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A bibliometric investigation of service failure literature and a research agenda

Abstract

Purpose - This research studies the citations made in service failure literature, and assesses the knowledge construction of this region of exploration to date.

Design/methodology/approach - The bibliometric investigation assesses 416 service failure articles in business associated research. Multidimensional scaling (MDS) is employed to uncover the scope of the scholarly impacts that have helped understand the nature of the service failure literature. The establishment of knowledge in the service failure literature is revealed by analysing co-citation data to identify significant topical impacts.

Findings - The theoretical model combines five areas with significant propositions for the future improvement of service failure as an area of investigation. The most important research themes in-service failure literature are service failure, service failure communication, the recovery process, recovery offer and intention.

Research limitations/implications - Potential research concentrating on the service failure literature could use search terms improved from the literature review, or use a comparable approach whereby a board of well-informed scholars approved the keywords used.

Practical implications - This paper is beneficial for any reader who is interested in understanding the components of the perception of justice and recovery and how it improves repurchase intention.

Originality/value - The study seeks to influence resource and recovery-based concepts and utilises the five supporting knowledge groups to suggest a plan for future research that fills existing gaps and offers the possibility of expanding and enhancing the service failure literature.

Keywords: Perception of justice, research methods, intention, cluster analysis, factor analysis, promotion, customer attitudes.

Introduction

The past decade has seen a growing consideration of service failure and recovery issues by researchers (Azemi et al., 2019; Fox et al., 2018; Su et al., 2019). Service failure usually occurs when an organisation fails to meet consumer desires; service recovery describes the activities a service provider or company takes in response to that failure (Azemi et al., 2019; Dong et al., 2008; Hazée et al., 2017). For instance, the US Agency of Transportation (2016) reported that, of the 423,889 flights in the USA in February 2016, nearly 70,000 were postponed and around 7,000 were dropped. When a service failure happens, an organisation responds with recovery action in order to re-establish customer satisfaction, increase brand loyalty and build up strong relationships with customers to increase repurchase intention.

Proper recovery actions tend to mitigate negative emotions, dissatisfaction, avoidance, negative word-of-mouth and revenge intentions (Andreassen, 2001; Bambauer-Sachse & Rabeson, 2015; Kim & Ulgado, 2012; Lee, 2018; Nguyen & McColl-Kennedy, 2003; Varela-Neira et al., 2010). Due to consumer defections (Hazée et al., 2017; Knox &Van-Oest, 2014) as a result of service failure, finding an efficient service recovery policy, which can limit the negative impacts of a service failure for a firm (Chen et al., 2018; Smith & Karwan, 2010; Strizhakova et al., 2012) has turned into a major concern for sectors including hospitality, aviation, retail, healthcare and banking (Chang & Yang, 2012; Izogo & Jayawardhena, 2018; Karwan& Miller, 2004; Lee, 2018; Ozuem & Lancaster, 2014; Tshin et al., 2014).

While these contributions from both academics and practitioners are accommodated with the broad service failure concept, only a few scholars (Ishaque, Tufail, and Habib, 2016; Koe, 2019) have paid attention to how service failure literature has emerged and developed over recent years. Furthermore, there has not been a quantitative analysis of the domain underlying the creed so far. Hence, to overcome the lack of rigor associated with the common literature review (Ferreira et al., 2014; Tranfield et al., 2003; Zupic and Čater, 2015) and to further advance the development of the service failure literature the following research has employed the quantitative bibliometric method by applying MDS technique.

In this regard, the main purpose of this research is to systematically and quantitatively evaluate the past and present of service failure to assess the current prospective contribution of this burgeoning research domain. This research tries to answer two questions: *(1) what is the knowledge structure of service failure domain? (2) what is the possible future direction of*

the service failure domain? By adopting quantitative analysis in our study, we contribute to the existing literature in several ways. Firstly, we provide a comprehensive overview of the research domain by adopting the quantitative method MDS. Secondly, based on the proposed intellectual structure provided by the MDS analysis, we suggest a possible future research agenda. Because of the detailed and more scientific approaches of our research, it is much more valuable and bias-free (Zupic and Čater, 2015) in comparison to the common literature review methodology.

Taking into consideration that knowledge expansion in the recovery and service failure literature happens over time (Kelly & Davis, 1994) the target of this research is to present a thorough study of the service failure and recovery literature structure, as well as to encourage its further progress. We achieve this by means of co-citation research to analyse the present informational constitution of the service failure literature. In this study, we sought to discover the historical basis of the service failure domain. Consequently, as past and present studies have influenced future research (Kuhn, 1996), researchers can – admittedly to a degree – envisage the possible future direction in the knowledge structure of service failure domain. The co-citation research identifies the interconnections between the most frequently cited publications on recovery in the service failure literature, therefore reinforcing their position as the grounded, established view (see, for example, Chabowski et al., 2013; 2018). Co-citation has a lengthy record of being well recognised in the literature on marketing (e.g., Hoffman & Holbrook, 1993) and business (Chabowski et al., 2010; 2011; 2013; Hutzschenreuter et al., 2007; Sullivan et al., 2011).

In order to provide an evaluation of the most frequently cited studies on service failure (Kuhn, 1996; McCollough et al., 2000), the researchers in the present study conducted a bibliometric investigation (Acedo et al., 2006; Ramos-Rodríguez & Ruíz-Navarro, 2004; Schildt et al., 2006). This bibliometric analysis enabled the researchers to carry out an analysis of the most frequently cited works and the most important topics in the service failure literature with a higher level of quantitative sophistication. Applying quantitative analysis aids researchers in gaining a deeper knowledge of the link between the present and future studies. The next section of this paper provides a short overview of the service failure and recovery literature. We then present the techniques used to conduct our study and explain how the citation data taken/extracted from the service failure and recovery literature are used for the co-citation examination. Next, we evaluate the service failure literature knowledge

construction, provide a discussion on the findings, and propose a structure that identifies opportunities for future research on the basis of our findings.

An overview of service failure

Service failure is an area of study that has received considerable attention from researchers (Preko & Kwami, 2015). The subject of service failure has been of increasing interest to researchers, with a particular focus on the circumstances of recovery following the failure (Cho et al., 2017; de Matos, Rossi, Veiga, & Vieira, 2009; Hess et al., 2003; Maxham & Netemeyer, 2002; McCollough et al., 2000; Smith et al., 1999; Weun et al., 2004). Service failure refers to service performance that fails to meet customer expectation (Schöfer, 2003), which can lead to customer dissatisfaction (Balaji et al., 2017; Li et al., 2016; Su and Teng, 2018) or customer switching behaviour (Jung et al., 2017; Liang et al., 2013).

According to Mattila and Ro (2008) service failure prevails when the service was not delivered to the customer as it was originally planned. In this regard, Migacz, Zou, and Petrick, (2018) defined service failure as "situations in which customers are dissatisfied because their perception of the service they have received is worse than their expectation" (p, 85). It is crucial to note that all service failures are not equivalent to each other and can vary depending on customer observations (Sparks & Fredline, 2007). For example, in the restaurant context, uncooked food (food-related failure) is measured as the most serious kind of failure, followed by service-related failure (e.g., noise, slow service) as less serious service failure (Cho et al., 2017; Susskind & Viccari, 2015). For example, consumers in 'fine dining' restaurants have higher expectations than those in other kinds of the restaurant (such as informal dining restaurants). This distinction influences consumers' view of the seriousness of a service failure (Cho et al., 2017; Namkung & Jang, 2010; Weun et al., 2004).

Research into service failure categories has reliably existed since the 1990s. Initially, the types of service failure were investigated from a consumer perspective in the airline, restaurant and hotel sectors, and were based on three main areas: employee reaction to consumers' unprompted, unsolicited needs and requests, employee action, and employee response to service delivery failure (Bitner et al., 1990; Jeon & Kim, 2016). Smith et al. (1999) identified two kinds of service failure: process failure and outcome failure. Outcome failure implies the dissatisfaction of a consumer as a result of a process failure, alluding to a fault in the way a service is delivered (Fu et al., 2015). For example, a receptionist or

mediator speaking impolitely or inappropriately to a consumer would be a process failure. As for the outcome failure, in the hospitality industry, when a consumer reserves a room but does not get it, this is classified as an outcome failure (Fatma et al., 2016; Jeon & Kim 2016). In times of such service failure, companies try to recover the service failure through service failure recovery. Service failure recovery efforts include company action such as price changes, upgraded services, refunds, discounts, recognition of the problem, services or free products and apologies (Chebat & Slusarczyk, 2005; Hess et al., 2003; Kelley et al., 1993; Sajtos et al., 2010).

Service recovery is acknowledged as the main element for gaining consumer satisfaction (Andreassen, 2001; Tax & Brown, 2000), as well as being significant to consumer maintenance activities (Stauss & Friege, 1999). The findings of the Consumer Rage Study (2015) suggest a positive impact of successful recovery on brand reputation. Without a successful resolution, brand loyalty will not increase. In 2015, most complainants were disappointed with how organisations were dealing with the situation (Customer Rage Study, 2015). According to Harrison-Walker (2019), 86% of consumers are disappointed, while 52% never return to the business and share negative word-of-mouth. This situation persists even though successful recovery can essentially increase profits, while poor recovery prompts huge lost income (Harrison-Walker, 2019). When recovery is strong, which is determined by the level of customer satisfaction after the service failure recovery (Balaji et al., 2017), 30% of consumers' increase their spending, but when recovery is poor, 63% of consumers spend less (Harrison-Walker, 2019).

The research to date has looked at the immediate effect of recovery on negative word-of-mouth, revenge, repurchase intention and avoidance (Harrison-Walker, 2019; Mattila, 2001; Sparks & McColl-Kennedy, 2001; Swanson & Kelley, 2001; Webster & Sundaram, 1998), through the verifiable statement that recovery techniques inspire positive consumer reaction. Studies suggest that 30%-40% of dissatisfied consumers are pleased with organisations' attempts to deal with their complaints (Andreassen, 2001; Customer Rage Study, 2015). While consumers may be happy with the recovery attempt, they may not return to the company and might even inform others about its poor practices (Harrison-Walker, 2019). Choi & Mattila (2008) considered recovery evaluation, post-recovery behaviour and service failure occurrence. Researchers have proposed that the reason for service failure could be the seller, other unknown factors or consumers themselves (Azemi et al., 2019). When

consumers blame the organisation for the failure situation, the bigger the impact on repurchase intention and the lower the consumers' satisfaction (Grewal et al., 2008; Laufer et al., 2005). Siu et al. (2013). They assessed recovery by using fairness theory, which is the consumers' evaluation of how reasonably they have been treated through the recovery process. They suggested that if consumers saw reasonable recovery strategies, earlier happiness with the firm was the result (Azemi et al., 2019; Chen et al., 2018).

Ringberg et al. (2007) contended that consumer's allotted comparative importance to failure and recovery procedure encounters. However, there are contradictory discoveries in the writing base. Scholars (Casado-Diaz & Nicolau-Gonzalbez, 2009; Rio-Lanza et al., 2009; Wang et al., 2011) explored service failure and recovery techniques dependent on the ideas of fairness, and particularly those regarding procedural policies, procedural recovery and distributive methods used to convey interactional employee behaviours and recovery to consumers. Casado-Diaz & Nicolau-Gonzalbez (2009) connected the procedural and fairness elements of distributive procedures with post-recovery performance through effective recovery systems.

Additionally, the extent of service failure can be associated with the kind of injustice experienced by the customer: as service failure becomes progressively more extreme, the positive effect of the fairness of distributive and fairness of interactional on happiness assessments diminishes (Weun et al., 2004; Zourrig et al., 2014). Thus, knowing the scale of the situation may help in picking the correct service recovery method that a marketer has to convey as a solution for the failure (McCollough et al., 2000; Zourrig et al., 2014). Similarly, service failure can affect the kind of recovery that is important to alleviate consumers' dissatisfaction (Zourrig et al., 2014). For example, a consumer is probably more likely to anticipate some recompense from the service provider if the failure has resulted in a monetary loss than in situations where no monetary loss has occurred (McCollough, 2009; Zourrig et al., 2014). If the service failure is seen as considerable, even when the service provider starts a powerful service recovery, there is likely to be negative word-of-mouth, consumers will remain upset, and they will be more averse to building up commitment and trust toward the service provider (Weun et al., 2004; Zourrig et al., 2014).

