., 1998. A dynamic model of the duration of the customer's relationship with a continuous service provider: the role of satisfaction. *Marketing Science* 17 (Winter), 45–65.
- Burnham, T.A., Frels, J.K., Mahajan, V., 2003. Consumer switching costs: a typology, antecedents, and consequences. *Journal of the Academy of Marketing Science* 31 (2), 109–126.
- Castelfranchi, C., Tan, Y.-H., 2002. The role of trust and deception in virtual societies. *International Journal of Electronic Commerce* 6 (Spring), 55–70.
- Crosby, L.A., 1991. Building and maintaining quality in the service relationship. In: Brown, S.W., Gummesson, E. (Eds.), *Service Quality: Multidisciplinary and Multinational Perspectives*. Lexington Books, Lexington, pp. 269–287.
- Crosby, L.A., Evans, K.R., Cowles, D., 1990. Relationship quality in services selling: an interpersonal influence perspective. *Journal of Marketing* 54 (July), 68–81.
- Darby, M.R., Karni, E., 1973. Free competition and the optimum amount of fraud. *Journal of Law & Economics* 16 (1), 67–88.
- De Cannière, M.H., De Pelsmacker, P., Geuens, M., 2009. Relationship quality and the theory of planned behavior models of behavioral intentions and purchase behavior. *Journal of Business Research* 62 (1), 82–92.
- De Wulf, K., Odekerken-Schröder, G., Iacobucci, D., 2001. Investments in consumer relationships: a cross-country and cross-industry exploration. *Journal of Marketing* 65 (October), 33–50.
- Dorsch, M.J., Swanson, S.R., Kelley, S.W., 1998. The role of relationship quality in the stratification of vendors as perceived by customers. *Journal of the Academy of Marketing Science* 26 (Spring), 128–142.
- Evanschitzky, H., Iyer, G.R., Hesse, J., Ahlert, D., 2004. E-satisfaction: a re-examination. *Journal of Retailing* 80 (3), 239–247.
- Evanschitzky, H., Iyer, G.R. (Eds.), 2007. *E-Services: Opportunities and Challenges*. DUV-Gabler-Springer Academic Press, New York, Wiesbaden.
- Forsythe, S.M., Shi, B., 2003. Consumer patronage and risk perceptions in Internet shopping. *Journal of Business Research* 56 (November), 867–875.
- Fassnacht, M., Köse, I., 2007. Consequences of web-based service quality: uncovering a multi-faceted chain of effects. *Journal of Interactive Marketing* 21 (3), 35–54.
- Fornell, C., Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* 18 (February), 39–50.
- Galetzka, M., Verhoeven, J.W.M., Pruyn, A.Th.H., 2006. Service validity and service reliability of search, experience and credence services: a scenario study. *International Journal of Service Industry Management* 17 (3/4), 271–283.
- Ganesan, S., Hess, R.L., 1997. Dimensions and levels of trust: implications for commitment to a relationship. *Marketing Letters* 8 (4), 439–448.
- Garbarino, E., Johnson, M.S., 1999. The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing* 63 (April), 70–87.
- Gefen, D., Straub, D.W., 2004. Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services. *Omega: The International Journal of Management Science* 32 (6), 407–424.
- Geyskens, I., Steenkamp, J.-B.E.M., Kumar, N., 1998. Generalizations about trust in marketing channel relationships using meta-analysis. *International Journal of Research in Marketing* 15, 223–248.
- Geyskens, I., Steenkamp, J.-B.E.M., Scheer, L.K., Kumar, N., 1996. The effects of trust and interdependence on relationship commitment: a trans-Atlantic study. *International Journal of Research in Marketing* 13 (October), 303–317.
- Grégoire, Y., Fisher, R.J., 2008. Customer betrayal and retaliation: when your best customers become your worst enemies. *Journal of the Academy of Marketing Science* 36, 247–261.
- Gummesson, E., 1987. The new marketing—developing long-term interactive relationships. *Long Range Planning* 20 (4), 10–20.
- Hennig-Thurau, T., Klee, A., 1997. The impact of customer satisfaction and relationship quality on customer retention—a critical reassessment and model development. *Psychology & Marketing* 14 (December), 737–765.
- Hennig-Thurau, T., Gwinner, K.P., Gremler, D.D., 2002. Understanding relationship marketing outcomes: an integration of relational benefits and relationship quality. *Journal of Service Research* 4 (February), 230–247.
