Customer Services in the Digital Transformation: Social Media versus Hotline Channel Performance

Alexander Rossmann¹ and Gerald Stei²

Abstract: Due to the digital transformation online service strategies have gained prominence in practice as well as in the theory of service management. This study examines the efficacy of different types of service channels in customer complaint handling. The theoretical framework, developed using complaint handling and social media literature, is tested against data collected from two different channels (hotline and social media) of a German telecommunication service provider. We contribute to the understanding of firm’s multichannel distribution strategy in two ways: a) by conceptualizing and evaluating complaint handling quality across traditional and social media channels, and b) by testing the impact of complaint handling quality on key performance outcomes like customer loyalty, positive word-of-mouth, and cross-purchase intentions.

Keywords: Multichannel, social media, word-of-mouth, customer satisfaction, customer loyalty, complaint handling.

1 Introduction

Customer complaints are recurrent, and complaint handling is an important indicator of firm’s customer centricity and overall service quality ([HF05]). While poor complaint handling amplifies the negative evaluation of the overall service ([BBT90]), an excellent one can convert complainers into fans ([SB98]). Therefore, service managers are complementing traditional channels with online channels and corporate social media sites for purposes of providing effective customer complaint handling services. Due to the digital transformation firms are undertaking alterations to their channel structure and are adopting multichannel structures ([YM13]). Online channels provide cost-efficiencies in distribution and superior customization and market coverage ([MM90]). Moreover, research evidence suggests that companies which complement their traditional channels with modern online channels are more successful ([GG00]; [Po01]). However, considerable costs are involved in the implementation of multiple channel systems ([HVH14]), and channel expansion and alteration decision has a long-term impact on firm’s performance ([CCV07]).

¹ Reutlingen University, School of Informatics, Alteburgstr. 150, 72762 Reutlingen, alexander.rossmann@reutlingen-university.de
² Reutlingen University, School of Informatics, Alteburgstr. 150, 72762 Reutlingen, gerald.stei@reutlingen-university.de
In sum, whether firms are better off using multiple channels or not remains an open question; and, even if multiple channels do lead to objective improvement in the service, they may not necessarily result in a commensurate improvement in the customer’s perception of service quality ([GR11]; [HF05]). Therefore, this study examines the concept of perceived complaint handling quality (PCHQ), conceptualized as the complainer’s subjective assessment and perception of the complaint handling service ([SBW99]), and evaluates its influence across different types of channels, specifically addressing the following three research questions: a) how should PCHQ be conceptualized across different channels? b) how strong are the effects of different facets of PCHQ on customer satisfaction and other key performance outcomes? and c) how effective is customer complaint handling in social media channels as compared to traditional channels?

2 Conceptual Model

Figure 1 shows the five subdimensions of PCHQ derived from prior literature and an exploratory research process as (a) procedural justice, (b) interactional justice, (c) distributive justice, (d) customer effort, and (e) quality of service solutions. We integrate these facets of PCHQ and anchor them in expectation-disconfirmation theory and equity theory to model customer satisfaction as a mediator of the impact of PCHQ on three key performance outcomes (customer loyalty, word-of-mouth, and cross-purchase preferences). Additionally, the main effects are tested for a possible moderating role for the type of service channel (social media versus hotline).

Due to multimedia features such as colors, pictures, sound, animations, graphics, and interactive components, social media channels are highly vivid. Vividness, on one hand, causes increased perceived accessibility of information ([St92]) through different sensory elements and therefore trigger perception of superior quality and, on the other hand, it results in formation of (higher) expectation, which, in turn, influences satisfaction and other corporate outcomes ([DGL12]; [He10]).

Procedural justice refers to the degree to which an organizational procedure for registering and processing customer complaints exists and is consistent with complainants’ needs ([HF05]). It has been examined in terms of timing and speed and found to impact customer satisfaction ([HF05]; [SBW99]; [TBC98]). Therefore,

H1: Procedural justice in terms of timeliness and a process to solve a current problem positively impacts customer satisfaction.
This main effect varies across channels. Social media channels are more egalitarian in nature and provide the consumer with more control. Ubiquitousness and memory capacities of digital channels allow quick and customized procedures for complaint handling ([He10]; [La14]). The ensuing flexibility ensures superior procedural justice in complaint handling ([He10]). Complaint handling in social media is further enhanced due to dynamically generated messages to consumer comments, which improves the response time ([Ze12]). The responsiveness increases the interactivity of the medium ([SZ08]; [SP02]; [YV05]). Therefore, in social media channels, procedural justice is more pronounced.