Method

The preliminary stage in this exploration is to find evidence of the service failure and recovery topic and its range using the bibliometric process. The main purposes are to reveal the appropriate terms being used at present and to build up an approach that enables this study to identify the most important publications relating to service failure and recovery. Clearly, in their response to service failure situations, online shopping companies tend to apply recovery options to restore the service and customer satisfaction (Kotler et al., 2012). Recovery strategies are significantly applied in a number of developed countries; however, strong evidence cannot be found with regard to developing countries. For example, in the Bangladeshi context, it is hard to find evidence on the topic of service failure (Azemi et al. 2015). Service recovery techniques refer to the moves made by service providers because of service failure (Harrison-Walker, 2019; Johnston & Mehra, 2002).

In order to conduct a holistic and systematic review of service failure, we followed the bibliometric systematic literature review. There are three different types of bibliometric indicators, including: (1) quality indicator which shows the performance of research output. (2) quantity indicator, referring to the productivity of a particular researcher, and (3) and structural indicators, which pays attention to the connection of an article with different researchers, and publications (Durieux & Gevenois, 2010). We conducted co-citation analysis (Merigó, Mas-Tur et al., 2015) which aids researchers in identifying how knowledge structure (Ferreira et al., 2014) and development of service failure is related with other marketing research constructs (e.g., loyalty). To begin collecting the appropriate articles, researchers who were expert in the field were contacted and were asked to come up with at least three main keywords related to service failure. We received 24 responses which contained the keywords related to the service failure domain. These keywords included: *service failure, firm failure, brand failure, corporation failure, failure (in business and management domain), customer service failure, consumer service failure, and online service failure.*

The Web of Science (WOS) was employed as a multidisciplinary research platform which allows simultaneous cross-searching of a variety of citation databases and indices from a wide range of academic disciplines. In addition to personalised features (e.g., such as alerts and saved searches) WOS provides access to research tools such as cited references, citation analysis, and searching (Leydesdorff et al., 2013). Based on the recommendations of previous

studies (e.g., Chabowski et al., 2010, 2013, 2018; Merigó et al., 2015; Rey-Martí, Ribeiro-Soriano, and Palacios-Marqués, 2016; Zupic, and Čater, 2015) each of the keywords were searched for in the article-specific reference identifiers, abstract, author-provided keywords, and publication title (Thomson Reuters, 2009) in all the available abstracts across all business-related journals in the WOS (Merigó, Mas-Tur, Roig-Tierno, and Ribeiro-Soriano, 2015). Following this pattern, this provided a degree of surety that the researchers needed relative to include all service failure related articles in the sample. Appendix 1 illustrates the steps in producing a bibliometric analysis (MDS analysis steps).

The results yield 11,546 citations and 416 articles for use in our study of the service failure and recovery literature in a 26-year time frame from 1993 to 2019. As the research mainly included the articles that are associated with service failure, all the book chapters, editorial notes and other less relevant texts were removed from the data. Additionally, in order to enhance the reliability and validity of the study, the researchers reviewed all the chosen articles. In addition, to mitigate the bias, we defined the exact selection criteria beforehand, and three independent researchers also checked the selected articles to avoid any selection bias (Baumgartner and Pieters, 2003; Kunz and Hogreve, 2011; Zupic and Čater, 2015).

Afterwards, by using the BibExcel software, which is the most-widely used/the ideal software for identifying the highly referenced articles in a sample (Zupic and Čater, 2015), we identified the highly cited articles. In order to run the co-citation matrix, stress value for different thresholds was conducted to find the most appropriate threshold for choosing the proper amount of highly cited referenced articles in-service failure literature. In this regard, the best value for the stress value of 0.10 demonstrates a good model of fit (Ramos-Rodríguez and Ruíz-Navarro 2004). The adding of extra cited articles in a co-citation template enlarged the stress value; the resulting configurations were increasingly vague, and a lower level of 0.5 was used to present the significant results (Hair et al., 2014).

By the aid of BibExcel and SPSS 24.0 a co-citation matrix was generated. Each value in a cell represents the number of times two documents were co-cited in a third document. In order to analyse the co-citation matrix, we employed MDS in SPSS 24.0 to find the most influential knowledge structure on service failure literature (Knoke and Yang 2008; Marsden 1990; McCain 1990). Through visualisation process, the data can picture knowledge structure in a research domain (Wasserman and Faust 1994). In addition, the relationship between the

service failure theme can provide a golden opportunity for scholars to advance the research domain. In view of the previously mentioned gap in the introduction, —no service failure quantitative literature review, the present study sets out to fill the gap, and achieve a broad-based, suitable process to study service failure and recovery. We set out to drive the field further forward by searching for relevant data from a worldwide service failure and recovery experts in order to maximise the scope of our research. In the first stage, we utilised the search term "service failure" to find scholars whose works had been cited on a significant number of occasions.

This method produced a number of scholars who are dynamic researchers in the field. We then asked these researchers to list different terms that might be related to service failure beyond the national limits of a firm's home market (Chabowski et al., 2013). We requested at least three terms from every scholar and received 24 responses. These were utilised to extract service failure articles from business-connected articles in the Web of Science, and were as follows: universal, worldwide, global, without borders, borderless, around the world, crosses borders, abroad, worldwide appeal, cross-national country of origin, local, created market, emerging market, and across borders (Chabowski et al., 2013). This investigation resulted in 11,546 citations and 416 articles for use in our study of the service failure and recovery literature in a 26-year time frame from 1993 to 2019. Service failure and recovery articles were not available before 1980, and the time span used caught almost all the applicable works connected with the inquiry terms used. Table 1 illustrated the most frequently cited service failure publications. In addition, Appendix 2 shows the summary of highly cited papers with regards to objectives, motivation, theory, keyword, methodology as well as key findings. In general, the Web of Science looked at four fields for every article record, namely article-specific reference identifiers, abstract, author-provided keywords, and publication title (Thomson Reuters, 2009).

Table 1: The most frequently cited service failure publications

Rank	Source	Year	Publication	Source	Total citations
1	Smith, Bolton and Wagner	1999	A model of customer satisfaction with service encounters involving failure and recovery	J Mar Res	151
2	Tax, Brown, Chandrashe	1998	Customer evaluations of service compl aint experiences: Implications for relati onship marketing	J Marketing	110

	kara				
3	Bitner, Booms, Tetreault	1990	The service encounter: Diagnosing favourable and unfavourable incidents	J Marketing	87
4	Blodgett, Hill, Tax	1997	The effects of distributive, procedural, and interactional justice on post complaint behaviour	J Retailing	75
5	Hess, Ganesan, Kelin	2003	Service failure and recovery: the impact of relationship factors on customer satisfaction	J Acad Market Sci	71
6	McCollough , Berry, Yadav	2000	An empirical investigation of customer satisfaction after service failure and recovery	J Serv Res-Us	65
7	Smith. Bolton	2002	The effect of customers' emotional responses to service failures on their recovery effort evaluations and satisfaction judgments.	J Acad Market Sci	54
8	Weun, Beatty, Jones	2004	The impact of service failure severity on service recovery evaluations and post-recovery relationships	J Serv Mark	49
9	Keaveney	1995	Customer switching behaviour in service industries: An exploratory study.	J Marketing	49
10	Maxha, Netemeyer	2002	A longitudinal study of complaining cu stomers' evaluations of multiple servic e failures and recovery effort	J Marketing	49
11	Bitner, Booms, Tetreault	1990	The service encounter: diagnosing favourable and unfavourable incidents	J Marketing	48
12	Folkes	1984	Consumer reactions to product failure: An attributional approach	J Consum Res	46
13	Wirtz, Mattila	2004	Consumer responses to compensation, speed of recovery and apology after a s ervice failure	Int J Serv Ind Manag	46
14	McColl-Kennedy, Sparks	2003	Application of Fairness Theory to Service Failures and Service Recovery	J Serv Res-Us	45
15	Maxham, Netemeyer	2002	Modeling customer perceptions of complaint handling over time: the effects of perceived justice on satisfaction and intent	J Retailing	44
16	Maxham	2001	Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions	J Bus Res	40
17	Gregoire, Tripp, Legoux	2009	When customer love turns into lasting hate: The effects of relationship strength and time on customer revenge and avoidance	J Marketing	39
18	Gregoire, Fisher	2008	Customer betrayal and retaliation: When your best customers become you r worst enemies	J Acad Market Sci	38
19	del Río-Lanza,	2009	Satisfaction with service recovery: Perceived justice and emotional	J Bus Res	38

			responses		
	Vázquez-Casielles, Díaz-Martí		responses		
20	Smith, Bolton	1998	An experimental investigation of customer reactions to service failure and recovery encounters: Paradox or peril?	J Serv Res-Us	37
21	Zeithaml, Berry and Parasumaran	1996	The behavioural consequences of service quality	J Marketing	37
22	Chebat, Slusarczyk	2005	How emotions mediate the effects of perceived justice on loyalty in service recovery situations: An empirical study.	J Bus Res	37
23	Kelley, Hoffman, Davis	1993	A typology of retail failures and recoveries	J Retailing	36
24	Goodwin, Ross	1992	Consumer responses to service failures: Influence of procedural and interactional fairness perceptions	J Bus Res	36
25	Hart, Heskett, Sasser	1990	The profitable art of service recovery	Harvard Bus Rev	33
26	Singh	1988	Consumer complaint intentions and behaviour: Definitional and taxonomical issues	J Marketing	33
27	Gelbrich, Roschk	2011	A meta-analysis of organisational complaint handling and customer responses	J Serv Res-Us	33
28	Weiner	2000	Attributional Thoughts about consumer behaviour	J Consum Res	33

After the information had been gathered and coded for consistency, we used recurrence checks to identify the most frequently cited articles corresponding to this present research. Next, we built up a standardised co-citation matrix. The resulting co-citation information was used for additional investigation. This essentially enabled the quantity of the most frequently cited service failure and recovery literature articles to be improved until the borders of a decent framework fit were established. Next, in line with regular practice in bibliometrics regarding the importance of a network framework as the reason for good framework fit, we used a stress value of 0.10 (Ramos-Rodríguez & Ruíz-Navarro, 2004). Subsequently, 28 articles were incorporated into the investigation (as shown in Table 1). A standardised space of 0.25 was utilised to identify and investigate cliques and groups, an advantaged type of investigated group that contains at least three or more frequently cited articles in a similar research group (Alba & Moore, 1983; Chabowski et al., 2013; Wasserman & Faust, 1994).

This gave the basis for assessing the service failure and recovery literature. In the following sections, we discuss the results of the bibliometric examination (Chabowski et al., 2013).

Results

In this area, we first re-evaluate the universal ideas of the 28 most frequently cited articles in the service failure literature. Next, we set out the consequences of the bibliometric analysis. This gives a complete assessment of the most frequently cited published articles and considers low for the presentation of a suggested investigatory diagram in the next section.

