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**EXPLORING THE MEDIATING ROLE OF RELATIONSHIP QUALITY  
IN ONLINE SERVICES**

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## **EXPLORING THE MEDIATING ROLE OF RELATIONSHIP QUALITY IN ONLINE SERVICES**

### **ABSTRACT**

This paper is the first to examine the mediating role of relationship quality in the online context. By investigating this major tenet of customer relationship management theory in this nascent service setting, this paper clarifies the interaction between service quality and relationship quality, as they impact on customer loyalty. The findings reveal some fundamental differences in the way that strong relationships and loyalty develop in the online setting vis-à-vis the offline setting.

The findings of this empirical research support the existence of a partial mediating relationship. While effective service delivery was found to enhance the quality of customer-firm relationships, and consequently, the customer's perceived loyalty to their main financial institution; there was also evidence of a concurrent link between service quality and loyalty. This finding suggests that a strong relationship does not make customers immune to poor future services, and that firms operating in the online environment should maintain high service standards if they are to enjoy continued loyalty from their customers.

#### *Keywords*

Online services, customer relationship management, relationship quality, service quality, loyalty.

## INTRODUCTION

As the online channel matures and competition intensifies, the challenge and cost of attracting new customers will continue to increase. In response, e-businesses are looking to customer relationship management as a vehicle for creating more enduring and profitable customer relationships [42][52]. It has also been asserted that a key benefit of customer relationship management with services is that the strategy not only contributes to customer loyalty but also provides firms with a sustainable competitive advantage not easily duplicated, as many of the intangible aspects of a relationship are difficult for competitors to mimic [44], which in turn provides a valuable resource for responding to future opportunities and threats [2].

Although the application of customer relationship management in the offline channel has demonstrated that relationship quality provides additional explanatory power over service quality alone in the development of customer loyalty, the specific nature of the interactions between these constructs in the online services setting has yet to be empirically tested. In this regard, Parasuraman and Zinkhan assert that there is still quite a bit of uncertainty about the extent to which established management theory applies to the online channel [39]. Scullin et al. add that the real value of online may only be ascertainable when we have a clearer understanding of how such theory guides consumer behavior over the Internet [47].

There are some notable aspects of online service delivery and online consumer behavior that warrant consideration. In particular, online services are not subject to the same temporal, physical, and geographic constraints as traditional offline services [21]. Online services are always open, can carry a virtually infinite product range, and can cater to an international market. Prior research has shown that online consumers have a heightened sensitivity to visual cues and information accuracy [13] and that they are more susceptible to perceptions of risk [18]. Taken together, these considerations contribute to lower search costs and lower switching barriers [24], and, supposedly, result in lower levels of

customer loyalty [32]. However, Shankar et al. assert that this is not always the case, observing that in their study of consumer travel purchasing, relationship satisfaction in the online channel actually contributed more to customer loyalty than in the offline channel [48].

Against this backdrop, the present study is the first to investigate a major tenet of customer relationship management theory in an online retail service setting. That is, the research contributes to the literature by (1) examining the direction and strength of the inter-relationship between service quality, relationship quality and customer loyalty in online services, and (2) testing the mediating role of relationship quality. In doing so, this research provides insights into the dynamics of online exchange and practical guidance to managers who desire an improved understanding of how the Internet impacts on the relational needs of their customers.

Although Gummesson predicts that the domains of services and customer relationship management are destined to merge, he stops short of asserting that they are the same thing [22]. Rather, his claims can be said to reflect the general paradigmatic shift in the literature from the notion of “transactional exchanges” to that of “relationships.” Indeed, prior research has demonstrated that service quality and relationship quality represent different domains when tested in a variety of offline and online contexts, even though respondents often find it difficult to articulate specific differences between what constitutes good service and a good relationship [29].

The recent work of Roberts et al. provides specific support for a mediating model over a direct effects model, where relationship quality fully mediates the impact of service quality on loyalty in different offline contexts [44]. Yet, to date, the nature of this mediating relationship has not been investigated within online services. This important challenge is addressed here through a survey of Australian online banking customers. While the decision to sample Australian online banking customers was made mostly for convenience, the United Kingdom’s Office for National Statistics reveals that of the nine major international economies, Australia is on or above average for all major

indicators of e-commerce readiness, usage and impact [38]. Importantly, for the indicator of the percentage of individuals banking online, Australia had the greatest penetration (~35%) of the nine countries [33].

The remaining sections of this paper are organized as follows: The next section develops the theoretical background as it applies to our understanding of the key mediating variable in our study—relationship quality. The third section describes the conceptual models used for investigating the interplay between the key constructs in online services. The fourth section presents the method employed to test the associated hypotheses, and the remaining sections provide a discussion of the results and the implications of this work for academics and practitioners.

