Measurement of the Technology-Mediated E-Service Recovery Quality through Interactive Channels and the Effects on Intention to Value Co-Creation

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Abstract
Electronic Customer Relationship Management (e-CRM) is a strategic program that uses different technologies and interactive channels to create and maintain long-term relationships with customers. While operational and analytical aspects of e-CRM have been studied in some industries, few research has been done on collaborative e-CRM services especially its external aspect that emphasises on complaint management and e-service recovery. To fill this gap in the research, this study is the first attempt toward designing a scale to measure customers’ perception of e-service recovery quality and assessing the effect of this perceived quality on customer’s intention for future value co-creation and collaboration activities. This research will validate the measurement model empirically by gathering quantitative data from customers of e-banking in New Zealand.

Keywords
E-Service recovery quality, Collaboration e-services, Value co-creation, Measurement scale.

Research Motivation and Goals
While there is variety of definitions for Electronic Customer Relationship Management (e-CRM) in the literature, few studies provide a clear explanation for collaborative e-CRM. Collaborative e-CRM is usually considered to have two main dimensions: (1) internal and (2) external collaboration. The internal aspect is responsible for gathering consumer data through different touch-points including automated services to be used for the purposes of analytical e-CRM, while external collaboration e-services provide customer support (e.g., responding to questions, complaint handling and e-service recovery) via people-based technology-mediated interaction between each individual consumer and a firm via different channels (Cuthbertson & Messenger 2008; Keramati et al. 2010; Zarei, 2010). Therefore, it can be inferred that automated solutions and self-service technologies are not in the area of external collaborative e-services. We focus on the complaint management and e-service recovery (external) aspects of collaboration, as these have been less studied and there is a considerable gap in this area of research. While the main contribution of this study is designing a scale to measure consumers’ perception of e-service recovery quality by a comprehensive literature review in the Information Systems (IS), e-Commerce, and Marketing fields, this study also contributes to theory and practice by evaluating the relationship between e-service recovery quality, customer post-recovery satisfaction, and customers’ intentions for future value co-creation (e.g., intention to continuous use of self-service technology, positive WOM, and suggestions for recovery process improvement). Our comprehensive literature review shows that there is
no available scale specifically designed to measure consumers’ perceived quality of e-service recovery in the extant literature. This shows the gap in the research on e-service recovery quality measurement and the assessment of effects on customers’ value co-creation behaviours and therefore, the high importance of research in these areas.

In order to reach the above goals, this study first, reviews the e-service quality and e-service recovery quality literature in the Information Systems, e-Commerce, and Marketing fields comprehensively and identifies the e-service recovery quality dimensions to design a measurement scale. Next, it aims to assess the relationship between the overall e-service recovery process, customers post-recovery satisfaction and value co-creation behaviours. The content validity of this research is assessed; however, this research is in progress, so, we will assess the construct validity using the empirical data gathered from consumers of e-banking in New Zealand. Based upon this discussion and the importance of research in this area, the research question of this study has formed as: “What are the dimensions of perceived e-service recovery quality in e-banking and how they affect value co-creation?”

Literature Review Structure

This study identified Mackenzie et al.’s (2011) framework as the most comprehensive framework for construct conceptualization in the field of IS. This framework has been widely adopted in academia; however, like any other research it has its own research limitations, for example, it does not suggested a mechanism that shows how to find the most relevant prior research among the variety of studies in a field. In this regard, Wolfswinkel et al. (2013) proposed a five-stage process of literature reviews (See table 1) that is helpful for the situations when there is no extant theory or study in a specific context, especially if it is multidisciplinary and complex. The literature review of this study first, follows the steps proposed by Wolfswinkel et al. (2013) to find the most suitable literature to help conceptualization of the focal construct and then follows the first stage (i.e., construct conceptualization) of Mackenzie et. al.’s (2011) ten-stage construct measurement framework as its roadmap in defining the focal construct and finding its facets and their dimensions.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Explanation</th>
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<tr>
<td>1. Define the Criteria</td>
<td>Identification of The criteria for inclusion or exclusion of research areas, sources, and search terms</td>
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<tr>
<td>2. Search</td>
<td>Using suitable search terms based on the criteria and aim of study</td>
</tr>
<tr>
<td>3. Select</td>
<td>Refining the sample of papers according to the purpose and criteria of the study</td>
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<tr>
<td>4. Analysis</td>
<td>Analysis of the texts of the carefully selected studies</td>
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<tr>
<td>5. Present</td>
<td>Representation and structuring the results</td>
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Table 1: The Five Stages of Literature Review (Wolfswinkel et al., 2013)