Citation overview

In total, the 28 most frequently cited articles in the service failure literature are the work of 45 researchers. Although our focus is the current domains covered by these articles, an assessment of author citations gives a fundamental analysis of the academic construction of the service failure literature. Two co-authored studies highlighting experiences of the evaluation of service complaints, Tax et al. (1998) and Blodgett et al. (1997), had 185 citations in our sample; while Smith's three articles on service failure received 242 citations (Smith & Bolton, 1998, 2002; Smith et al., 2001). Maxham's three articles on customers' complying behaviour assessments of service failure received 133 citations (Maxham, 2001; Maxham & Netemeyer, 2002). Bitner, in her two articles on favourable and unfavourable service encounters, and evaluating employee responses in service encounters, received 135 citations (Bitner, 1990; Bitner et al., 1990). Gregoire received 77 citations for his two articles focusing on customer revenge and customer betrayal (Gregoire & Fisher, 2008; Gregoire et al., 2009). Hess received 71 citations for his work on service failure and recovery (Hess et al., 2003). McCollough, Weun, & Keaveney had 65, 49 and 49 citations respectively for their highly cited articles on consumer satisfaction following service failure and recovery, the effect of service failure seriousness on service recovery, and consumer switching behaviour in the service sector (McCollough et al., 2000; Weun et al., 2004; Keaveney, 1995). The final most frequently cited publications consolidated into this study were by Folkes (1984) and Wirtz & Mattila (2004), which each had 46 citations for their articles on product failure and consumer responses to the speed of recovery after a service failure.

Co-citation analysis

MDS results represent the service failure, and recovery literature use co-citation data as markers of nearness among the most frequently cited works. High co-citations produce more

prominent closeness and shared knowledge, while lower co-citations show that the articles have less in common. Using the highest standardised distance of 0.25, the results in Figure 1 showed obviously characterised research groups in the service failure literature.

Figure 1: Service failure knowledge structure.
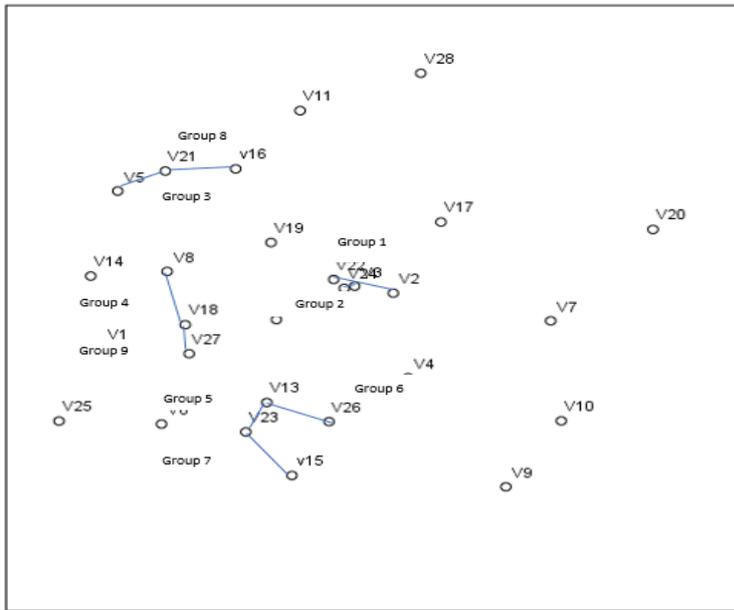
(Stress value: 0.09769; standardised distance: 0.25; research cliques shown).

V1=Bitner, 1990; V2=Bitner et al., 1990; V3=Blodgett et al., 1997; V4=Chebat & Slusarczyk, 2005; V5=Del Rio-Lanza et al., 2009; V6=Folkes, 1984; V7=Gelbrich & Roschk, 2011; V8=Goodwin & Rose, 1992; V9=Gregoire & Fisher, 2008; V10=Gregoire et al., 2009; V11=Hart & Tuyl, 1990; V12=Hess et al., 2003; V13=Keaveney, 1995; V14=Kelley & Hoffman, 1993; V15=Maxham, 2001; V16=Maxham & Netemeyer, 2002; V17=Maxham & Netemeyer, 2002; V18=McColl-Kennedy& Sparks, 2003; V19=McCollough et al., 2000; V20=Singh, 1988; V21=Smith & Bolton, 1998; V22=Smith et al., 1999; V23=Smith & Bolton, 2002; V24=Tax et al., 1998; V25=Weiner, 2000; V26=Weun et al., 2004; V27=Wirtz & Mattila, 2004; V28=Zeithaml et al., 1996.

Group 1 (V2, V22 and V24): Consumer satisfaction through service failure and recovery experiences; Group 2 (V3, V22 and V23): The impacts of consumers' emotional responses to service failure on their evaluation, recovery effort and satisfaction judgements; Group 3 (V5 and V21): Consumers' satisfaction and repatronage intention; Group 4 (V8 and V18): procedural justice theory approach to understanding customer evaluations; Group 5 (V13 and V23): Customers' switching behaviour in the service firms; Group 6 (V13 and V26): Service failure seriousness influences on commitment, negative word-of-mouth and trust; Group 7 (V15 and V23): Service recovery effects on customer perceptions of repurchase intention,

satisfaction and positive intentions; Group 8 (V16 and V21): Customer complaining evaluation of multiple recovery and service failure efforts; Group 9 (V18 and V27): Service recovery fairness along the three dimensions of justice theory.

With a perspective on the structural work of the research groups based on the results, we can build up an understanding of the core of the service failure and recovery literature. The main research groups involve the examination of consumer satisfaction through service failure and recovery experiences (Group 1); the impacts of consumers' emotional response to service failure on their assessments, recovery effort and satisfaction judgements (Group 2); consumers' satisfaction and repatronage intentions (Group 3); the procedural justice theory approach to understanding customer evaluations (Group 4); customers' switching behaviour in service firms (Group 5); and the major influence of the seriousness of service failure on commitment, negative word-of-mouth and trust (Group 6). This research group has frequently cited articles that focus particularly on service failure and recovery issues. Research groups that are not as central, but are still part of the service failure literature, focus on the effects of service recovery on customer perceptions of repurchase intention, satisfaction and positive intentions (Group 7); customer complaining evaluation of multiple recovery and service failure efforts (Group 8); and service recovery fairness along the three dimensions of justice theory (Group 9).

Firstly, it can be noted that research into consumer happiness with service failure and recovery experiences (Group 1) demonstrates the significance of the subject's related behaviours and the particular conduct of staff, leading consumers to distinguish agreeable service experiences from dissatisfactory service encounters. Examining three articles from this research groups gives an unmistakable sign that service failure and recovery encounters present useful guidelines for establishing proper recovery efforts (Bitner et al., 1990; Smith et al., 1999; Tax et al., 1998). In other words, this group, based on justice theory, suggests that although service failure in any industries is inevitable, how the firms try to overcome their failure determine customer satisfaction or dissatisfaction.

Secondly, research in three areas – the impacts of consumers' emotional response to service failure on recovery, satisfaction, assessments and effort judgement (Group 2); repatronage intentions and consumer satisfaction following service failure and recovery (Group 3); and the procedural justice theory approach to understanding customer evaluations (Group 4) –

highlights that consumers' evaluation of responses and of the stress caused by the service failure is influenced by their perceptions of fairness, satisfaction and emotions during the service recovery. In more depth, The impacts of consumers' emotional responses to service failure on their evaluation, recovery effort and satisfaction judgements (Group 2) analysis the influence of procedural, interactional, and distributive justice on customer satisfaction with a service failure recovery. Consumers' satisfaction and repatronage intention (Group 3) tries to investigate the relationship between customer emotion and customer satisfaction before and after service failure recovery. Procedural justice theory approach to understanding customer evaluations (Group 4) aims to finds how customers' negative and positive feelings can have an influence on the customers' loyalty after service recovery.

Thirdly, the influence of consumers' switching behaviour in service firms (Group 5) is remarkable as it establishes the importance of both service marketing scholars and executives of service firms (Keaveney, 1995). This groups shed light on the importance of customer switching behaviour in service industries and investigate the roots of customer switching behaviour during the service failure and service recovery.

Fourthly, the level of service failure severity has important impacts on negative word-of-mouth, trust, satisfaction and commitment (Group 6). Service failure seriousness influences on commitment, negative word-of-mouth and trust (Group 6) tries to extend the previous literature of distributive justice and interactional justice relation with customer satisfaction by taking the role of service failure severity into account. Aligned with group 6, service recovery effects on customer perceptions of repurchase intention, satisfaction and positive intentions (Group 7) aims to examine the influence of different service recovery can have on the positive WOM, purchase intention, and customer satisfaction after a service failure. Consistent with Group 6, Customer complaining evaluation of multiple recovery and service failure efforts (Group 8) tries to find out how customers respond to different and multiple firm service failures and recovery effort over time. The last group, service recovery fairness along the three dimensions of justice theory (Group 9) investigates how procedural, interactional, and distributive justice affect the customer behavioural response (e.g., WOMS), and satisfaction in a non-mandatory service context.

Finally, with a customer complaining assessment of several service failures and recovery attempts (Group 8) as a key research group, and the impact of service recovery on consumer

perceptions of positive intentions, repurchase intention and satisfaction (Group 7) and customer complaining evaluation of multiple recovery and service failure efforts (Group 9).

Furthermore, an assessment of the ungrouped and grouped articles shown in Figure 1 provides the premise for the important concept of the horizontal and vertical level components of the service failure literature (Hoffman & Holbrook, 1993). Interestingly, articles found close to the base of the MDS results seem to concentrate on explicitly firm-centred subjects, for instance, assessments of different service failures and recovery attempts (Maxham & Netemeyer, 2004), service encounters (Bitner et al., 1990) and consumer responses to service failure and recovery encounters (Smith & Bolton, 2002), which address service industry-centric areas. Articles in the left-hand area of the horizontal axis in Figure 1 concentrate on other topics such as the justice theory of service failure and recovery (Blodgett et al., 1997; McColl-Kennedy & Sparks, 2003), while those to the right emphasise the differences in the market (Chebat & Slusarczyk, 2005; Del Rio-Lanza et al., 2009; Keaveney, 1995).

Discussion

What we already know

To expand the key areas of our research, and overcome the lack of rigour in common service failure literature review studies, our main aim was to investigate the research domain quantitatively by applying bibliometric research methods to provide a systematic and quantitative evaluation of the intellectual structure by answering the research questions. One of the premises of this research was to further evaluate the possible future agenda hoping to provide an insightful guideline to the researchers and academics regarding the future trends of the service failure. Therefore, to provide a future agenda of the service failure domain, we identified and analysed the current most frequently cited articles in the service failure literature. We utilised the same strategy and main conditions to identify service failure publications while 2017 with more than one reference per year in the Web of Science. This demonstrates an article's probable durability in a research space (Burrell, 2003). As shown in Table 2, a total of 24 articles were found. Also, the expanded explanation of the recent highly cited articles (e.g. research questions, methodologies, key findings and their further recommendations) can be found in Appendix 3. These studies were assessed specifically to build up oversimplify subjects for every one of the five themes for a possible future service failure research plan: service failure communications, the recovery process, service failure

strategy, intentions and recovery offers. Related to our methodology for building particular research groups in the MDS results, the terminology used for each of these five themes depended on the topics that were remarkable in our findings. Few articles identified in the general investigation were also among the most frequently cited in the current service failure and recovery literature articles (Gregoire et al., 2009; Del Rio-Lanza et al., 2009; Gelbrich & Roschk, 2011; Chebat & Slusarczyk, 2005; Weun et al., 2004; Wirtz & Mattila, 2004). Taken together, we are hoping to provide the premised discussion regarding potential research opportunities in the service failure and recovery literature.

The research findings of MDS revealed the fact that the area of service failure strategies was extremely widespread in the results, as demonstrated by the prominence of the influence of customers' switching behaviour in service firms (Group 5), the impacts of service recovery on consumer perception of positive intentions, satisfaction and repurchase intention (Group 7), and customer complaining evaluation of recovery efforts and multiple service failure (Group 8). This highlights that service failure areas relating to products, employee response, service firms, service providers or pricing are significant to a planned structure for future research on service failure. Secondly, while service failure and recovery encounter with customer satisfaction (Group 1) are significant in the service failure literature, there is additionally importance for service failure communication component in the articles focusing on customers' switching behaviour in service firms (Group 5) and for the seriousness of service failure that has a major influence on trust, negative word-of-mouth, satisfaction and commitment (Group 6).