### **THEORETICAL BACKGROUND**

Relationship quality has been posited by a number of scholars as a significant variable in the study of customer loyalty [9][44][51]. This is not to say that loyalty does not occur in situations of low relationship strength; however, in such situations, the likelihood of future service encounters is more dependent on external factors such as low level of alternatives or high switching barriers [30]. As such, the focus of this research is on voluntary service relationships. To this end, Varki and Wong make the point that healthy relationships between consumers and service providers depend on the voluntary participation of consumers [53]. In the case of online banking, consumers not only voluntarily choose among banks but also among the various service delivery channels offered by these institutions [21].

Crosby et al. assert that relationship quality in voluntary service relationships is the main driver of a customer's future purchase intentions [9]. They suggest that as a customer's trust in a service provider's ability to deliver satisfying service increases, the customer's intention to remain loyal will also increase. Storbacka et al. add that a strong relationship reduces the adverse effects of critical incidents on a customer and decreases that customer's desire to experiment with substitute products or

services [51]. In this respect, relationship quality is viewed as the ultimate measure of whether a dyadic relationship will be enduring and profitable.

After exploring the association between service quality and relationship quality, Crosby et al. concluded that quality service encounters are necessary for the development of relationship quality and the retention of customers [9]. Storbacka et al. (p. 149) refer to this as the “chain of impact”—whereby service quality affects satisfaction which, in turn, affects customer loyalty [51]. However, their conceptualization of satisfaction is synonymous with our definition of relationship quality—defined as the “customers’ cognitive and affective evaluation based on the personal experience across all service episodes within the relationship.”

While there is a widespread belief in the services literature that service quality leads to relationship quality, Roberts et al. argue that there is still much to learn about the nature of the causal relationships between these constructs in consumer services [44]. In an effort to address this issue, they examined the interplay between these constructs in various offline service settings. Their research provides evidence in support of the chain of impact, with the effect of service quality on loyalty completely subsumed by relationship quality. That is, service quality has no independent effect on customer loyalty but only works through relationship quality to impact customer loyalty.

However, other studies provide support for a direct relationship between service quality and customer loyalty [40][60][5] [57]. Indeed, Zeithaml reviewed the literature pertaining to service quality and profitability and identifies 18 articles that espouse a direct relationship between service quality and loyalty [59]. In the same article, Zeithaml notes that much remains unclear about the precise nature of the link between service quality and loyalty; in particular, the author states that more research is needed to explore why the strength of the association between service quality and loyalty appears to vary in different service delivery and operational contexts.

In response, the present study attempts to clarify the nature of the interaction among service quality, relationship quality, and customer loyalty by examining these constructs in another context—online services. Roberts et al. specifically assert that “technology” and “mode of contact” are likely to impact on the consumer relationship with the firm, and that this needs to be investigated [44]. Indeed, some have even argued that the absence of interpersonal contact in a service encounter raises serious questions regarding the applicability of customer relationship management [30]. Nevertheless, prior research has shown that online service environments are capable of eliciting emotional responses [58] and that the Internet is able to provide highly interactive and personalized encounters [25].

Online services provide a particularly effective lens through which to examine these issues because relationships are considered to be a critical strategy for reducing information overload. Rust and Chung assert that while consumers deal with the potential for information overload in online services by limiting the number of firms to which they will interact and form relationships, firms respond by making the web experience more personalized and engaging [46]. Examples of how firms can customize content to enhance relationships include website features such as product recommendations and opt-in email notifications of sales and new developments, as well as real-time contact options to address any customer issues that arise during the service encounter. This use of relationships is set to become even more relevant as firms contend with the exponential growth of competition online, and lowering levels of information tolerance as consumers seek to cut through the clutter.

The present research will examine the central role played by relationship quality in online services relationships. In particular, we will seek to investigate whether a mediating effects model extends to the online services context. A conceptual model depicting this mediating effect and the interaction between service quality, relationship quality and loyalty is shown in Figure 1. The relationships represented in this model are elaborated on further in the next section of our paper.



*“Insert Figure 1 about here”*

## **CONCEPTUAL DEVELOPMENT**

While our conceptual model extends Roberts et al.’s [44] adaptation of Zeithaml et al.’s [60] framework for service encounters, it is also informed by Rust and Chung’s [46] classification of prior research on service relationships. This later work of Rust and Chung highlights the extent to which the key relationships depicted in our model are entrenched within the services literature, despite the fact that these relationships had not been comprehensively considered prior to Robert et al. [44], and still have not been explored within the online services context. As the focus of our research is on examining the extension of customer relationship management theory to online services, it would seem appropriate that we spend a little time exploring the literature in support of the key relationships in the online setting.