Results

As the result of the process of literature review, we identified a set of appropriate constructs and proceeded to find the relations between the main constructs and also the relations between each main construct and its dimensions. In this research, Information quality (i.e., quality of the information individual consumers receive through the interaction with customer service staff), channel quality (quality of the channel of interaction that the consumer prefers to use it), multi-channel interaction quality, and quality of staff performance are considered as the constructs of e-service recovery quality. Next, we continued to identify the dimensions of customers’ intention for future value co-creation. These constructs and their dimensions are presented in details in the following sections; however due to the word number limitations we were not able to discuss the reason for the selection or removal of each dimension.
Information quality

Information quality (IQ) can be assessed by its objective (raw data stored in databases) and subjective (information products) aspects. The first group is mainly about software systems to measure datasets quality and the second one is assessed by information consumers through surveys or interviews to evaluate the fitness for purpose (Price et al. 2008; Ge et al. 2011). Based on this explanation and the goals of this study, this paper assesses the subjective aspect of IQ. To do so, we conducted a comprehensive literature review in IQ context to date and found all of the dimensions identified by previous researchers. We then critically reviewed each dimension. Some of the dimensions were related to objective aspects of IQ, some are identical in concept (e.g., accurate and free of error), some are not related to the topic and the view point of this study (e.g., security and trust, since they are mostly about transactional and operational aspects, not for collaboration purposes), some (e.g., reliability and consistency) were considered as more suitable for other constructs, and some are too general (e.g., information fit-to-task which comprises relevancy, completeness, etc.), finally, another group of dimensions (e.g., accessibility that is identical with responsiveness as a dimension of “multi-channel interaction quality”) were removed from our list of identified IQ dimensions.

Below is the identified suitable dimensions related to the context of this study:

1. Relevancy (Aladwani & Palvia, 2002; Parasuraman et al., 2005; Collier & Bienstock, 2006; Barnes & Vidgen, 2007),
2. Accuracy/Free of Error (Aladwani & Palvia, 2002; Collier & Bienstock, 2006),
3. Timeliness/Timely/currency of information (Aladwani & Palvia, 2002; Collier & Bienstock, 2006),
4. Believability,
5. Value Added (Ge et al., 2011),
6. Conciseness/Representation,
7. Completeness,
8. Understandability/Ease of Understanding (Yang et al., 2005; Liu et al., 2009; Loiacono, 2000; Lee et al., 2002; Parasuraman et al., 2005; Barnes & Vidgen, 2007; Ge et al., 2011; You & Donahue, 2001; Padmanabhan et al., 2006; Eppler, 2006; Barnes & Vidgen, 2007; O’Cass & Carlson, 2012),

Channel quality

A service provider that offers services through multiple channels should consider the quality of each channel that an individual consumer chooses and prefers to use it. The majority of studies in e-service quality literature examine the quality of only one channel (mostly Website). This research is one of the few studies that multiple interactive channels and is the only study that targets the context of consumer perceived quality dimensions for e-service recovery through multiple channels of interaction. Our identified dimensions of interactive channel quality include:

1. Availability/Accessibility (Yang et al., 2005; Parasuraman et al., 2005; Kim et al., 2006),
2. Fulfillment/Reliability (Zeithaml, 2002; Wolfinbarger & Gilly, 2003; Carlson & O’Cass, 2011),
3. Responsiveness (Zeithaml, 2002; Kim et al., 2006; Yang et al., 2003; O’Cass & Carlson, 2012),
4. Ease of Use (Yoo & Danthu, 2001; Carlson & O’Cass, 2011; Yang et al., 2003; Collier & Bienstock, 2006),
5. Adaptability (to changes in network or consumer needs) (Marchetti et al., 2004).