For instance, when service failure happens, its connection to social media and complaint behaviours, perceived betrayal, negative emotions, negative word-of-mouth, revenge and anger are examined and discussed to changing levels in the MDS results and are therefore significant in the future research structure (Gelbrich & Roschk, 2011; Kelley & Hoffman, 1993; Maxham, 2001; Smith & Bolton, 1998; Smith & Bolton, 2002). Thirdly, the position of recovery processes is established at a level in the concentration on service failure, and recovery encounters through consumer satisfaction (Group 1), but the main view of justice relating to service failure is found in three interconnected research groups: the impact of consumers' emotional reactions to service failure on satisfaction judgements, assessments and recovery efforts (Group 2); repatronage intentions and consumer satisfaction following service failure and recovery (Group 3); and a procedural justice theory approach to

understanding customer evaluations (Group 4). Fourthly, the theme of recovery offers is prominent in the research group concentrating on the fairness of a service recovery using justice theory along its three dimensions (Group 9). Engaged jointly, these four topics give a clear indication of the role of the recovery process in-service failure research.

Table 2: Recent frequently cited research on service failure

Rank	Year	Authors	Journal	Title	Average per Year
1	2017	Zhang, Tingting (Christina); Omran, Behzad Abound; Cobanoglu, Cihan	International Journal of Contemporary Hospitality Management	Generation Y's positive and negative eWOM: use of social media and mobile technology	5
2	2017	Koc, Erdogan; Ulukoy, Metin; Kilic, Recep; Yumusak, Sedat; Bahar, Reyhan	Total Quality Management & Business Excellence	The influence of customer participation on service failure perceptions	4.67
3	2017	Hazee, Simon; Van Vaerenbergh, Yves; Armirotto, Vincent	Journal of Business Research	Co-creating service recovery after service failure: The role of brand equity	3.67
4	2017	Balaji, M. S.; Roy, Sanjit Kumar; Quazi, Ali	European Journal of Marketing	Customers' emotion regulation strategies in service failure encounters	2.67
5	2018	Byun, Jaemun; Jang, SooCheong (Shawn)	International Journal of Contemporary Hospitality Management	Open kitchen vs closed kitchen: Does kitchen design affect customers' causal attributions of the blame for service failures?	2.5
6	2017	Vazquez-Casielles, Rodolfo; Iglesias, Victor; Varela-Neira, Concepcion	Service Business	Co-creation and service recovery process communication: effects on satisfaction, repurchase intentions, and word-of-mouth	2.33
7	2017	Malhotra, Neeru; Sahadev, Sunil; Purani, Keyoor	Journal of Business Research	Psychological contract violation and customer intention to reuse online retailers: Exploring mediating and moderating mechanisms	2.33
8	2017	Obeidat, Zaid Mohammad Ibrahim; Xiao, Sarah Hong; Iyer, Gopalkrishnan R.; Nicholson, Michael	Psychology & Marketing	Consumer Revenge Using the Internet and Social Media: An Examination of the Role of Service Failure Types and Cognitive Appraisal Processes	2.33
9	2017	Umashankar, Nita; Ward, Morgan K.; Dahl, Darren W.	Journal of Marketing	The Benefit of Becoming Friends: Complaining After Service Failures Leads Customers with Strong Ties to Increase Loyalty	2
10	2017	Menguc, Bulent; Auh, Seigyoung; Yeniaras,	Journal of The Academy	The role of climate: implications for service employee engagement	2

		Volkan; Katsikeas, Constantine S.	of Marketing Science	and customer service performance	
11	2017	Jung, Na Young; Seock, Yoo-Kyoung	Journal of Retailing and Consumer Services	Effect of service recovery on customers' perceived justice, satisfaction, and word-of-mouth intentions on online shopping websites	1.67
12	2017	Albrecht, Arne K.; Walsh, Gianfranco; Beatty, Sharon E.	Journal of Service Research	Perceptions of Group Versus Individual Service Failures and Their Effects on Customer Outcomes: The Role of Attributions and Customer Entitlement	1.67
13	2017	Sampaio, Claudio Hoffmann; Ladeira, Wagner Junior; Santini, Fernando De Oliveira	International Journal of Bank Marketing	Apps for mobile banking and customer satisfaction: a cross-cultural study	1.67
14	2017	Abney, Alexandra K.; Pelletier, Mark J.; Ford, Toni-Rochelle S.; Horky, Alisha B.	Journal of Services Marketing	#IHateYourBrand: Adaptive service recovery strategies on Twitter	1.67
15	2018	Sengupta, Sanchayan; Ray, Daniel; Trendel, Olivier; Van Vaerenbergh, Yves	International Journal of Electronic Commerce	The Effects of Apologies for Service Failures in the Global Online Retail	1.5
16	2018	Izogo, Jayawardhena	Journal of Research in Interactive Marketing	Online shopping experience in an emerging e-retailing market	1.5
17	2017	Hogreve, Jens; Bilstein, Nicola; Mandl, Leonhard	Journal of the Academy of Marketing Science	Unveiling the recovery time zone of tolerance: When time matters in service recovery	1.33
18	2017	Israeli, Aviad A.; Lee, Seonjeong Ally; Karpinski, Aryn C.	Journal of Hospitality Marketing & Management	Investigating the Dynamics and the Content of Customers' Social Media Reporting after a Restaurant Service Failure	1.33
19	2017	Khalilzadeh, Jalayer; Ghahramani, Ladan; Tabari, Saloomeh	Journal of Hospitality Marketing & Management	From Hypercritics to Happy Campers: Who Complains the Most in Fine Dining Restaurants?	1.33
20	2017	Tektas, Oznur Ozkan	Service Business	Perceived justice and post-recovery satisfaction in banking service failures: Do commitment types matter?	1
21	2017	Weitzl, Wolfgang; Hutzinger, Clemens	Journal of Business Research	The effects of marketer- and advocate-initiated online service recovery responses on silent bystanders	1
22	2017	Baumann, Jasmin; Le Meunier-FitzHugh, Kenneth; Wilson, Hugh N.	Industrial Marketing Management	The challenge of communicating reciprocal value promises: Buyer-seller value proposition disparity in professional services	1

23	2017	Ozkan-Tektas, Oznur; Basgoze, Pinar	European Management Journal	Pre-recovery emotions and satisfaction: A moderated mediation model of service recovery and reputation in the banking sector	1
24	2019	Azemi, Yllka; Ozuem, Wilson; Howell, Kerry E.; Lancaster, Geoff	Journal of Business Research	An exploration into the practice of online service failure and recovery strategies in the Balkans	1

Established in this theme is the importance of the association between customers and service providers, which can be achieved by concentrating on compensation, promotion, apology and voice. Finally, while the focus on intentions is prevalent in the service failure and recovery literature, there is particular stress on the topic of the severity of service failure, which has important influences on commitment, trust, satisfaction and negative word-of-mouth (Group 6). Overall, repurchase intention (Balaji et al., 2017; Izogo & Jayawardhena, 2018; Hazée et al., 2017; Wirtz & Mattila, 2004; Maxham & Netemeyer, 2002), post-recovery satisfaction (Azemi et al., 2019; Maxham & Netemeyer, 2002; Ozkan-Tektas & Basgoze, 2017) and customer satisfaction (Balaji et al., 2017; Hazée et al., 2017) have been discussed in the MDS results in relation to service failure.

Future agenda for service failure research

By assessing the recent most frequently cited articles and those from the established service failure literature; our aim is to have a robust understanding of the intellectual foundation and then to identify the key trends and future avenues of service failure and recovery research by building a bridge between the intellectual structure and the future agenda (Burrell, 2003). We believe this approach can provide an enhanced understanding of the present and future research opportunities, and offers opportunities to develop the hypothetical underpinnings (Kuhn, 1996). To achieve this, we first present the key factors and milestones of the future trends that we have found in the result of analysing the 24 recent highly cited papers. In the next section, we communicate these perspectives together to suggest an integrated structure for potential service failure and recovery research.

The components of a service failure and recovery research agenda
Service failure
A significant part of the recent service failure research put a substantial emphasis on the service providers, products or services, pricing (Bitner et al., 1990; Hess et al., 2003;

Gregoire & Fisher, 2008; Maxham & Netemeyer, 2002; Smith et al., 1999; Tax et al., 1998; Taylor, 2005; Weun et al., 2004; Wirtz & Mattila, 2004), and the significance of employee responses in-service failure circumstances (Bitner, 1990; Smith et al., 1999; Maxham & Netemeyer, 2002; Tax et al., 1998; Smith & Bolton, 1998; Weun et al., 2004; Blodgett et al., 1997). The nature of service providers and firms was examined in developing markets to establish the significance of preserving customer loyalty and building up long-term connections with consumers and the importance of these factors are heavily reflected in the recent highly cited paper to be considered and investigated in the future studies too.

Service failure communication

The importance of communication with the customer after the service failure for the service recovery process has been heavily emphasised in recent studies. Gelbrich (2010) examined the viability of correspondence, connecting it to clarifications during and after a service failure grievance. Firms' ability to avoid negative feelings (perceived betrayal, negative emotions, anger, and revenge) and to protect other consumers from damage has been revealed to encourage online positive word-of-mouth behaviour (Abney et al., 2017; Hennig-Thurau et al., 2004; McGraw et al., 2015). To achieve this, a number of correspondence options, which are applied during customer recovery, can be identified: for example, clarifications that explain the causes of the issues, remedial measures taken to re-establish trade in the form of monetary or social compensations, and planned clarifications aimed at informing consumers of the intention to develop service recovery procedures. In research on service failure, correspondence during customer recovery is extended by considering recovery process correspondence. An organisation develops a service recovery procedure by resolving the causes of the issues experienced by its consumers and chooses to state this development. Hence, service failure correspondence is a marker of the commitment carried out by an organisation through the improvement of its resolution to address the reason for failure. Consequently, recovery process communication can be relied on as an efficient system to improve repurchase intention, brand reputation and satisfaction (Gelbrich & Roschk, 2011; Van Vaerenberg et al., 2012; Vazquez-Casielles et al., 2017).

Also, during the service recovery development through recovery performance, the role of social media and other communication platforms has been heavily emphasised through the development of technology and consumers being more active on these platforms. Social media and internet platforms enable consumers to conveniently and easily voice grievances to

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a broad audience and customers have started moving towards using these channels to discuss their negative encounters with service providers (Abney et al., 2017; Xia, 2013; Pinto and Mansfield, 2011).

Recovery process

The recovery process has been identified as another key construct in-service failure research. As a type of ability improvement and a key positioning device in the market place, the justice theory (procedural, distributive, and interactional) which refers to a hypothetical establishment in the examination flow of service recovery (Li et al., 2015) enables additional understanding of the dynamic of the relationship between service providers and consumers. In addition, the justice theory recommended: "that individual fairness or justice perceptions in an exchange determine subsequent intentions and behaviors" (Haenel et al., 2019, p. 305) which is related to service setting. In addition, justice theory offers "compensation to stakeholders increases their satisfaction through their perception of distributive justice (Rasoulian et al., 2017, p. 793). Blodgett et al. (1997) looked at complainants' views of fairness and their outcomes. They established that when the public perceived unfairness, they defected, engaged in negative word-of-mouth and became angry with the retailers. Perception of fairness has also been shown to drive customers' post-recovery satisfaction levels (Mattila, 2001; McCollough et al., 2000; Smith et al., 1999; Tax et al., 1998; Wirtz & Mattila, 2004). Consumers normally assess justice related to service recovery in three ways: interactional, procedural fairness and distributive fairness, which are founded on the service recovery that customers accept from an organisation and the way it is delivered (Chebat & Slusarczyk, 2005; Collier & Bienstock, 2006; Jung & Seock, 2017; Ozkan-Tektas & Basgoze, 2017). This shows the significance of further research into these parts of the recovery process and improvement in service failure literature.