Service quality is conceptualized within our study as a customer’s overall evaluation of the quality of a service encounter with a firm [40]. While traditional service quality measures have found some resonance in the online context [20], there have also been calls for the conceptualization of separate service quality measures that reflect the unique nature of service delivery online. Parasuraman et al. argue that more needs to be done to understand how the nature of service relationships varies between the online and offline setting [41]. To this end, they have responded by developing a measure for electronic service quality, which they define as encompassing “all phases of a customer’s interaction with a website: the extent to which a web site facilitates efficient and effective shopping, purchasing, and delivery” (p. 217).

One particularly noteworthy aspect of their definition of electronic service quality is that it clearly positions electronic service quality as a construct concerned specifically with the transactional aspects of online exchange. Parasuraman et al. even question whether the hedonic aspects that characterize exchange in the offline services setting apply online [41]. By examining the central role of

relationship quality in the online setting, we will, in effect, test the extent to which these claims hold true.

Within our study, relationship quality is concerned with the accumulated value that transpires from a number of discrete transactions over time. As such, relationship quality can be defined as a higher order construct related to a customer's evaluation of their overall relationship with a service provider at a particular point in time based on all prior interactions with that firm [9]. From this definition, we see that relationship quality is closely related to what many researchers define as customer satisfaction, particularly where satisfaction is conceptualized as an overall measure of service quality based on prior exchange experiences [10][27][48]. In other cases, satisfaction has even been conceptualized as a dimension of relationships quality [9].

In line with the work of Morgan and Hunt we frame relationship quality as a second-order latent construct comprised of two dimensions: trust and commitment [36]. Morgan and Hunt assert that the presence of both of these dimensions is critical to realizing the benefits of customer relationship management, because they encourage partners to make relationship investments, and reduces the likelihood of short-term or high-risk behavior. To this end, Chakrabarty et al. [6] assert that the role of relationship quality is consistent with the theories of transaction cost economics and agency theory; where they demonstrated that a strong relationship mitigated costs and risk in IT outsourcing relationships.

While service quality has been shown to have a positive influence on relationship quality in the offline channel [44], further research is required to better understand whether this relationship extends to the online channel. To this end, Bauer et al. [4] report that the Internet has the potential to significantly influence the development of relationships—especially with respect to perceptions of satisfaction, commitment, and trust. The ability of the Internet to facilitate strong relationships between buyers and sellers is mainly due to the interactivity of the medium and the greater provision for support

options in the exchange process [12]. The highly automated nature of online service encounters could also be argued to reduce uncertainty in exchange, which Crosby et al. espouse is a critical driver of stronger relationships [9].

Notwithstanding, Reichheld and Schefter caution that strong relationships are not won by technology alone, but they depend on the delivery of consistently superior customer service [42]. This suggests that the basics of good customer relationship management should be as applicable online as they are offline. Montoya-Weiss et al. also observe that overall satisfaction with the service provider—consistent with the definition of relationship quality used in this study—was largely determined by service quality in the online channel [34]. Likewise, research in multichannel environments supports this claim with online service quality observed to account for higher levels of relationship satisfaction in online rather than offline channels [48]. Based on this evidence, we propose that:

*H<sub>1</sub>. Service quality in online services is positively related to relationship quality.*

The literature reports that service quality also has a long and well established influence on customer loyalty in traditional service environments [5][40][60]. When a customer experiences good service from a firm, there will be little incentive to switch to an alternative provider, as the risk of uncertain service delivery has been, at least in part, mitigated by this experience [21a]. In this sense, service quality contributes directly to loyalty, where loyalty is defined as a customer choosing to continue a relationship with a particular provider in the face of competing offers from alternative providers. Dick and Basu make an important distinction between loyalty and customer retention by asserting that for loyalty to exist, it is not sufficient for a customer just to continue to use a service provider; they must have a positive attitude toward the firm that is more favorable than that which is held for competing providers [14]. Recent evidence suggests that this association also extends to online services. For instance, Parasuraman et al. found a strong and positive relationship between their measure of electronic service quality and loyalty [41]. As such, we hypothesize that:

*H<sub>2</sub>. Service quality in online services is positively related to loyalty.*

As relationship quality is considered to increase with a history of positive service encounters [9], and service quality has a strong direct influence on loyalty, it is likely that relationship quality will have a positive impact on customer loyalty. It is no surprise, then, that relationship quality has been shown by a number of scholars to have a significant and positive effect on the development of customer loyalty in offline service encounters [9][44][51].