H1a: The positive main effect of procedural justice on consumer satisfaction is higher for social media channels than for traditional channels.

Studies in service quality support a central role for interactional justice in service delivery ([PZB88]). Hence, interactional justice is an integral component of PCHQ. Scholars argue that the behavior exhibited by employees towards complainants, which includes customer perceptions of employee politeness ([GR89]), employee empathy ([TBC98]), and employee effort ([SBW99]) during a recovery process, augments customer satisfaction. Therefore:

H2: The interactional justice met by the consumer during a complaint handling process has a positive impact on customer satisfaction.
Social media allows ease of partnering and engagement between firm and consumer ([Pe13]). The company’s actions, including the service delivery effort, are more transparent and visible ([He10]). According to parasocial interaction (PSI) theory ([La14]), social media offer an illusionary experience of engagement and reciprocal relationship with mediating person. PSI causes positive effects such as creating connections as real life friends and affirm relationship with the mediated source ([GGB91]; [HW56]). Thus, on one hand, the influence of PSI in social media communication makes the customers feel better about the way they are treated; on the other, due to the vividness property of social media, interactional justice is rendered more accessible. In complaint handling using social media service, although it is true that responses typically originate from prewritten scripts and from different service employees, due to the perceived interactivity and openness of the social media, PSI effects are triggered so that consumers attribute the service responses to a single source, i.e., the brand as a source of interaction quality. Therefore, we hypothesize a stronger effect of interactional justice on customer satisfaction in social media compared to the same effect in traditional channels.

H2a: The positive effect of interactional justice on customer satisfaction is higher in social media channels than in traditional channels.

Distributive justice refers to whether or not the ratio of an individual’s output (benefits) to input (financial and nonfinancial efforts) is balanced with that of relevant others. The construct is rooted in equity theory ([Ad65]). If the differences between input and output are in the individual’s favor, the result may be a feeling of guilt or regret, and if they are detrimental to the individual, this may result in a feeling of disappointment or anger. Equity theory predicts that in either situation individuals try to arrive at a state of equilibrium. Customers who perceive the organizational response to a complaint as fair are more satisfied than those who perceive the response as unfair ([GR11]; [PCE06]; [SBW99]).

H3: Distributive justice with respect to organizational responses to complaints has a positive impact on customer satisfaction.

Social media allows cost effective and personalized procedures for customers and can now change the intensity and meaning of messages in multiple ways ([DGL12]). They are informative and educational because of the multitude of socialization agents ([TLS11]), not to mention the role played by peer consumers, who also enable resolution of doubts and queries. The higher interactivity increases the possibility of affective and convenient socialization ([Mu08]). Therefore, even when the firm puts in the same level of effort, social media brings greater interactional benefits to the consumer. Therefore, we hypothesize cross-channel a stronger effect of distributive justice on satisfaction for complaint handling via social media.

H3a: The positive effect of distributive justice on customer satisfaction is higher in social media channels than in traditional channels.
Customer effort comprises cognitive, emotional, physical, and time elements. A high quality of customer service is associated with a low expense of customer effort. 59% of customers report expending moderate to high effort in resolving a complaint ([DFT10]). Firms employ different methods to reduce customer effort - Nedbank (getting the same person to respond to a request every time), Osram Sylvania (avoidance of negative language), Cisco (creating a complaint channel for each complaint), Travelocity (improving its help section), and Ameriprise Financial (capturing No’s in responses) ([DFT10]). Expenditure of higher effort causes overall satisfaction to be lower, as compared to when customer efforts are low ([Pa14]). Therefore:

H4: The amount of effort customers need to invest during a complaint handling situation to solve a current problem has a negative impact on customer satisfaction.