Recovery offer

The recovery offer is the fourth key area of the service failure literature, which is also connected to the improvement of an organisation's brand reputation in the marketplace. Connected with the development of consumers' and service providers' relationships as well as increasing brand reputation (Bitner, 1990; Del Rio-Lanza et al., 2009; Hess et al., 2003; Keaveney, 1995; Smith & Bolton, 2002), this topic involves compensation, promotions and apologies (McColl-Kennedy & Sparks, 2003; Tax et al., 1998; Weun et al., 2004). In particular, promotions are used to resolve customers' repurchasing behaviour, while

compensation is given to consumers to decrease genuine harms. Apologies, gifts, discounts, refunds, coupons and free services are naturally applied to correct the difficulty caused by the service failure and to develop repurchase intention and customer satisfaction (Jung & Seock, 2018; Kuo & Wu, 2012). Service recovery types involving both compensation and apology can be established in genuine business settings (Jung & Seock, 2018). Collectively, all of these studies could develop the knowledge regarding compensation, promotions and apologies in the service failure literature.

A major part of the service failure literature emphasises intentions. Indeed, intentions have taken numerous forms in prior research. Topics ranging from repurchase intention; customer satisfaction and trust have been the focus of a number of studies (Bitner et al., 1990; Blodgett et al., 1997; Smith et al., 1999; Tax et al., 1998). Moreover, the research has concentrated on different components of customer-focused performance, for example, service encounters and product concerns (Gregoire et al., 2009; Maxham & Netemeyer, 2002; Weun et al., 2004). Therefore, the role of implementation has been analysed in an assortment of contexts and gives an exhaustive premise on which to base future studies relating to repurchase intention.

An integrated framework for future service failure and recovery research
With the perspective of the key sections of the service failure literature identified by means of our bibliometric approach, we were influenced by the source and capability based on models to suggest an integrated framework for future service failure and recovery research (Bitner et al., 1990; Hess et al., 2003; Gregoire & Fisher, 2008; Maxham & Netemeyer, 2002; Smith et al., 1999; Tax et al., 1998; Taylor, 2005; Weun et al., 2004; Wirtz & Mattila, 2004). Our suggested conceptualisation is shown in Figure 2. It is understood in this hypothetical base that technique impacts the design of recovery abilities, which in turn impacts performance. As this identifies with the service failure literature, the components of service failure strategy (product or service, service providers, pricing and employee response) should influence service failure communication with consumers (social media customer complaints, negative emotions, negative word-of-mouth, revenge, anger and perceived betrayal), the recovery process (perception of justice: interactional, procedural and distributional justice and equity theory), and recovery offers (compensation, promotion and apology), all of which can be regarded as the development of recovery-based abilities. Similarly, the joint impact improved by particular components of service failure, e.g., communication with consumers after a service failure, the recovery process and recovery offers, should impact on intention

(repurchase intention, customer satisfaction, brand reputation and increasing customer trust). Below, we present two generalised research themes dependent on the proposed service failure research model.

The influence of service failure on service recovery development with the moderating role of culture

The topics of service providers and products or service have been associated with service failure communications, and normally focus on a hybrid strategy that results in a worldwide framework of an organisation's response to social media customer complaints, anger, perceived betrayal, negative emotions and revenge (Del Rio-Lanza et al., 2009; Smith et al., 1999; Tax et al., 1998). Also, the relationship between the product/service failure on the service failure communication has been investigated, with the findings showing that the product/service failure is positively linked to the anger (Wirtz, and Mattila, 2004), or negative emotions (Yi and Baumgartner, 2004). Furthermore, the relationship between the employee response and recovery process has been analysed, with findings showing that a recovery process based on justice theory (interactional, distributional and procedural justice) can unhelpfully affect the attitude toward an employee's response (Wirtz & Mattila, 2004; Sengupta et al., 2018; Jung & Seock, 2017; Ozkan-Tektas & Basgoze, 2017). In addition, service failure identification has been linked to compensation, promotion and apology elements of recovery offer (Izogo & Jayawardhena, 2018; Jung & Seock, 2018; Ozkan-Tektas & Basgoze, 2017), although, as identified by our findings, significantly less research has concentrated on these different components of service failure as antecedents to the identification of service failure and recovery ability improvement. Hence a future line of service failure research may seek to evaluate the variety of possibilities, for instance, potential theory-based connections.

Taking into account the mentioned discussion on the relationship between the service failure and service recovery development; there are considerable amounts of research done in the social psychology showing that the individual psychological process is culturally oriented (Fiske et al., 1988). Results of Markus and Kitayama (1991) suggested that the relationship between individual self-concept and others is one of the most important sources of cultural differences. In this regard, customer self-concept is significantly important as it drives people's behaviour and evaluation (Triandis, 1989). Service failure encounters, and service recovery evaluation is considered to be social behaviours that are driven by the customers by

themselves (Solomon, 1985). In this regard, the results of previous researchers demonstrated that cultural diversity (e.g., Western vs Asian) could positively influence the relationship between the service failure and service recovery development (Becker, 2000; Patterson et al., 2006; Wong, 2004). Consequently, based on the above discussion, there are new research streams for future scholars.

Figure 2: A proposed framework for potential service failure research
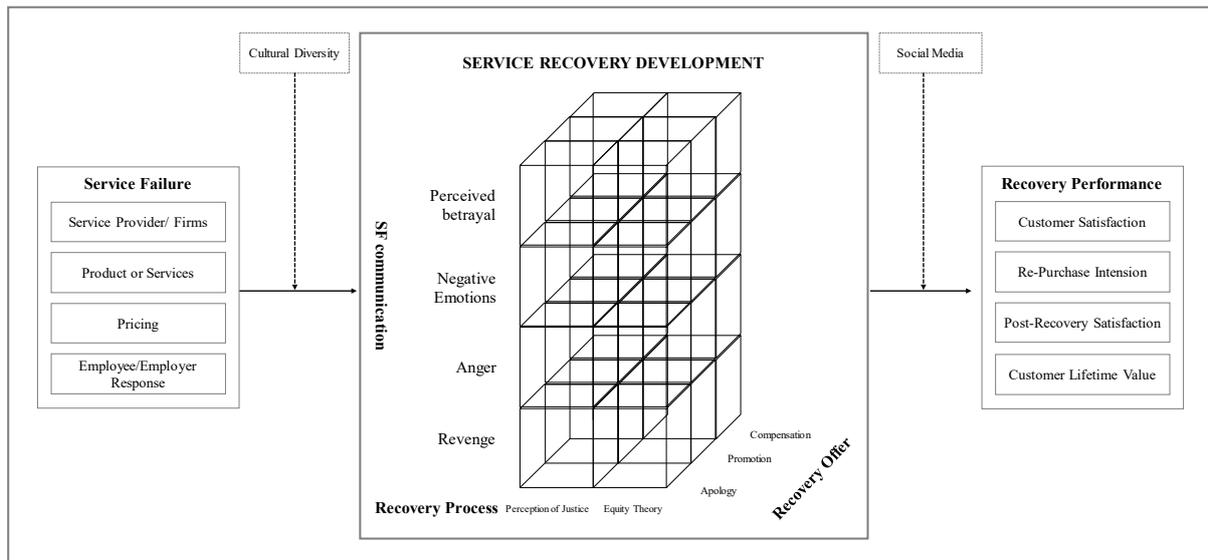
For example, little has been identified about the behaviour of recovery processes with respect to recovery offers (compensation, promotion and apology) as it relates to service failure identification (service providers, product or service, pricing and employee responses) and service failure communication. Is it possible for compensation to be standardised internationally? Does the response depend on the recovery process? Comparative research questions might be posed for service failure identification. Are organisations more likely to use standardised promotions with a perception of justice? Emphasis on employee response techniques may raise increasingly complex research themes. For example, can organisations change perceptions of justice, or turn compensation as a recovery offer into a promotion? How are social media customers' complaints, perceived betrayal, negative emotions and negative word-of-mouth components modified? Additionally, how can global companies (e.g., Amazon)deal with service failure in different parts of the worlds because of the consumer culture difference? Future researches can also investigate the interrelationship between service recovery strategy and cultural dimensions in developing countries (e.g., Turkey) to develop more effective global service recovery strategies. As shown in Figure 2,

there are numerous opportunities available to assess these generalised research themes in future service failure and recovery studies.

The influence of service recovery development and recovery performance

A number of performance assessments among perception of justice and equity theory have been conducted in the service failure and recovery literature (Jung & Seock, 2018; Gregoire et al., 2009; Bitner et al., 1990; Blodgett et al., 1997; Smith et al., 1999; Tax et al., 1998). In addition, the influence of recovery offers on post-recovery satisfaction, repurchase intention and customer satisfaction have been explored to some degree (Abney et al., 2017; Balaji et al., 2017; Mattila, 2001; McCollough et al., 2000; Smith et al., 1999; Tax et al., 1998; Wirtz & Mattila, 2004). In addition, the relationship between service recovery offers and customer lifetime value has been studied to some degree (Grégoire et al., 2009; Michel et al., 2009) showing that recovery offer can positively influence the customer lifetime value.

Moreover, not all service failure can result in online public actions. Previous studies revealed that customers who participate in service failure online complaints are the ones who have faced service failure and are not satisfied with the service recovery response (Gu and Ye, 2014; Israeli et al., 2017; Obeidat et al., 2017; Su et al., 2019). However, an additional complete assessment of the connections between service failure and recovery offers, customer satisfaction, repurchase intention post-recovery satisfaction, and customer lifetime value with the moderating role of social media as revealed in Figure 2, does not seem to have been carried out from previous studies.

Hence research addressing these questions might lead to a significant increase in service failure research. For example, which components of the perception of justice and recovery contribute most to improving repurchase intention? Is it service failure communication relating to social media customer complaints, perceived betrayal, revenge, negative word-of-mouth or negative emotions that creates the most profound impact on repurchase intention, customer satisfaction and post-recovery satisfaction? Does this remain the same for perceptions of justice and apology? How does the recovery offer contribute to repurchase intention? Similarly, significant avenues could be related to assessing developments in customer satisfaction or post-recovery satisfaction under comparative situations. Additionally, future researchers can investigate the different social media complaint behaviours that customers can have with each recovery offer. Future researchers can also

compare the customer social media behaviour in time of different service failure communication (perceived betrayal, negative emotion, anger, and revenge).

Limitations

This study has three significant restrictions. Firstly, we used service recovery specialists to build up a set of keywords to outwardly confirm the grounds for identifying service failure articles. In particular, the research methods used in this study, i.e. the MDS results, show the connections between the most frequently cited articles on service failure. The different group of keywords might result in some degree of customised results, contingent upon the degree of progress in the search terms. While the MDS results are reliant on the most frequently cited articles in a particular example, any change will affect the idea of the influential used. If the importance of this change is elevated, the MDS results will be unique. Particularly in this regard, one would have to implement an alert in considering this present investigation's results as a main representation of the service failure literature. Potential research concentrating on the service failure literature could use search terms improved from the literature review, or use a comparable approach whereby a board of well-informed scholars approved the keywords used.

Likewise, in spite of the fact that MDS is broadly utilised in the bibliometric assessment of a research area, different types of social network investigation might also be connected. One methodology might be a two-mode network assessment (Wasserman & Faust, 1994). For example, an investigation might research domains. Therefore, the results might make an exciting and complementary contribution to the development of service failure literature.

Finally, bibliometric methods are in general backwards-looking, with a focus on the most frequently co-cited references. Therefore, investigations are frequently founded on the particular position of the most frequently cited works. In spite of the fact that the most-cited studies could be viewed as powerful, they may not correspond to the whole field. However, since they are the most regularly co-cited publications through the stage below examination, their persuasions might be excessively high and in this way could be resolved as stimuli in configuring the potential of the field, also. Hence the latest contributions might prove to be significant, and provide a new structure to the service failure literature. The significance of this contribution to the field might be uncovered in due course.