While an extensive review of the literature did not identify any articles that specifically explore or support this relationship in the online setting, related constructs such as relationship satisfaction have been found to positively influence customer retention in the online setting [48]. Further, the commitment of firms to electronic customer relationship management, particularly in the banking sector, suggests that this relationship extends to e-services. Accordingly, the following hypothesis is advanced:

*H<sub>3</sub>. Relationship quality in online services is positively related to loyalty.*

Taken together, H1, H2, and H3 suggest a mediating relationship whereby relationship quality mediates the impact of service quality on loyalty (Figure 1). The work of Dabholkar et al. [11a] and Zeithaml et al. [59] provides endorsement for a conceptual model in which the relationship between service quality and loyalty is “mediated” by another variable. The term “mediated” is used here in the sense suggested by Baron and Kenny—that is, a “mediated” relationship is understood to apply when one variable has an antecedent effect on another variable’s influence on an outcome variable [3].

In this regard, Dabholkar et al. argue that the mixed empirical findings regarding the relationship between service quality and loyalty suggest that the association might be indirect [11], with various researchers finding evidence of the relationship being mediated by some other variable [10][60]. While Roberts et al. find specific support for relationship quality mediating the influence of service quality on loyalty in the offline service setting [44]; there is a lack of theoretical guidance in the

online setting regarding the nature of this relationship. However, drawing from the support for this relationship in the offline setting, we propose that:

*H<sub>4</sub>. Relationship quality in online services will mediate the impact of service quality on loyalty.*

## **RESEARCH METHOD**

A survey was administered online to a population of Australian Internet banking customers to test the hypotheses presented above. Online banking was selected as the context for this study because it is an important online service. A convenience sample of 4,000 online banking customers was purchased from a commercial list supplier. The criteria used for selection of potential respondents were as follows: (1) they were members of a SPAM compliant email list, (2) 18 years of age or older, and (3) were regular users of online banking. Non-respondents were automatically sent a reminder email one week after the first email. Actual responses were received from 451 people from a revised sample of 3,650 people after the removal of non-contactable persons, resulting in a response rate of 12%. This response rate is consistent with other marketing studies using similar methodologies [26]. While the data is limited to one nation, Australia, we are not aware of any reason to expect major idiosyncratic country-specific effects. In sum, while the sample is imperfect, it is nevertheless strong because it represents a substantial real world online banking user group, randomly contacted from a high quality mailing list. Detailed information on the sample characteristics has been omitted due to space constraints, but is available from the authors upon request.

### *Measurement of constructs*

Measures for the different constructs used in this study were identified after an extensive review of the literature, and modified following feedback from focus group sessions with a sample of representative respondents and confirmatory interviews with academic experts in the fields of marketing and information systems. Following is a summary of the scales used. It is noteworthy that two of the three

principle constructs—namely, service quality and relationship quality—were conceptualized as Type I second-order latent variables as defined by Jarvis et al. [28].

The five lower-order dimensions for service quality reflect the physical aspects, reliability, customization, problem-solving, and policy components of online service delivery. Fifteen items were chosen from the retail service quality scale of Dabholkar et al. [10] to measure these dimensions, with three items used for each dimension to ensure item balance at the dimensional level. Ringle and Henseler recommend this as a way of ensuring equal weighting for each dimension within the repeated measures approach to modeling second order latent variables [43]. Dabholkar's original dimension for personal interactions was re-interpreted for the online context as customization. That is, we suggest that the personalization of the service encounter will be interpreted by the customer in terms of the effort that a firm makes to customize the website experience to their individual needs. Definitions for the five dimensions are available upon request.

While there are numerous scales available for measuring service quality in the online setting [41][56][27], we chose to adapt the retail service quality scale because of its particular suitability to evaluating the quality of retail banking services. In this regard, we concur with the views of Rossiter who suggests that more careful consideration needs to be given to context when choosing a measurement model [45]. He warns that too often researchers are committed to scale development, particularly when scale adaptation would suit.

In line with the definition of relationship quality presented previously, we chose six items from Morgan and Hunt's seminal customer relationship management work to measure the underlying dimensions of trust and commitment [36]. Within the context of our study, we follow Moorman et al. [35] to define trust as the "willingness to rely on an exchange partner in whom one has confidence" (p. 82), and commitment as a customer's "desire to maintain a valued relationship" (p. 316). To measure

customer loyalty, which we model as a first-order latent variable, we selected three items from Zeithaml et al.'s behavioral intentions scale [60].