Multi-channel interaction quality

The third main construct of the proposed theoretical model by this study is “perceived multi-channel interaction quality”. Like the previous sections, most models of e-service quality such as WEBQUAL (E-QUAL), SITEQUAL, and E-SERVQUAL (E-S-QUAL) and more recent studies in IS as well as in marketing examine the quality of interaction between a firm
and its consumers for only one channel (mainly Website). While some other studies such as Zablah et al. (2004), and Sousa and Voss (2006) concentrate on multi-channel environment, they do not provide a comprehensive set of dimensions for consumer perceived quality of interaction provided by multi-channel collaborative e-services. In addition to the comprehensive e-service quality and e-service recovery literature search and analysis to identify the candidate dimensions, this study has considered the types of justice (fairness) theory as the dimensions of this construct. The identified dimensions by this study include: (1) Breadth of Channel Choice, (2) Transparency of Channel-Service Configuration, (3) Content Consistency, (4) Process Consistency (Sousa and Voss, 2006), (5) Relevancy/personalization (Kim et al., 2006), (6) Privacy (Liu et al., 2009; Carlson & O’Cass, 2011; Parasuraman et al., 2005; Kim et al., 2006; Collier & Bienstock, 2006) (7) Reliability/Fulfilment (Zeithaml, 2002; Wolfinbarger & Gilly, 2003; Parasuraman et al., 2005; Kim et al., 2006), (8) Responsiveness (Pitt et al., 1995), (9) Interactive Fairness, and (10) Procedural Fairness (Collier & Bienstock, 2006; Boshoff, 1999; Dong et al., 2008). Other dimensions were removed based on the reasons such as being explained better by other facets of the focal construct (e.g., ease of use and empathy), being more relevant to transactional and operational aspects of e-services (e.g., security), and the ones which are not relevant to this construct or are explained by other constructs such as “quality of customer service staff performance”.

Customer service staff performance quality
The quality of customer service representative/consultant performance is the last facet of the overall e-service recovery quality. The dimensions for this construct are searched through a thorough literature review in both traditional and electronic service quality contexts to date. The selected dimensions include: (1) Commitment, (2) Competence, (3) Courtesy, (4) Integrity (degree to which consumers are treated with honesty and fairness by the staff), and (5) Empathy (giving consumers individual attention and care and understanding their needs) (Boshoff, 1999; Dong et al., 2008).

Customer post-recovery attitudes and value co-creation behaviours
The previous sections presented the identified constructs and dimensions of customers’ perception of e-service recovery quality for the purpose of designing a scale to measure the quality of these services. As another goal of this study, we aim to assess the relationship between e-service recovery quality, the post-recovery consumer’s attitudes towards the firm, and future behavioural value co-creation intentions. Value co-creation is defined as creation of value by both of the firm and its customers. For example, using a self-service technology by customers is cost and time efficient for both of the customer and the firm, therefore continuous use of a self-service technology (that was identified from IS literature) is a kind of value co-creation (Dong et al., 2008; Boshoff, 1999; Roggeveen et al., 2012; Vaerenbergh et al., 2012). Another type of value co-creation identified from the literature is the positive word of mouth (WOM). This is because when a customer suggests the firm to other customers, that customer can be considered as an internal employee advertising for the firm without any cost (Dong et al., 2008; Roggeveen et al., 2012; Vaerenbergh et al., 2012). The last identified dimension of value co-creation is suggestions for e-service recovery process improvement by the customers who have complained because of a type of failure in service delivery (Dong et al., 2008; Roggeveen et al., 2012). We hypothesise that customers’ intention to future value co-creation efforts (i.e., collaboration activities) is improved if they perceive e-service
recovery processes quality satisfactorily; therefore, customer post-recovery satisfaction can improve the effect of overall perceived e-service recovery on futures intension for value co-creation activities.

Summary and Future Research
While e-service quality literature emphasises on the importance of the quality of e-service recovery on consumers’ post-recovery attitudes and behavioural intentions, surprisingly, there is no scale to measure consumers’ perceived e-service recovery quality in IS, e-Commerce, marketing, and other relevant fields of research. In order to fill this gap, we conducted a thorough review of literature in IS, e-Commerce, and Marketing based on the scope and aims of this study. The main result of this review was identification of the e-service recovery quality constructs (i.e., Information Quality, Channel of Interaction Quality, Multi-Channel Interaction Quality, and Customer Service Staff Performance Quality) and their dimensions, customer post-recovery satisfaction construct, and customers’ intention for future value co-creation construct and its dimensions (i.e., continuous intension for use of self-service technology, positive WOM, and customers suggestions for recovery process improvement) that form the theoretical model of this study.

The above constructs and their dimensions have been reviewed and modified by four experienced academics and researchers in the field. Identification of these constructs and their dimensions help us to proceed to the next step which is generating a large pool of candidate items for inclusion in the scale. We choose Likert Scale as the format for measurement since it is widely used and suitable for measuring opinions, attitudes, and perceptions (DeVellis 2012). While the content validity of this research has been assessed, this research is in progress, so, we will use Structural Equation Modelling to assess the construct validity using the empirical data gathered from consumers of e-banking in New Zealand and will test the hypothesised relationships (i.e., the relationship between overall e-service recovery quality, customer post recovery satisfaction, and customers future intensions to value co-creation).

References