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Appendix 1: Steps to produce a bibliometric analysis (Conceptualization of MDS analysis steps)

Multidimensional scaling (MDS) refers to a quantitative technique which is used for "creating maps from proximity matrices so that an underlying structure can be studied" (Zupic and Čater 2015, p.445). In this approach, the items that share more similarity together are shown closer to each other in the MDS map. The results do not explicitly assign to any group and choosing the proper item is up to researchers (in this study researchers choose 0.25 as the distance). Due to difficulty of interpretation of big set of data, which can be shown in big maps, MDS is mainly limited to small set of data base. The below seven stages illustrates the conceptualisation of MDS analysis

(i) Define the search criteria, keywords, and time periods

To find and integrated understanding of service failure domain through determining the knowledge structure of service failure, the researcher applied the multidimensional scaling (MDS). subsequently, following previous studies (Chabowski et al. 2020; Foroudi et al. 2020; Zha et al. 2020) to identify the most relevant keywords related to service failure the academic service failure experts were contacted. Doing this also, would result in decreasing in the research bias associate with research term.

(ii) Selection of Web of Science database

Owing to the bibliometric data which is in form of a text file, other data bases such as google scholar are not able to provide an appropriate data for conducting the bibliometric analysis. Additionally, due to similarity of the results in different data bases, researchers can not combine the outputs of alternative databases (e.g., Scopus). Hence, following previous researchers (e.g., Samiee and Chabowski, 2012; Chabowski, Samiee, and Hult, 2017) researchers should limit their focus of attention onto one database. With this in mind, although the results of various databases would be different, but, the applied procedure still can aid researchers to identify the knowledge structure of the research domain under study.

- Log in to Web of Science website (www.webofknowledge.com)
- In the '*topic field*', search your keyword. (It is better to search different keywords for your research domain; these different keywords can be found out by asking experts on the research domain)

(iii) Adjustment of research criteria
- Select the papers which are relevant to your research study (you can select articles which the keyword is mentioned in the title and keyword. However, it is better to read papers which the keyword is in the abstract)
- After selecting the papers, go to the *'Marked List'*
- In *Select Records* part, type the first and last number of your list (e.g., 1-245) (Please note that you can save up to 500 records in each saving)
- In *select content*, *select all* box

(iv) Export of result to Bibexcel

- In *select destination*, choose *save to other file formats.*
- In the file format select *'plain text'*.
- The *filename.txt* file should be downloaded automatically, otherwise click on send and download the file
- Download *Bibexcel* software (https://homepage.univie.ac.at/juan.gorraiz/Bibexcel/)
- In Bibexcel select the text file you download from WOS

(v) Refinement of research Bibexcel data

Now in the Bibexcel follow the following steps:

- Open the file ''orm.txt'' in the BibExcel software
- Edit *doc-file/Replace line feed* with *carriage return*
- Select the *Filename.tx2* file and run *Misc/Convert to Dialog format/Convert from Web of Science*
- Extracting data from CD-field (cited documents)
- Process the cited references data into an intermediate .out file for co-citation analysis– Select 'Any; separated field' as the field to be analyzed, put 'CD' into the Old tag field. Press the 'Prep' button.

The *filename.out* file can be edited by doing the following steps:

- Click on *Edit out-File/select Remove DOI* from the string (you can have a better drawing using Pijek)
- Click on the *Edit Out-File/ Keep only author first initial*
- Click on the *Edit Out-File/convert upper lower case/ good for cited reference*

Now you should have a file labeled as *filename.low* which can be used for analyzing and extracting highly cited articles.

- Choose the whole string in the frequently string
- Choose sort descending and press start
- Now save the number of publications with citation you prefer (here with maximum 10 citation)
- Copy them
- Click on the clear the list
- Click on the past (you have the numb of citations you want, here = 140) (Please note that you can edit the list manually in excel and then transport it to Bibexcel, for doing so open the *filename.cit* in excel and edit the papers, it is better to remove the methodology papers)
- After choosing the number of your highly cited publication click on the low (one click in the Bibexcel
- Click on the *analysis/co-occurance/Make pair with listbox* (first question no, then ok)
- Now you have a file called *'filename.coc'*

(vi) Develop a square MDX matrix

Now follow the following steps for making the square MDX matrix

- Choose the publications you want to make matrix for them in the *COC* file (this is usually done for the top 30 papers as the MDS drawing is not accurate in large number of data)
- *Analyze -> List units in pairs (*see *the filename.ccc)*
- Select the *filename.coc* and *Analyze/Make matrix for MDC* etc. (Answer yes to question regarding square matrix)

(vii) MDS Analysis in SPSS

After Making the square matrix, please follow the following steps for analyzing:

- open your MDS matrix from Bibexcel in the excel
- it is recommended to code your authors here as it can be shown easier in the SPSS
- open SPSS and open your matrix in the SPSS *Analyse/scale/multidimensional scaling (Proxscal)* (don't forget to choose distance box in the output)
- click on the OK

- By using the table draw the groups
- Label the groups by reading the papers and finding their similarities

Appendix 2: Summary of highly cited papers

Authors	Source	Article name	Motivation	Objectives	Keyword/ Keyword Plus	Theories/ concepts	Methodology	Analysis
Smith, Bolton and Wagner	Journal of Marketing Research	A model of customer satisfaction with service encounters involving failure and recovery	To develop a model to investigate customer satisfaction with service encounters, where it includes failure and recovery	By using exchange framework: -to identify the impact of the recovery efforts on customer evaluations in a variety of service failure contexts, -provide guidelines to determine the standpoints for service failure and the recovery effort.	Consumer Perceptions, Marketing Practices, Prospect-Theory, Equity, Behaviour, Justice, Transactions, Intentions, Responses, Typology	Resource exchange, mental accounting theory, prospect theory	2 mixed-design experiment in two contexts 1: Survey with 375 undergraduate students in restaurant context 2: Mailed questionnaire study with 602 customers of a midrange line hotels owned by international chains	Consumers tend to look for service recovery that depending on the type of failure and the strength of the failure that consumers experience. This study also establishes an understanding of theoretical principles that explain customer evaluations of service failure/recovery encounters.
Tax, Brown, Chandrashekara	Journal of Marketing	Customer evaluations of service complaint experiences: implications for relationship marketing	To develop and test hypotheses on shaping customer trust and commitment and the influence of satisfaction with complaint handling and prior experience	To deliver enhanced understanding of service complaint handling evaluations and provide guidelines to managers to develop actionable complaint handling programs	Buyer-Seller Relationships, Organisational Justice, Consumer Perceptions, Procedural Justice, Satisfaction, Perspective, Management, Responses, Fairness, Quality	Justice theory	A cross-sectional survey design conducted in companies (including telecommunications, health care insurer, bank, ambulatory and emergency services) with 257 employees based on their recent service-related complaints within the past six months	The trustworthiness and reliability of firm's actions were found to influence the evaluations of service quality, strengthen customer relationships, and build customer commitment.
Bitner, Booms, Tetreault	Journal of Marketing	The service encounter: diagnosing favourable and unfavourable incidents	To explore the events and related behaviours that cause consumers to evaluate service from satisfactory to dissatisfactory	To understand and determine the sources for both satisfactory and dissatisfactory service	NA	Service quality theory	By using critical incident method (CIT) method, 700 incidents from customers of airlines, hotels, and restaurants	By CIT, a classification system has been emerged for the use of managers for evaluating customer dis/satisfaction in service encounters. Also, the validity of CIT was supported.

Blodgett, Hill, Tax	Journal of Retailing	The effects of distributive, procedural, and interactional justice on post complaint behaviour	To investigate the relationship between perceived justice and post-complaint behaviour	To empirically test the effects of distributive, interactional and procedural justice on complainants' negative WOM and repatronage intentions	Word-of-Mouth, Service Encounter, Consumer, Satisfaction, Responses, Perceptions, Perspective, Intentions, Decisions, Judgments	The confirmation/disconfirmation paradigm, Theory of exit, voice, and loyalty; and attribution theory	Quasi-experimental design	Consumer who are complainants are tend to have higher levels of distributive and interactional justice are more likely to repatronise the retailer and are less likely to engage in negative word-of-mouth behaviour (and vice-versa).
Hess, Ganesan, Kelin	Journal of the Academy of Marketing Science	Service failure and recovery: the impact of relationship factors on customer satisfaction	To understand "how do customers' relationships with a service organisation affect their reactions to service failure and recovery?"	How do the quality of past service performance, number of past encounters with the organisation, and customers' expectations of relationship continuity affect consumers' responses to failures and recoveries?	Service Failure, Attributions, Customer Relationships	Equity theory	Experimental design with 346 senior undergraduate business students	Customer-organisation relationships was found to provide a protection to a service organisation from the negative effects of failures on customer satisfaction.
McCollough, Berry, Yadav	Journal of Service Research	An empirical investigation of customer satisfaction after service failure and recovery	To investigate the effect of failure expectations, recovery expectations, recovery performance, and justice on customers' post-recovery satisfaction	To determine the antecedents of post-recovery satisfaction within the context of the disconfirmation and justice contexts as well as investigate the recovery paradox effect.	NA	A disconfirmation model of recovery	Scenario-based experiments with 615 airline travel consumers while waiting to board flights	Recovery paradox was not found significant (no support for recovery paradox effect). The initial and recovery disconfirmation was found to influence post-recovery satisfaction.
Smith, Bolton	Journal of the Academy of Marketing Science	The effect of customers' emotional responses to service failures on their recovery effort evaluations and satisfaction judgments	To examine the role of customer emotions in the context of service failure and recovery encounters	To develop and test the effects of emotion on service encounter satisfaction after accounting for cognitive antecedents of satisfaction (e.g., performance, disconfirmation, and	Word-of-Mouth, Consumer Satisfaction, Consumption Experience, Affective States, Positive Affect, Behaviour, Determinants,	Appraisal theories	Experimental design in two service settings (e.g. restaurants and hotels) Surveyed 355 undergraduate students and 549 hotel customers	Lack of support for the impact of emotion in the restaurant setting, whereas the effect of emotion in the hotel setting was found significant.

				justice).	Model, Mood, Perceptions			
Weun, Beatty, Jones	Journal of Services Marketing,	The impact of service failure severity on service recovery evaluations and post-recovery relationships	To explore the role of service failure severity with an existing framework of service recovery research	To test the influence of service failure severity on trust, commitment, and negative word-of-mouth as well as its interaction with satisfaction	Service Failures, Consumer Psychology, Justice	Justice theory	Experimental design with 533 students and 537 non-student respondents in two service industries (hotel and mail-order)	The role of severity was found to influence consumers' evaluation of service failure and recovery and service provider relationships

The study supports the moderating role of service failure severity. As well as moderating influence of severity on the distributive justice/satisfaction relationship. |
Keaveney,	Journal of Marketing	Customer switching behaviour in service industries: An exploratory study	To answer the question: "Is to help managers and researchers understand service switching from the customer's perspective?"	To identify factors for customers' decisions to switch service providers as well as to identify the role of service encounters and technical service quality	Quality, Satisfaction, Retention	Grounded theory	Critical incident technique with 300 corporate employees, and a follow up study with 226 additional participants	A classification system was found for developing a comprehensive theory of customer switching behaviour in service industries
Maxha, Netemeyer	Journal of Marketing	A longitudinal study of complaining customers evaluations of multiple service failures and recovery efforts	To explore the perceptions of complaining customers' perceptions and recovery efforts	To investigate consumers' within-subject evaluations of overall satisfaction with the firm, WOM recommendations	Attribute-Level Performance, Consumer-Behaviour, Product Failure, Model, Satisfaction, Intentions, Quality, Expectations, Consequences, Antecedents	Prospect theory, Attribution theory, Asymmetric disconfirmation theory	Repeated measures field study with bank complainants across a 20-month time span at 116 branches of an industry leading bank	Consumers tend to report an unsatisfactory recovery followed by a satisfactory recovery in higher ratings at the second post-recovery period than did customers reporting the opposite recovery sequence.
Bitner, Booms, Tetreault	Journal of Marketing	The service encounter - Diagnosing favorable and unfavorable inci	To provide an enhanced understanding of the particular events and related behaviours of	To determine the factors of both satisfactory and dissatisfactory service encounters	Marketing Strategies, Employee Behaviour, Customer	Service quality theory	Critical incident technique service in three service industries with 700 incidents	A classification system was provided for events and behaviours that result in dis/satisfaction.