Consumer expectations from social media have amplified in recent years ([La14]). Customers share the impression that services in social media channels are convenient and reduce service costs – both monetary and nonmonetary ([MWD08]). Also, social media facilitate easy generation of content through multitasking and are expected to reduce customer effort ([Ge13]). As consumers come with a lower expected effort compared to their usual experience and effort in traditional channels, when that expectation is disconfirmed, their dissatisfaction is raised as a result. Hence, we hypothesize the following relationship:

H4a: The negative effect of the amount of effort customers need to invest in customer satisfaction is higher in social media channels than in traditional channels.

A large-scale study of contact center and self-service interactions determined that what customers really want (but rarely get) is a satisfactory solution to their service issue ([DFT10]). The quality of the core service solution to a complaint has a positive effect on customer satisfaction. Thus, we hypothesize that customers appreciate getting a viable and tangible solution to their current problem. Therefore, improving the quality of service solutions can amplify customer satisfaction.

H5: The quality of delivered service solutions in order to solve a current problem impacts positively on customer satisfaction.

Complaint handling through social media is timely and interactive; however, this may not necessarily translate into superior core quality of solutions provided to the complaints. This is because the quality of solutions to consumer queries may depend on other factors like employee expertise and other resources of the firm. Moreover, consumers are aware of features provided by social media like interactivity and multitasking, and expect better solutions to their complains than is the case with traditional media ([La14]). We therefore hypothesize that:
H5a: The positive effect of the perceived quality of delivered service solutions on customer satisfaction is lower in social media channels than in traditional channels.

Scholars argue that the behavioral intentions of a customer are predominantly driven by overall satisfaction with a service ([Da00]; [OL97]; [SHM95]). We integrate overall customer satisfaction as a mediating construct between complaint handling quality and key behavioral intentions – the two most important ones being loyalty and word-of-mouth ([GG82]). Loyalty refers to a customer’s intention to continue to do business with an organization ([GR11]). Positive word-of-mouth is the likelihood of spreading positive information about an organization ([Da00]; [Da03]). Jeng ([Je11]) found that corporate reputation and satisfaction raise cross-buying intentions by decreasing information costs and enhancing trust and affective commitment. Similarly, studies by Bolton and Lemon ([BL99]) and Mittal and Kamakura ([MK01]) show a positive effect of satisfaction on further usage levels and repurchase behavior and cross-purchase preferences. Therefore, we posit a positive relationship between customer satisfaction and the intentional outcomes of loyalty, word-of-mouth, and consumer preferences across channels.

H6: The degree of customer satisfaction positively impacts consumer loyalty.

H7: The degree of customer satisfaction positively impacts consumer word-of-mouth.

H8: The degree of customer satisfaction positively impacts consumer preferences to purchase additional products or services.

3 Confirmatory Study

Our research tested the formulated hypotheses using data supplied by the customer service department of the same German telecommunications provider where we conducted our exploratory study. We used two different samples in this study, one from a traditional hotline channel (sample A) and one from social media (sample B). The data was collected immediately after a service experience. In sample A, customers were invited by email to take part in the service survey immediately after a hotline contact. In sample B, customers received a comparable invitation by email, by direct message (Twitter), or by direct mail (Facebook).

After suitably improving the questionnaire, a pretest involving 186 customers was conducted to develop measures which were valid and reliable. Items having low loadings or high cross-loadings were eliminated. Our final questionnaire included nine constructs and three items per construct, used across the two samples. By integrating 220 customers from sample A (hotline) and 220 customers from sample B (social media) into the main study sample, the final sample size arrived at was 440.
The conceptual model was tested in a two-stage research process – (a) structural equation modeling (SEM) was deemed suitable for testing the measurement model and estimating the main effects, (b) a multisample analysis to compare the hypothesized effects across the two channels ([Co93]).

After the measurement models were deemed acceptable, we devised a structural path model to test the hypotheses depicted in Figure 1. The fit indexes for the cross-channel sample (n= 440) (χ²(300) = 512.09, CFI= .991; NFI= .981; NNFI=.990; RMSEA = .040) suggest that the model acceptably fits the data ([By13]). A chi-square difference test reveals that a model with direct effects (direct paths from the antecedent variables to the three target variables) does not have significantly better fit indexes than our full mediation model, suggesting that our model provides a parsimonious explanation of the data ([BY88]).