- Hennig-Thurau, T., Langer, M., Hansen, U., 2001. Modeling and managing student loyalty: an approach based on the concept of relationship quality. *Journal of Service Research* 3 (4), 331–344.
- Heskett, J.L., Sasser Jr., W.E., Schlesinger, L.A., 1997. *The Service Profit Chain: How Leading Companies Link Profit to Loyalty, Satisfaction, and Value*. Free Press, New York.
- Hewett, K., Money, R.B., Sharma, S., 2002. An exploration of the moderating role of buyer corporate culture in industrial buyer–seller relationships. *Journal of the Academy of Marketing Science* 30 (Summer), 229–239.
- Hibbard, J.D., Kumar, N., Stern, L.W., 2001. Examining the impact of destructive acts in marketing channel relationships. *Journal of Marketing Research* 38 (February), 45–61.
- Holmlund, M., 2001. The D&D model—dimensions and domains of perceived relationship quality perceptions. *The Service Industries Journal* 21 (3), 13–36.
- Homburg, C., Wieseke, J., Hoyer, W.D., 2009. Social identity and the service-profit chain. *Journal of Marketing* 73 (March), 38–54.
- Hu, L.-T., Bentler, P.M., 1999. Cutoff criteria for fit indices in covariance structural analysis: conventional criteria versus new alternatives. *Structural Equation Modeling* 6 (1), 1–56.
- Johnson, D., Grayson, K., 2005. Cognitive and affective trust in service relationships. *Journal of Business Research* 58 (4), 500–507.
- Joinson, A., 2003. *Understanding the Psychology of Internet Behaviour*. Palgrave Macmillan, Basingstoke.
- Kumar, N., Scheer, L.K., Steenkamp, J.-B.E.M., 1995. The effects of supplier fairness on vulnerable resellers. *Journal of Marketing Research* 32 (February), 54–65.
- Lau, G.T., Lee, S.H., 1999. Consumers' trust in a brand and the link to brand loyalty. *Journal of Market Focused Management* 4, 341–370.
- Lee, Matthew.K.O., Turban, Efraim., 2001. A trust model of consumer Internet shopping. *International Journal of Electronic Commerce* 6 (1), 75–91.
- McAllister, D.J., 1995. Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal* 38 (1), 24–59.
- McKnight, D.H., Chervany, N.L., 2002. What trust means in E-Commerce customer relationships: an interdisciplinary conceptual typology. *International Journal of Electronic Commerce* 6 (2), 35–59.
- McKnight, D.H., Choudhury, V., Kacmar, C., 2002. The impact of initial consumer trust on intentions to transact with a web site: a trust building model. *Journal of Strategic Information System* 11, 297–323.
- Meng, J., Elliott, K.M., 2008. Predictors of relationship quality for luxury restaurants. *Journal of Retailing and Consumer Services* 15 (6), 509–515.
- Moorman, C., Zaltman, G., Deshpandé, R., 1992. Relationships between providers and users of marketing research: the dynamics of trust within and between organizations. *Journal of Marketing Research* 29 (August), 314–328.
- Morgan, R.M., Hunt, S.D., 1994. The commitment–trust theory of relationship marketing. *Journal of Marketing* 58 (July), 20–38.
- Nelson, P., 1970. Information and consumer behavior. *Journal of Political Economy* 78 (2), 311–329.
- Nunnally, J.C., 1978. *Psychometric Theory*, 2nd ed., New York.
- Oliver, R.L., 1997. *Satisfaction: A Behavioral Perspective on the Consumer*. McGraw-Hill, New York, NY.
- Palmatier, R.W., Dant, R.P., Grewal, D., Evans, K.R., 2006. Factors influencing the effectiveness of relationship marketing: a meta-analysis. *Journal of Marketing* 70 (October), 136–153.
- Palmer, A., Bejou, D., 1994. Buyer–Seller relationships: a conceptual model and empirical investigation. *Journal of Marketing Management* 10 (6), 495–512.
- Paul, M., Hennig-Thurau, T., Gremler, D.D., Gwinner, K.P., Wiertz, C., 2009. Toward a theory of repeat purchase drivers for consumer services. *Journal of the Academy of Marketing Science* 37 (2), 215–237.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88 (5), 879–903.