dents			contact employees that trigger customers to distinguish very satisfactory services from very dissatisfactory		Satisfaction, Content Analysis, Airlines, Restaurants, Hotels, Cultural Groups			(approximately half satisfactory and half dissatisfactory) were gathered from customers of airlines, hotels, and restaurant
Folkes	Journal of Consumer Research	Consumer reactions to product failure: An attributional approach	To explore the factors that influence how consumers respond to product failure	To deliver a framework for predicting consumer responses to product failures	Refunding, Customer Complaints, Anger, Business Entities, Attribution Theory, Automotive Repair, Customer Satisfaction, Restaurants, Breakfasts, Retail Stores	Attribution theory	Two study 1: Critical incident technique with 61 students about product failure 2: Manipulated experiment to test the relationships with 56 students	Product failure was found to cause due to the certain reactions (e.g. desiring a refund or an exchange for the product).
Wirtz, Mattila	International Journal of Service Industry Management	Consumer responses to compensation, speed of recovery and apology after a service failure	To explore how do the dimensions of fairness influence consumers' attributional processes and their post-recovery satisfaction.	To test the effect of fairness dimensions (e.g. distributive, procedural and interactional) on consumer attributions towards the service failure, post-recovery satisfaction, repurchase intention and negative WOM	Customer Service Management, Consumer Behaviour, Customer Satisfaction	Justice theory, Attribution theory	Factorial design experiment with scenario of a service failure restaurant setting with 187 participants	Recovery outcomes, procedures and interactional style were found to influence customer perceptions following a service failure.
Mccoll-Kennedy, Sparks	Journal of Service Research	Application of fairness theory to service failures and service recovery	To provide a fairness theory-based conceptual framework for strategies to manage consumers' emotions during service recovery attempts	To identify and to test the role of customer emotions in the service failure and recovery process	Service Failure, Service Recovery, Emotion, Fairness Theory, Counterfactual Thinking, Accountability, Situational Effort, Justice Theories, Conduct, Moral Principles	Fairness theory	A qualitative study with customers in the hospitality and tourism industry	Service failures can be triggered by events from several different factors, (e.g. problems with the service, service provider, or customer related problems)

Maxham, Netemeyer	Journal of Retailing	Modeling customer perceptions of complaint handling over time: the effects of perceived justice on satisfaction and intent	To empirically examine a perceived justice and satisfaction-based model of the service recovery process which continues over time.	To examine the effects of justice on satisfaction with recovery, overall firm satisfaction, purchase and WOM intent.	Customer Satisfaction, Service Recovery, Complaint Handling, Word of Mouth, Purchase Intent	Social exchange theory	Two field study 1: Bank service complainants in 116 branches in US 2: Survey with consumers of home construction sales service where a first-time product failure and recovery attempt occurred in 215 communities across 12 states	Service providers should attempt to offer customers fair outcomes, procedures, and personal interactions, which turn influence customer intent
Maxham	Journal of Business Research	Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions	To explore the different levels of service recovery and its effect on satisfaction, purchase intentions, and WOM	To investigate the effects of various levels of service recovery on consumer perceptions of satisfaction, purchase intentions, and positive WOM.	Consumer Satisfaction, Positive Word-of-Mouth, Purchase Intentions	Equity theory	Experiment based on haircut service failure scenario experiment with 406 university students Field study with 114 complainant of national internet service provider	Post-recovery satisfaction was found to have greater influence than that satisfaction prior to the service failure.
Gregoire, Tripp, Legoux	Journal of Marketing	When customer love turns into lasting hate: The effects of relationship strength and time on customer revenge and avoidance	To explore the influence of time and relationship strength on the evolution of customer revenge and avoidance in online public complaining contexts	To examine the evolution of online complainers' grudges over time with regards to special attention to firms' best customers	Service Failure Recovery, Customer Revenge, Customer Avoidance, Online Public Complaining, Customer Relationships, Time Effect	NA	Survey and experimental study 1: cross-sectional surveys with 247 and 184 participants for Consumer Affairs.com and Ripoff Report 2: A follow up scenario experiment of a service failure with a French restaurant with 113 students	Consumers were found to be co-operative to any level of recovery attempt.
Gregoire, Fisher	Journal of the	Customer betrayal and retali	To test a justice-based model to	To tests a justice-based theory and model to	Customer Retaliation,	Justice-based theory	Study with 216 complainers who	Relationship quality was found to influence on a

Author	Journal	Title	Purpose	Research Questions	Keywords	Theory	Method/Sample	Findings
	Academy of Marketing Science	ation: When your best customers become your worst enemies	understand customer retaliation and the "love becomes hate" effect	understand why do customers retaliate	Customer Betrayal, Justice Theory, Customer Relationship, Survey, Service Failure and Recovery, Moderated Regression Analyses		experienced poor recoveries with an airline and subsequently complained to the Canadian Transportation Agency (CTA)	customer's response to a service recovery.
Del Río-Lanza, Vázquez-Casielles, Díaz-Martí	Journal of Business Research	Satisfaction with service recovery: Perceived justice and emotional responses	To examine the relationship between perceived justice, emotions, and satisfaction during service recovery (SR)	To test the direct effects of justice on satisfaction with SR, along with its indirect effects, via emotions	Service Failure, Service Recovery, Perceived Justice, Emotions, Consumer Satisfaction	Control theory, Cognitive appraisal theory	184 cell-phone company customers have experienced a failure in the service and received a response from the company	Procedural justice perceptions was found to influence emotional responses from customers as well as satisfaction judgments.
Smith, Bolton	Journal of Service Research	An experimental investigation of customer reactions to service failure and recovery encounters: Paradox or peril?	To investigate "how do service failure and recovery encounters influence customers' overall assessments of a service organisation?"	To examine 3 questions: "How does satisfaction with a service failure and recovery encounter affect satisfaction judgments and repatronage intentions? To what extent satisfaction and repatronage intentions influence overall satisfaction and repatronage intentions? Can a highly satisfying service failure and recovery encounter enhance overall satisfaction with a service organisation and increase repatronage intentions?"	Service Recovery, Service Failure, Service Encounters, Customer Satisfaction, Repatronage Intentions, Updating	Service recovery paradox	Quasi-experimental design in two different settings (e.g. restaurants and hotels) with 96 service failure and recovery combinations by using a between-subjects design	Customers' cumulative satisfaction and repatronage intentions were found to be influence by service encounters involving failure and recovery.

Author	Journal	Title	Conceptual Focus	Objective	Keywords	Theory	Methodology	Findings
Zeithaml, Berry and Parasumaran	Journal of Marketing	The behavioral consequences of service quality	To offer a conceptual model of the impact of service quality on particular behaviours	To test the model to investigate the relationships between service quality and customers' behavioural intention	Customers, Automobile Insurance, Life Insurance, Business Entities, Customer Complaints, Customer Satisfaction, Life Insurance	NA	Survey with 3069 consumers of companies including computer manufacturer, retail store, insurance companies (life and automobile)	Service quality is directly related with behavioural intentions, where service quality can be increased due to the positive intentions.
Chebat, Slusarczyk	Journal of Business Research	How emotions mediate the effects of perceived justice on loyalty in service recovery situations: An empirical study	Specifically focuses on the question "How do positive and negative emotions mediate the effects of justice on loyalty in actual service recovery situation related to retail banking?"	To investigate the relationship between emotional, behavioural responses and perceived justice in the situation of service recovery	Justice, Emotions, Customer Loyalty, Service Recovery	Affect Control Theory (ACT) Justice Theory	Field study for 186 Canadian bank consumers who had complaint in the last 12 months	Emotions mediates the relationship between justice and consumer loyalty
Kelley, Hoffman, Davis	Journal of retailing	A typology of retail failures and recoveries	To investigate retail failures & recovery strategies	To develop systematic plan for retail failures & recovery strategies to be considered by academic or managers for a further research	Service Encounter, Product Failure, Consumer, Satisfaction, Involvement, Behaviour, Model	NA	Critical incident technique with 661 responses who experienced recovery in general merchandise retail stores	The study revealed 15 different retail failures and 12 different recovery strategies to expand the service failures and recoveries for academics and managers
Goodwin, Ross	Journal of Business Research	Consumer responses to service failures: Influence of procedural and interactional fairness perceptions	Offer a framework to investigate the influence of procedural justice	To test the effect of distributive, procedural and interactional fairness on consumer satisfaction, perceptions of fairness, perceptions of quality and willingness to return the firm	Justice, Equity, Satisfaction	Equity theory	2x2x2x4 experiment with 285 undergraduate students where service failure scenarios presented	Voice and apology were determined as significant experimental treatments where alter the perception of satisfaction and fairness.

Hart, Heskett, Sasser	Harvard Business Review	The Profitable Art of Service Recovery	Summarise the steps to the roads of service recovery	-	-	-	-	-
Singh	Journal of Marketing	Consumer Complaint Intentions and Behavior: Definitional and Taxonomical Issues	To re assess the consumer complaint intentions and behaviour	To re-investigate the operationalisation and taxonomy of consumer complaint behaviour (CCB) construct	Consumer Behavior, Customer Complaints, Conceptualisation Patient Care, Cognitive Space, Retail Stores	NA	Exploratory investigation with 4000 Questionnaires for four different complaints situations	Current operational definitions as well as constructs for CCB are found to be not acceptable
Gelbrich, Roschk	Journal of Service Research	A meta-analysis of organisational complaint handling and customer responses.	To investigate the complete process of post-complaint behaviour	As a complete chain to empirically test the process of organisational responses, justice perceptions, post-complaint satisfaction, and customer behavior	Service Recovery, Meta-Analysis, Consumer Complaints, Customer Satisfaction, Complaint Management	Justice theory Fairness theory	Meta-analysis of 87 studies having 95 independent sample with a total sample size of 28,826	This research empirically validates the model for post-complaint behaviour by using meta-analysis
Weiner	Journal of Consumer Research	Attributional Thoughts about Consumer Behavior	To conceptually investigate the effect of attribution theory principles on consumers	To conceptually investigate perceptions of causality along stability and controllability	Affect/Emotions/Mood, Attribution/Self-Perception, Motivation/Desire/Goals, Social Cognition, Theory Construction/Testing	Attribution theory, Heuristic value of the theory a	-	To conceptually investigate the framework and methodology regarding the attribution theory and its effect on consumer psychology