All constructs show sufficient correlation in the hypothesized direction. Accordingly, the paths of the conceptual model, estimated β-factors of main effects, corresponding t-values of the causal model, and squared multiple correlations (= total variance explained) of the four target constructs are displayed in Table 1. All eight hypothesized main effects received strong and significant support in the cross-channel sample. The quality of the service solution (β=.35, p<.001) and procedural justice (β=.34, p<.001) have the strongest impact on customer satisfaction in the total sample, providing strong support for H5 and H1. Contrarily, distributive justice impacts only with β=.09 (p<.001) on customer satisfaction. Moreover, squared multiple correlations show that the model explains a sufficient amount of the total variance of the four targets constructs. Overall, 88% of the variance of customer satisfaction is explained by our model. Approximately one third of the variance of customer loyalty, word-of-mouth, and cross-sell preferences is explained solely by the impact of customer satisfaction.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Construct relationship</th>
<th>Main effect</th>
<th>Squared multiple correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Procedural justice → Customer satisfaction</td>
<td>.34</td>
<td>8.37</td>
</tr>
<tr>
<td>H2</td>
<td>Interactional justice → Customer satisfaction</td>
<td>.25</td>
<td>6.39</td>
</tr>
<tr>
<td>H3</td>
<td>Distributive justice → Customer satisfaction</td>
<td>.09</td>
<td>2.84</td>
</tr>
<tr>
<td>H4</td>
<td>Customer effort → Customer satisfaction</td>
<td>-.20</td>
<td>-8.00</td>
</tr>
<tr>
<td>H5</td>
<td>Quality of service solutions → Customer satisfaction</td>
<td>.35</td>
<td>8.00</td>
</tr>
<tr>
<td>H6</td>
<td>Customer satisfaction → Customer satisfaction</td>
<td>.73</td>
<td>13.05</td>
</tr>
<tr>
<td>H7</td>
<td>Customer satisfaction → Word-of-mouth</td>
<td>.58</td>
<td>11.01</td>
</tr>
<tr>
<td>H8</td>
<td>Customer satisfaction → Cross-sell preferences</td>
<td>.62</td>
<td>11.85</td>
</tr>
</tbody>
</table>

N=440

Tab. 1: Main Effects
Additionally, we used multisample analysis method to assess the differences between the hotline and social media samples ([Pi95]; [SH89]) in one single LISREL model ([JS96]). The test of invariance between the two measurement models in both samples provides significant support for sufficient pre-conditions for multisample analysis ([By13]; [SB98]). Hence, we tested the general model fit, differences in $\beta$-values, and t-values. Results are displayed in Table 2.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Construct relationship</th>
<th>Hotline $\beta$</th>
<th>Hotline t-value</th>
<th>Social Media $\beta$</th>
<th>Social Media t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Procedural justice $\rightarrow$ Customer satisfaction</td>
<td>.23</td>
<td>3.23</td>
<td>.29</td>
<td>3.33</td>
</tr>
<tr>
<td>H2a</td>
<td>Interactional justice $\rightarrow$ Customer satisfaction</td>
<td>.20</td>
<td>1.70</td>
<td>.22</td>
<td>5.09</td>
</tr>
<tr>
<td>H3a</td>
<td>Distributive justice $\rightarrow$ Customer satisfaction</td>
<td>.11</td>
<td>2.21</td>
<td>.24</td>
<td>2.93</td>
</tr>
<tr>
<td>H4a</td>
<td>Customer effort $\rightarrow$ Customer satisfaction</td>
<td>-.17</td>
<td>-3.01</td>
<td>-.33</td>
<td>-7.85</td>
</tr>
<tr>
<td>H5a</td>
<td>Quality of service solutions $\rightarrow$ Customer satisfaction</td>
<td>.48</td>
<td>4.49</td>
<td>.18</td>
<td>3.04</td>
</tr>
<tr>
<td></td>
<td>Customer satisfaction $\rightarrow$ Customer loyalty</td>
<td>.68</td>
<td>8.47</td>
<td>.77</td>
<td>9.90</td>
</tr>
<tr>
<td>H7a</td>
<td>Customer satisfaction $\rightarrow$ Word-of-mouth</td>
<td>.40</td>
<td>5.21</td>
<td>.79</td>
<td>10.67</td>
</tr>
<tr>
<td></td>
<td>Customer satisfaction $\rightarrow$ Cross-sell preferences</td>
<td>.64</td>
<td>8.74</td>
<td>.64</td>
<td>8.60</td>
</tr>
</tbody>
</table>