All scales were selected on the basis of strong past performance and required only minor modifications to the wording of the constituent items. The scales were all measured using 5-point Likert scale, where 1 indicated that respondents strongly disagree with the stated item and 5 indicates that respondents strongly agree. A complete list of items and factor loadings are available upon request.

### **ANALYSIS AND RESULTS**

Partial least square (PLS) and the SmartPLS program were used to assess the adequacy of measurement models for the latent constructs. Our use of PLS was informed by the procedures and recommendations of Fornell and Bookstein [16]. The choice of PLS over alternative structural equation modeling techniques is based on the following reasons. First, the use of ordinary least squares to explain variance within PLS is well suited to exploratory research. As the main objective of this study is to better understand the influence of relationship quality on service quality and loyalty in e-services, this justifies the use of PLS. Second, PLS is a variance-based structural equation modeling technique that has identified advantages over covariance based approaches when using new or modified measures [8]. In the case of this research, PLS is appropriate because we use several adapted measures. Last, PLS provides for efficiency in analysis because it allows for simultaneous examination of both the measurement model (outer model) and the theoretical or structural model (inner model). That is, PLS can be used to assess to the relationships between the observed indicators and the latent constructs they measure at the same time as we assess the hypothesized relationships of interest.

As our study used Type I second-order reflective constructs as described by Jarvis et al. [28], it is appropriate that the evaluation of the measurement model be done using accepted conventions relating to validity and reliability. To achieve this, we examine a range of indicators including item factor loadings, composite reliability, average variance explained (AVE), bootstrap t-statistics,

convergent validity, and discriminant validity. Statistics for the second-order constructs were based on the repeated measures approach recommended by Wold [55].

From our preliminary analysis, we can see that each of the items loaded significantly ( $p > 0.01$ ) on its associated construct with factor loadings in the range 0.80 to 0.96—exceeding the recommended minimum of 0.3 for evidence of convergent validity [23]. We also see that the average variance explained by the first- and second-order constructs was between 54% and 89%. Fornell and Larcker [17] also suggest that for convergent validity to be established, the average variance explained (AVE) by the items of a latent construct should be greater than the variance unexplained (i.e.,  $AVE > 0.50$ ). In this regard, all of the constructs overcame the benchmark for establishing convergent validity.

In terms of discriminant validity, an examination was made of the inter-construct correlations and the composite reliabilities. Gaski and Nevin recommend that the bivariate correlations should not exceed the composite reliabilities for the respective constructs [19]. Table 1 provides information on the correlations between all of the first- and second-order constructs. Based on this data, in no case did we see that the correlations exceed the respective composite reliabilities. Review of the factor loadings for each item also revealed that cross-loadings was not a problem, with each item loading in its preferred construct better than any other construct. Finally, Fornell and Larcker recommend that the bivariate correlations should not exceed the square root of the associated measures of AVE [17]. This condition was met for all first-order latent constructs. The use of repeated measures for the second-order constructs nullifies this test with higher-order constructs.

In terms of reliability, the high composite reliabilities and Cronbach alpha statistics reported in Table 1 are all above the minimum required value of 0.7 suggested by Nunnally for strong internal consistency [37]. Taken together, these preliminary analysis results support the validity and reliability of the measurement model and provide a sound basis for examining the structural relationships required to resolve the hypotheses.



*“Insert Table 1 about here”*

### *Hypothesis testing*

To test the identified hypotheses, we examine the strength and significance of inner model paths. Following Chatelin et al.'s [7] recommendation, t-statistics and associated p-values were obtained for the inner paths using the bootstrapping procedure with 200 runs. The path coefficients and p-values for the hypothesized model (and the three competing models) are reported in Table 2 along with the associated fit statistics. Falk and Miller provide some guidance for evaluating the explanatory power of the inner model and associate paths [15]. They suggest that in addition to significant path coefficients (i.e.,  $p > 0.05$ ), the  $R^2$  values for the endogenous constructs should also exceed 0.1.

*“Insert Table 2 about here”*

From Table 2, we see that all of the model constructs exceeded this benchmark, with  $R^2$  values in the range 0.52 to 0.91, which Chin et al. assert are in the strong to very strong range [8]. All paths were also found to be significant, most at the 99.9% confidence level (i.e.,  $p > 0.001$ ). As such, these results provide general support for adequacy of the structural models and specific support for H1, H2, and H3. That is, service quality (e-SQ) and relationship quality (RQ) were both found to be positively related to loyalty, and e-SQ was also found to positively influence RQ in online services.