Appendix 3. Explanation on the most recent articles in service failure

Authors	Source	Research questions	Keywords	Theories	Methodology	Analysis	Future research suggestions
Zhang, Omran, Cobanoglu (2017)	International Journal of Contemporary Hospitality Management	What are the factors influencing Generation Y's eWOM behaviour via social media and mobile technology in the context of foodservice?	Service Recovery, Generation Y, eWOM, Social Media, Service Failure, Mobile Technology	Social exchange theory, Social capital theory	Survey with 583 Gen Y consumer through Amazon M-Turk	Active use of social media and peer influence were found to influence Gen Y's eWOM about their service experience	To validate the model with more diverse sample in developing countries
Koc, Ulukoy, Kilic, Yumusak, Bahar (2017)	Total Quality Management & Business Excellence	To what extend do consumer participation types (mental, emotional, physical) influence consumers' perception of service failure?	Service Failure, Customer Participation, Customer Co-Production, Hospitality	NA	472 scenario-based online survey	Consumers mental, physical and emotional participations were found to influence, reduce and mitigate service failure	Researchers can focus on three types of consumer participation while investigating service failure to develop news form of consumer participation
Hazee, Van Vaerenbergh, Armirotto (2017)	Journal of Business Research	When can co-created service recovery be appropriate?	Service Failure, Service Recovery, Customer Satisfaction, Co-Creation, Brand Equity	Justice theory	Two scenario-based experiments in hotel and airline context	Co-created service was found to influence consumer satisfaction for both contexts	By using field experiment, role-playing or survey the research can be replicated, where firm size and country of origin can also be considered
Balaji, Roy, Ali (2017)	European Journal of Marketing	What is the role of emotion during service failure evaluation? To what extend does consumer's emotion influence in satisfaction, repurchase intention and WOM?	Service Failure, Emotions, Customer Satisfaction, Emotion Regulation, Negative Word-of-Mouth, Perceived Injustice	Theory on emotional regulation	Scenario based survey with 305 graduate students in Malaysia	Behavioural responses of consumers' can vary with regards to their ability to regulate their emotions, both negative and positive emotions affect consumer satisfaction	Future studies can use a diverse sample with probability sampling and can explore the role of attribution in consumers' emotion regulation strategies
Byun, Jang (2018)	International Journal of	To what extent circumstantial cues	Service Failure, Mediation,	NA	Subject experiment	Different circumstantial cues	Other circumstantial cues can be considered to

	Contemporary Hospitality Management	(open vs closed design kitchen) do influence consumer responses through causal attribution in the case of service failure?	Attribution, Circumstantial Cue, Open Kitchen		(e.g. close vs open kitchen design) was found to influence consumer responses	investigate in the context of service failure
Vazquez-Casielles, Iglesias, Varela-Neira (2017)	Service Business	To what extent co-creation does influence the service recovery process?	Service Recovery Process, Repurchase Intention, Word of Mouth, Co-Creation, Service Recovery Process, Communication	NA	Experiment with 480 consumers who have experienced problems with retailer offers	Implementing co-creation to recover service failure leads consumers to have positive responses after consumer recovery strategy	Future research could also investigate purchase quantity, frequency and level of expenditure while investigating the effect co-creation on service failure recovery
Malhotra, Sahadev, Purani (2017)	Journal of Business Research	To what extent does PCV influence on customer re-use intention of e-retailer through trust and satisfaction?	Psychological Contract Violation (PCV), Trust, Customer Satisfaction, Structural Assurance, Intention to Reuse, Online Retailing	Psychological contract violation theory, S-O-R framework	Survey with 379 undergraduate students who made purchases through e-retailers and experienced PCV	PCV was found to influence consumers re-use of the website negatively through trust and satisfaction	Future research can consider moderators e.g. technological readiness, level of social presence, retailer reputation to investigate their influence on PCV and consumers' intention
Obeidat, Xiao, Iyer, Nicholson (2017)	Psychology & Marketing	How do service failure types influence appraisal processes, which in turn lead to deserve for revenge (DR)?	Word-of-Mouth, Planned Behaviour, Customer Satisfaction, Self-Efficacy, Emotions, Recovery, Communication, Retaliation, Consumption, Avoidance	Cognitive appraisal theory	Mixed method research: 1- Interviews with 32 consumers 2-Online survey with 1351 students in UK 3- 217 consumer in Jordan to test cross-cultural differences	The influence of different types of service failures (outcome and process) on cognitive appraisal process and desire for revenge has been found	Future research can consider cultural dimensions (individualism, collectivism)
Umashankar, Ward, Dahl (2017)	Journal of Marketing	To what extent the customer complaints do impact on loyalty which in turn creates	Tie Strength, Relationship Marketing, Service Failure,	NA	4 studies including secondary survey, scenario-based	Complaint can be used as a relationship builder between consumer and service	Future research can consider different aspects of failure (e.g. attribution, controllability) and can

		social ties between consumers and service providers?	Complaining, Loyalty		experiment, behavioural experiment	provider as it leads consumer to have strong ties (e.g. loyalty) to the company	investigate the role of guilt or accountability
Menguc, Auh, Yeniaras, Katsikeas (2017)	Journal of The Academy of Marketing Science	To what extent performance-focused and service failure (as climates) moderate the relationship of resource-engagement-performance linkages of the job-demands resource (JD-R) model?	Job Demands–Resources Model, Self-Efficacy, Job Autonomy, Engagement, Climate, Service Failure Recovery	Job demands resources theory	2 study 1: Survey with 800 surveys from service employees of private health care companies 2: Follow up study with 276 participants from M-Turk	Same climate (e.g. performance-focused and service failure) can be assessed as a challenge (based on the resources of employees) which in turn be effective to identify resource-engagement relationship	Future studies can consider other climates (e.g. service, justice, innovation climate) or other resources (e.g. co-worker, supervisor support)
Jung, Seock (2017)	Journal of Retailing and Consumer Services	What is the effect of different types (apology and compensation of service recovery on customers' perceived justice, post-recovery satisfaction, and WOM intentions in the context of online shopping?	Service Recovery, Perceived Justice, Satisfaction	Justice theory	Scenario based online experiment with 368 participants	Customers perceive justice (e.g. distributive and interactional) differently which depends on the type of the recovery they receive	Future study can consider different level of service recovery types, e.g. different level of apology or different level of tangible compensation can be worthwhile to investigate
Albrecht, Walsh, Beatty (2017)	Journal of Service Research	How does individual service failure (ISF) differ from group service failure (GSF) and influence consumer outcomes in service failure situation (e.g. WOM)?	Attribution, Customer-Customer Interaction, Customer Entitlement, Group Service Failure, Individual Service Failure, Self-Serving Bias	Attribution theory Social facilitation theory	Two scenario-based experiment 1: 115 participants with hotel scenario 2: a follow up research with 241 participants	ISF and GSF are found to have different influential effects in behavioural outcomes	Further study can consider consumer interaction, where this study neglected.
Sampaio,	International	How does perceived	Service Failure,	Theory of	Survey in 3	Benefits offered by	Future study can lean on the

Ladeira, Santini, Perin (2017)	Journal of Bank Marketing	justice moderate the relationship between the benefits offered and consequences of satisfaction in the context of mobile banking?	Customer Satisfaction, Mobile Banking, Perceived Justice, Apps for Online Banking	justice	countries (USA, Brazil, India) with 303 bank consumers who experienced mobile app failure	mobile banking found to influence customer satisfaction positively.	cultural differences by looking Hofstede's five dimension
Abney, Pelletier, Ford, Horky (2017)	Journal of Services Marketing	How companies can interact with their customers using Twitter as a service recovery strategy?	Service Recovery, Social Media, Twitter, Service Failures, Adaptiveness	Justice theory	Survey experiment via Twitter with 300 Twitter users	The level of personalised messages delivered by Twitter found to influence consumer perception	Future research can investigate other social media platforms for the generalisability of the results
Sengupta, Ray, Trendel, Van Vaerenbergh (2018)	International Journal of Electronic Commerce	To what extend does apology influence on the service recovery strategy?	E-Tail, Global E-Commerce, Online Retail, Perceived Justice, Service Apology, Service Failure, Service Recovery	Face theory	Two experiment service failure scenarios in 4 countries 1: 217 German, 214 Indian 2: 2 Western (with 383 participant), 2 Eastern (with 446 participant)	The effectiveness of apology was found to culture and channel (e.g. social media) dependent	Further research can consider the influence of apology directly coming from manager
Izogo, Jayawardhena (2018)	Journal of Research in Interactive Marketing	What are the dimensions of online shopping experience (OSE) in emerging markets? To what extent does OSE influence eWOM and internal external responses in service experience?	Customer Experience, Service Experience, Dominant Logic, Engagement, Determinants, Netnography, Lessons, Impact, eWOM	Theory of customer engagement, Experiential consumption theory	Netnography on 284 experiential reviews in Nigerian e-tailers	8 dimensions of OSE was identified which in turn had an impact on repurchase intention. WOM, internal and external responses to service experience	Further research can empirically test the OSE and its components
Hogreve, Bilstein, Mandl (2017)	Journal of the Academy of Marketing Science	How does recovery time affect customers' compensation expectations during service recovery? If so, which moderators	Service recovery; Customer relationships; Service failure; Customer betrayal; Customer anger;	Equity theory	Six experimental study by using consumer panels in the context of airline industry and student data	The influence of recovery time on compensation expectation, as well as the influence of customer-firm	Further research could consider other service industries to generalise the findings

		affect the relationship between recovery time and compensation expectations? What are the underlying processes that explain the effects?	Explanation; Equity theory; Complaint status updates		relationship on recovery time tolerance was found significant	
Israeli, Lee, Karpinski (2017)	Journal of Hospitality Marketing & Management	How does the dynamics of service failure influence customers' attitudes and e-WOM in social media in the context of restaurants?	Electronic word of mouth (eWOM); social media; service failure; restaurant management	Prospect theory	Study 1: Scenario based survey with 321 social media users Study 2: Cross-sectional survey with 226 participants	Active social media users tend to communicate eWOM to respond the service failure in a period of time	Different types of service failures or recovery efforts worthwhile to investigate as moderators for the future research
Khalilzadeh, Ghahramani, Tabari (2017)	Journal of Hospitality Marketing & Management	Who does complain in fine dining restaurants?	Attitude toward complaining; consumer complaining behavior; recovery expectations; service failure; service recovery	Disconfirmation theory	Experiment with 623 five fine fining consumers in Tehran	Determining the customer groups based on the complaining behaviour is substantially important to implement recover strategies	Future studies could examine the framework in different context with consumers who have different cultural backgrounds
Tektas (2017)	Service Business	What are different buffering effects of calculative and affective commitment that influences on perceived justice and post-recovery satisfaction (PRS)?	Service recovery Perceived justice Post-recovery satisfaction (PRS) Affective commitment Calculative commitment	Perceived justice theory	Survey with 284 retail banking consumers in Turkey	Perceived justice associated with service recovery was found to influence secondary consumer satisfaction	Future study could replicate the research in different service industries by considering education level and age
Weitzl, Hutzinger (2017)	Journal of Business Research	To what extent do specific response types from marketers and advocates influence complaint bystanders?	Online complaints, Negative word-of-mouth, Service failure, Service recovery, Webcare,	Social learning theory, Reinforcement theory	2 Online experiment 1: scenario with 731 consumers who use social media	Online comments on negative brand experiences and the responses were found as information sources	Future study could investigate the influence of bystander's demographics and prior experiences

			Brand advocate		regularly 2: follow up research with 361 consumers	for a brand's potential customers	
Baumann,Le Meunier-FitzHugh,Wilson (2017)	Industrial Marketing Management	To what extend does communication of reciprocal value propositions matter in buyer-seller interactions?	Reciprocal value proposition, Value, Value co-creation, Buyer-seller interaction, Service-dominant logic	NA	Qualitative research with auction houses (e.g. art specialists) and 13 consumers over 6 months	The value propositions were found to be reciprocal in all contexts	Further research could investigate this study into different contexts
Ozkan-Tektas, Basgoze (2017)	European Management Journal	To what extent does service recovery judgments mediate the relationship between pre-recovery emotions and post-recovery satisfaction?	Pre-recovery emotions, Perceived justice, Service recovery satisfaction, Firm reputation, Banking sector	Justice theory	Online survey with 366 consumers who submitted their complaints online	Perceived justice was found to mediate the relationship between pre-recovery emotions and post-recovery satisfaction	Further study could examine the influence of consumer commitment or loyalty
Azemi, Ozuem, Howell, Lancaster (2019)	Journal of Business Research	How does online customers develop perceptions on the failure-recovery phenomenon without prior assumptions to direct their responses?	Service failure Recovery strategies Social constructivism Failure-recovery process	Social learning theory, Reinforcement theory	Thematic analysis with 10 bank managers and 32 online banking customers in two Balkan countries	This study found out that interactions with the provider should be taken into account.	Further study should replicate this study in other developed or developing countries to test the consumer typology