Tab. 2: Multisample analysis of moderation effects

4 Discussion

Social media have emerged as a vital supplement to traditional channels in a firm’s multichannel strategy. Modern firms are actively boarding the e-commerce bandwagon to widen the horizon of opportunity lying before them in their core and support activities. The use of multiple channels extends beyond value creation and dissemination stages to consumer complaint handling processes. This study contributes to our understanding of the quality perception and processes of complaint handling and its consequences, and compares the core concepts in a multichannel context.

We examined five dimensions of PCHQ and detailed the constituents of each construct. For example, procedural justice includes convenience and responsiveness, whereas interactional justice consists of elements like politeness and customer-oriented interaction. Moreover, we reduced the scope of distributive justice to its core, which is the general evaluation of fairness during the complaint handling process. Moreover, we added customer effort and the perceived quality of service solutions as two new constructs to nuance the understanding of PCHQ.

These five dimensions are tested for their effect on consumer satisfaction (H1-H5) and the subsequent impact of consumer satisfaction on three key performance outcomes (H6-H8). The general model fit in the total sample and the two sub samples provides evidence for the applicability of the displayed model in different service channels. Additionally, the model explains a large part of the total variance of all four outcome constructs. As a spe-
cific theoretical contribution, an improved understanding of PCHQ would give fresh impetus to research around these constructs. Particularly, the results of this research foster a more differentiated view about PCHQ and demonstrate the insights executives might derive for a multichannel strategy.

A multigroup SEM using samples from a traditional hotline channel and a social media channel indicates the comparative efficacy of the two types of channels. This leads to some important differences in effect size and carries implications for specific channel strategies. Social media makes the role of distributive justice ($\beta_{SOCIAL} = .25$) and consumer effort ($\beta_{SOCIAL} = -.33$) more salient, indicating that firms need to manage these two factors closely in pursuit of a social media channel strategy. On the other hand, the role of core service quality is of utmost importance in the traditional channel strategy ($\beta_{HOT} = .48$). The results also indicate that a satisfied customer in a social media channel is a superior asset for a firm than a customer served through traditional channels, because the former is more inclined to generate word-of-mouth communication ($\beta_{SOCIAL} = .79$).

While scholarly research is divided on the importance of social media as an alternative channel of distribution, corporate executives believe that social media channels are superior in performance in complaint handling and resort to implementing multiple channels. Our findings indicate that any increase in customer effort in respect of complaint handling in social media might substantially reduce satisfaction as compared to traditional media. Additionally, our results show precisely the points of benefits where online channels can be used in tandem with traditional channels and in what situations firm should not opt for feature-rich channels like social media. For example, the impact of all perceived justice dimensions on satisfaction is higher in social media than in hotline; however, consumers availing services from traditional channels value the core service quality more than anything else – this is so because, while social media do not affect the core service, they raise the customer’s expectation from the channel, place the channel at risk of higher negative disconfirmation of consumer expectation. Therefore, social media act also as vehicles of communication media, while the traditional hotline is more of a solution channel.

Many firms are using multiple channels, including social media, to provide complaint handling services. The findings of our research are relevant to such practices, offering useful diagnostic insight into plausible replacement and channel migration decisions. We illustrate that it is not always in the firm’s best interest to use feature-rich channels like social media. Though use of social media channels is expected to improve the quality of solutions and reduce consumer effort, the marginal impact of these on satisfaction and subsequently on behavioral intentions is lower as compared to traditional media. Managing service expectation should be an important component in channel design and change. However, social media have many features that lead to a reduction of customer effort, whereas consumer awareness of these features will result in high expectations. When such expectations are tactfully managed, social media can be a cost effective replacement for traditional channels.
References