The research also proposed that RQ mediates the impact of e-SQ on loyalty in the online service delivery channel. According to Baron and Kenny [3a], four conditions must be met for mediation to be established: (1) e-SQ must have a significant effect on RQ; (2) RQ must have a significant effect on loyalty; (3) e-SQ must have a direct effect on loyalty when RQ is constrained (that is, not linked to loyalty); and (4) the effect of e-SQ on loyalty must become statistically insignificant (or become substantially reduced) when the path between RQ and loyalty is opened.

To test these conditions, we examined four alternative models. The first model ('PEM', Partial Mediation Model, Figure 2a) posits a partial mediation model where paths between all of the principle

constructs are included; relationship quality as partially mediating the effect of service quality on loyalty. The second model ('MEM1', Mediation Model 1, Figure 2b) is a modification of the first model, where the path between e-SQ and loyalty was removed. This posits a mediation only effect, where RQ fully mediates the effect of e-SQ on loyalty (this being the model posited in accordance with this study). The third model ('MEM2', Mediation Model 2, Figure 2c) is a modification of the first model, where the path between RQ and loyalty was removed. This posits a mediation only effect, where e-SQ mediates the effect of RQ on loyalty. The fourth model ('DEM', direct Effects Model, Figure 2d) was a modification of the first model, where the path between e-SQ and RQ was removed. This posits a direct effects only model, where both e-SQ and RQ are each modeled to have an independent and direct effect on loyalty.

*“Insert Figure 2 about here”*

While evidence for Baron and Kenny's criteria (1) and (2) has been provided previously in support of H1 and H3, the evidence in support of H2 is not sufficient to support criterion (3). The remaining two criteria require evaluation of the competing models. From the path coefficients in MEM2, we see that criterion (3) appears to be supported. However, the support for criterion (4) is mixed. Comparing the coefficients in DEM with those in PEM for the path from e-SQ to loyalty shows that while the significance does decrease ( $\Delta t = -0.143$ ), this change is noticeably small and does not provide the evidence required to resolve criterion (4) and confirm the presence of full mediation.

To further explore the nature of the proposed mediating relationship, we used a two-step process. We first used a Sobel Test to confirm the presence of mediation [50] before examining the proportion of mediation ( $P_M$ ) accounted for [49]. The Sobel Test revealed that the mediating impact of RQ on the relationship between e-SQ and loyalty was significantly different from zero ( $z=16.483$ ,  $p>0.001$ ), suggesting that mediation was present. The proportion of the mediation accounted for was calculated by creating an index that approaches one as the mediating relationship moves from a partial

to a full mediating relationship. Based on the recommendations of Shrout and Bolger [49], we found evidence that a strong partial mediating relationship appears to be present ( $P_M = 0.7874$ ).

On the basis of this evidence, we partially accept H4 and the presence of a strong partial mediating effects models over a full mediating model.

## DISCUSSION

Although the marketing literature has long alluded to the presumed existence of a chain of effects whereby perceptions of service quality contributes to a stronger relationship and, hence, greater levels of customer loyalty (Storbacka et al., 1994), this presumption was not directly tested until Roberts et al. [44] confirmed that relationship quality completely mediated the effect of service quality on customer loyalty in a range of offline service settings. However, there is little theoretical guidance regarding how these constructs may have been related to one another in online services. In this regard, our study makes two important contributions to our understanding in this area by (1) examining the direction and strength of the relationships between these constructs in the Australian online banking services setting, and (2) investigating the role of relationship quality as a central mediating variable. Our findings for the four hypotheses related to these two objectives are provided in Table 3. Each of these issues will now be discussed in more detail.

*“Insert Table 3 about here”*

In line with the prior research cited in support of H1, H2, and H3, we found general support for each of the relationships proposed by these hypotheses. For example, we found that service quality and relationship quality were both positively related to loyalty. This finding is consistent with the research of Janda et al. [27], who found that service quality in the online retail setting was positively related to a variety of loyalty measures as well as a measure of satisfaction that taps a similar conceptual space to our relationship quality measure. We also found support for the impact of service quality on relationship quality in the context of our research. As such, our research supported the findings of

Wang and Head who observe that service quality, as measured through a customer's satisfaction with the quality of the online exchange, had a strong and significant positive impact on trust and commitment as captured through relational intention [54]. Taken together, these results suggest that managers that desire to enhance customer loyalty via their online channel, should concern themselves with those factors that most drive good service and superior relationships. That is, for the delivery of service quality it is most important that firms focus on customer-focused policies, reliable service delivery and customized solutions. Likewise, for stronger relationships it is most important to be perceived as trustworthy than committed.