- Pritchard, M.P., Havitz, M.E., Howard, D.R., 1999. Analyzing the commitment–loyalty link in service contexts. *Journal of the Academy of Marketing Science* 27 (Summer), 333–348.
- Qiu, L., Benbasat, I., 2005. Online consumer trust and live help interfaces: the effects of text-to-speech voice and three-dimensional avatars. *International Journal of Human–Computer Interaction* 19 (1), 75–94.
- Rauyruen, P., Miller, K.E., 2007. Relationship quality as a predictor of B2B customer loyalty. *Journal of Business Research* 60, 21–31.
- Reibstein, D.J., 2002. What attracts customers to online stores, and what keeps them coming back. *Journal of the Academy of Marketing Science* 30 (Fall), 465–473.
- Roberts, K., Varki, S., Brodie, R., 2003. Measuring the quality of relationships in consumer services: an empirical study. *European Journal of Marketing* 37 (1/2), 169–196.
- Rousseau, D.M., Sitkin, S.B., Burt, R.S., Camerer, C., 1998. Not so different after all: a cross discipline view of trust. *Academy of Management Review* 23 (3), 393–404.
- Rust, R.T., Zahorik, A.J., 1993. Customer satisfaction, customer retention, and market share. *Journal of Retailing* 69 (2), 193–215.
- Sassenberg, K., Boos, M., 2003. Attitude change in computer-mediated communication: effects of anonymity and category norms. *Group Processes & Intergroup Relations* 6 (4), 405–422.
- Schoenbachler, D.D., Gordon, G.L., 2002. Trust and customer willingness to provide information in database-driven relationship marketing. *Journal of Interactive Marketing* 16 (3), 2–16.

- Shankar, V., Smith, A.K., Rangaswamy, A., 2003. Customer satisfaction and loyalty in online and offline environments. *International Journal of Research in Marketing* 20, 153–175.
- Shankar, V., Sultan, F., Urban, G.L., 2002. Online Trust and e-Business Strategy: Concept, Implications, and Future directions. University of Maryland.
- Singh, J., Sirdeshmukh, D., 2000. Agency and trust mechanisms in consumer satisfaction and loyalty judgments. *Journal of the Academy of Marketing Science* 28 (1), 150–167.
- Sirdeshmukh, D., Singh, J., Sabol, B., 2002. Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing* 66 (January), 15–37.
- Smith, J.B., 1998. Buyer–seller relationships: similarity, relationship management, and quality. *Psychology & Marketing* 15 (1), 3–21.
- Srinivasan, S.S., Anderson, R., Ponnayolu, K., 2002. Customer loyalty in e-commerce: an exploration of its antecedents and consequences. *Journal of Retailing* 78 (1), 41–50.
- Urban, G.L., Amyx, C., Lorenzon, A., 2009. Online trust: state of the art, new frontiers, and research potential. *Journal of Interactive Marketing* 23 (2), 179–190.
- Vieira, A.L., Winklhofer, H., Ennew, C.T., 2008. Relationship quality: a literature review and research agenda. *Journal of Customer Behaviour* 7 (4), 269–291.
- Walther, J.B., 1996. Computer-mediated communication: impersonal, interpersonal and hyperpersonal interaction. *Communication Research* 23, 1–43.
- Walsh, G., Beatty, S.E., Shiu, E., 2009. The customer-based corporate reputation scale: replication and short form. *Journal of Business Research* 62 (10), 924–930.
- Walther, J.B., Anderson, J.F., Park, D.W., 1994. Interpersonal effects in computer-mediated interaction: a meta-analysis of social and anti-social communication. *Communication Research* 21, 460–487.
- Yang, Z., Jun, M., Peterson, R.T., 2004. Measuring customer perceived online service quality: scale development and managerial implications. *International Journal of Operations & Production Management* 24 (11/12), 1149–1174.
- Weijters, B., Rangarajan, D., Falk, T., Schillewaert, N., 2007. Determinants and outcomes of customers' use of self-service technology in a retail setting. *Journal of Service Research* 10 (1), 3–21.
- Wikinvest, 2009. E-Commerce <http://www.wikinvest.com/concept/E-Commerce#Online_Travel_Services>. Accessed 25 May, 2009.
- Zeithaml, V.A., Berry, L.L., Parasuraman, A., 1996. The behavioral consequences of service quality. *Journal of Marketing* 60 (April), 31–46.