Based on the criteria proposed by Baron and Kenny [3], we were not able to establish sufficient support for the four required conditions of mediation. As such, we only found partial support for H4. That is, relationship quality only partially mediated the impact of service quality on loyalty in the online setting. This places our study in stark contrast to theory and the findings of Roberts et al. in the offline services setting [44]. While we observed that the proportion of mediation was strong, the findings of our research reveal that a strong relationship online does not exempt the service provider from the need to provide good future service. This result is particularly interesting as it brings into question a major tenet of customer relationship management theory, that is, that strong relationships mitigate the adverse affects of critical incidents [51]. It also raises the possibility that there may be some inherent level of risk associated with the online service channel that cannot be completely ameliorated by a good service track record.

However, other possible explanations for this discrepancy are alluded to by Shrout and Bolger [49], who suggest that the presence of a partial mediating relationship, particularly when one expected a full mediation effect, could indicate the presence of one of two masked mediating effects (see Figure 3). The first relates to the presence of a missing mediator. In this case, the proposed mediating relationship may manifest itself only in the presence of an additional mediating relationship. An

example of such a variable is personalization. An online experience that is perceived as personalized, friendly, and leaves a customer feeling that his or her needs have been met, is likely to increase a customer's commitment to the service provider, and trust in the service provider's ability to meet future needs. Evidence of a direct relationship between personalization and loyalty has been provided by Ball et al. in the context of offline banking services [1a]. In particular, they found that the extent to which a service provider customizes its service offerings is irrelevant unless these efforts are viewed as personalized. In the case of our study, the lack of support for a complete mediating relationship may be an artifact of the service personalization falling outside what Parasuraman et al. refer to as "the zone of tolerance" [40].

The second possible explanation provided by Shrout and Bolger of why an expected mediating relationship was not supported relates to the possible presence of segments within the sample of respondents [49]. Such a finding is analogous to Baron and Kenny's description of moderated mediation where the presence of mediation is, in fact, moderated by some other exogenous variable [3]. For instance, drawing on the dual theories of cognition espoused in social psychology, it is quite feasible that the preferences of respondents could differ on the basis of the respondent's relationship orientation. In such a situation, one group may exhibit disinterest in developing a relationship with the service provider on any level, where another group could have a very strong relationship orientation. For the first group, this may manifest as a direct effects bias, where relationship quality has no mediating impact at all and service quality is seen as the only determinant of future service encounters. For the second group, on the other hand, the strong preference for social interaction may manifest as a mediating effects bias, whereby the effect of service quality on loyalty is completely subsumed by relationship quality. This distinction is similar to the way that different consumers process advertising messages, where the level of involvement is directly related to the nature and extent of cognitive processing and elaboration that is undertaken.

In sum, the findings of our study are important as they suggest that what we understand about the way relationships are fostered and developed in the offline services setting may not translate directly to the online services setting. While there are obvious synergies in the way the key customer relationship management constructs are conceptualized across different service delivery channels, the interplay between these constructs appears to be channel and context dependent. Future research should build on this study by considering the independent and complementary effect of alternative service delivery channels on the relationship between these key constructs, and their impact on the loyalty of a customer.

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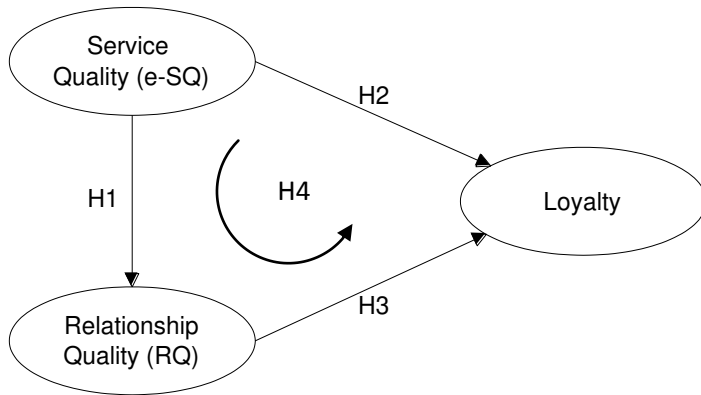


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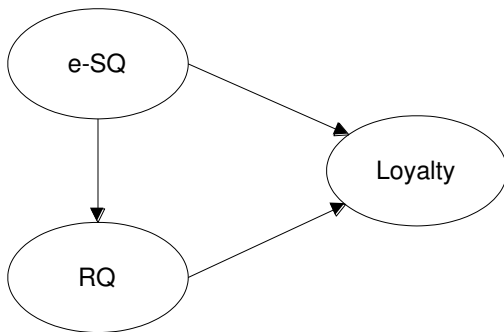
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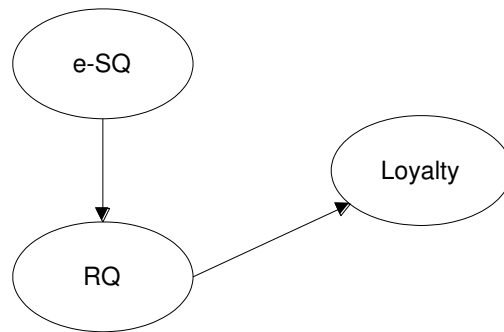
**Figure 1.** Conceptual model for this research



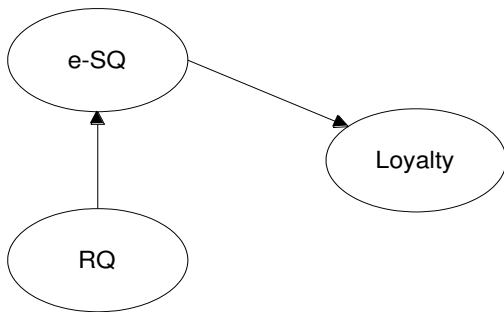
**Figure 2.** Four competing models



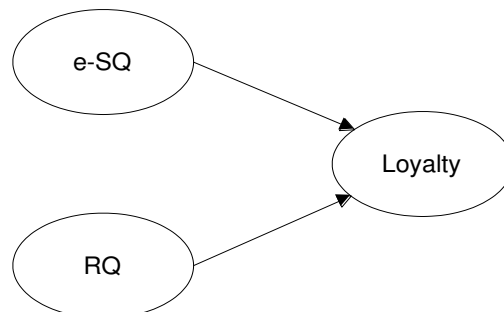
A. Partial mediating effects model (PEM)



B. Hypothesized mediating effects model (MEM1)



C. Alternative mediating effects model (MEM2)



D. Direct effects model (DEM)

**Table 1.** Descriptive statistics and correlations

	1	2	3	4	5	6	7	8	9	10
1 Commitment	0.874									
2 Customization	0.734	0.822								
3 Loyalty	0.775	0.754	0.901							
4 Physical aspects	0.468	0.587	0.478	0.892						
5 Policy	0.581	0.689	0.586	0.700	0.853					
6 Problem solving	0.513	0.633	0.548	0.489	0.639	0.942				
7 Relationship quality*	0.942	0.809	0.849	0.487	0.634	0.575	0.843			
8 Reliability	0.476	0.639	0.493	0.656	0.719	0.596	0.521	0.869		
9 Trust	0.795	0.795	0.830	0.455	0.618	0.572	0.952	0.509	0.906	
10 e-Service quality*	0.660	0.841	0.682	0.810	0.890	0.809	0.721	0.855	0.704	0.735
Mean	3.414	3.448	3.514	4.025	3.849	3.537	3.464	3.895	3.509	3.770
St. Dev	0.998	0.883	1.054	0.752	0.772	0.887	0.947	0.809	1.004	0.685
AVE	0.764	0.676	0.811	0.795	0.728	0.888	0.711	0.756	0.820	0.540
Composite reliability	0.907	0.862	0.955	0.921	0.889	0.960	0.936	0.903	0.932	0.946
R <sup>2</sup>	0.888	0.708	0.731	0.657	0.792	0.654	0.520	0.731	0.907	0.000
Cronbach alpha	0.845	0.762	0.941	0.869	0.813	0.937	0.918	0.838	0.890	0.938

Square roots of the AVE values appear on the diagonal. All correlations significant at  $p > 0.05$ .

\*Second order latent construct.

**Table 2.** Results of PLS analysis

Predicted variable	Predictor variable	PEM	MEM1	MEM2	DEM
e-SQ	RQ	0.721***	0.717***	n/a	n/a
e-SQ	Loyalty	0.145*	n/a	0.682***	0.143**
RQ	e-SQ	n/a	n/a	0.721***	n/a
RQ	Loyalty	0.745***	0.849***	n/a	0.747***
Model fit	R <sup>2</sup> (DV)	0.731	0.721	0.465	0.731
	P <sub>M</sub>	0.787	n/a	n/a	n/a

\*\*\*p>0.001, \*\*p>0.01, \*p>0.05.

Legend: PEM=partial mediating model, MEM=mediating effects model, DEM=direct effects model, e-SQ=electronic service quality, RQ=relationship quality.

**Table 3.** Summary of results against hypotheses

Test	Description of hypothesis	Result
H <sub>1</sub>	Service quality → Relationship quality	Supported
H <sub>2</sub>	Service quality → Loyalty	Supported
H <sub>3</sub>	Relationship quality → Loyalty	Supported
H <sub>4</sub>	Service quality → Relationship quality → Loyalty	Partially