The impact of service failure on brand credibility

Ursula Sigrid Bougoure [a,*], Rebekah Russell-Bennett [b], Syed Fazal-E-Hasan [b],
Gary Mortimer [b,*]

[a] Newcastle Business School, University of Newcastle, Australia, UONS Singapore, 355 Jalan Bukit Ho Swee, Tiong Bahru 169567, Singapore
[b] QUT Business School, Queensland University of Technology, 2 George Street, PO Box 2434, Brisbane, Queensland 4001, Australia

ABSTRACT

Recent studies have examined the consequences of brand credibility, with the majority of works embedded in physical goods. Despite the growing attention service branding receives, little is known about how service failure and recovery efforts impact on brand credibility in service organisations. The purpose of this study is to examine how brand credibility is affected by service failure and an organisations recovery efforts. An online self-completion survey of airline consumers (n=875) was employed to test the relationships between the focal constructs. The results show that a service firm's effective complaint handling positively impacts satisfaction with complaining, overall satisfaction and service brand credibility. The study also finds that the higher the perceived magnitude of failure, the more difficult it is to satisfy a customer. These results demonstrate that it is possible to maintain service brand credibility during a service failure, provided brand managers develop and implement effective complain handling procedures.

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1. Introduction

Globally, businesses like Apple and Google, contribute well over $100 billion each in brand equity to their respective organisations (Interbrand, 2014). Other than brand equity, effective branding strategies enable businesses to position and reposition themselves in the market, stand apart from competing brands, and simplify and explain consumer choice processes (Berry, 2000; Erdem and Swait, 2004; Keller and Lehmann, 2006). Understanding how brands influence consumers and their choice processes has attracted much research attention in marketing over the past two decades. An important literature stream emerging from this field is *brand credibility* (Erdem and Swait, 2004; Sweeney and Swait, 2008).

Brand credibility is a brand characteristic that explains consumer choice processes. The dominant perspective of brand credibility has been emphasised in physical goods (e.g. Erdem and Swait, 1998, 2004), which is surprising given the importance of branding within the consumer service domain (Berry, 2000) and the general acknowledgement that marketing has moved away

from a product dominant to a service dominant focus (Lusch et al., 2007; Merz et al., 2009). While researchers have recently begun to explore the notion of brand credibility in a service domain, these earlier studies have examined the consequences of brand credibility, such as positive 'Word of Mouth' recommendations, purchase intentions or loyalty (Baek and King, 2008, 2011; Ghorban and Tahernejad, 2012; Sweeney and Joffre, 2008). While these works add to our understanding of brand credibility in a service context, each considers brand credibility to be already present and stable, while remaining silent on antecedents like service failure, responses to such failures and overall satisfaction with service recovery outcomes.

This lack of research investigating the influence of the service recovery process and determinants has been recognised in the seminal work of Mostafa, Lages, Shabbit and Thwaites (2015) and others (de Matos et al., 2007, 2013). Mostafa et al. (2015) explored the direct and indirect antecedents that contribute to corporate image formation in a service recovery context. While their work specifically explored the impact on corporate image rather than brand image, sufficient parallels exist, thus offering a useful initial foray into this relatively unexplored domain and a strong base for further enquiry. This current work builds upon the Mostafa et al. (2015) studies and responds to their calls to examine the impact of service failure across new contexts, in our case the airline industry and in relation to the severity of the service failure. In summary, still little is known about how brand credibility functions in a

* Corresponding authors.
E-mail addresses: Ursula.bougoure@newcastle.edu.au (U.S. Bougoure),
rebekah.bennett@qut.edu.au (R. Russell-Bennett),
s.fazalehasan@qut.edu.au (S. Fazal-E-Hasan),
gary.mortimer@qut.edu.au (G. Mortimer).

service context and research that investigates service brand credibility is both warranted and required (Baek and King, 2011; Sweeney and Swait, 2008).

Service failure is a key research theme in services marketing that negatively impacts the relationships between consumers and service providers (Casidy and Shin, 2015) and possibly brand credibility. While it is widely acknowledged that consumers often experience service failure (Patterson et al., 2006; Lopes and da Silva, 2015), how such failures and the complaint handling strategies designed to deal with them, impact a firm's brand credibility remains unknown. Unlike earlier studies that have examine the consequences of brand credibility, this current research contributes to the literature by examining the impact on brand credibility when the firm fails to deliver its promises. This paper uses a nomological network from the complaining behaviour and service recovery literature to explain brand credibility for service firms, while drawing on social exchange, equity and signalling theories to develop a conceptual model that examines how *complaint handling* efforts by a firm, perceived *magnitude of failure*, customer *satisfaction with complaint handling* and *overall satisfaction* with the brand, impact *brand credibility* during a service failure.

The remainder of this paper is presented in the following way. First, the literature review provides a discussion of the constructs and develops the study's conceptual model. Next, the research design outlines the methodologies undertaken to test the conceptual model. The results of the study, which are analysed with Structural Equation Modelling (SEM), are then discussed in both theoretical and practical terms. Finally, the limitations of the study and areas for future research conclude this paper.

2. Literature review and hypothesis development

2.1. Brand credibility

Based on early research into the credibility of the communicator, or source credibility (e.g. Hovland, 1951; Hovland et al., 1953; Hovland and Weiss, 1951), brand credibility refers to the believability of an organisation's intentions at a particular time and is comprised of two components: *expertise* and *trustworthiness* (Erdem and Swait, 1998). Brand credibility is defined as the believability of product position information in a brand (Swait and Erdem, 2007) and requires a consumer to perceive a brand to have both the ability (i.e., expertise) and willingness (i.e., trustworthiness) to continuously deliver what has been promised (Erdem and Swait, 1998, 2004; Erdem et al., 2006; Swait and Erdem, 2007).

Brand credibility is underpinned by signalling theory, which suggests that the asymmetric information existing between firms and consumers is unsettling for many consumers, who struggle to distinguish between market offerings. Observable signals like brands, however, enable marketing managers to simplify consumer information search by providing information like country of origin and expected price range (Pecotich, Pressley and Roth, 1996). Such information helps consumers make informed choices and enables marketers to better distinguish themselves from competitors (Erdem and Swait, 1998; Wernerfelt, 1988). As such, a credible brand conveys information that consumers see as truthful and reliable and is achieved when a consumer interprets historical accumulation of past marketing mix strategies and forms a judgment about a brand. Brand credibility then, as a signal of product positioning, may be the most important of all brand characteristics to influence consumer choice (Erdem and Swait, 1998, 2004; Spry et al., 2011).

The brand credibility literature is largely based on a study by Erdem and Swait (1998), who developed a framework of brand

effects on consumer choice under consumer uncertainty. Erdem and Swait (1998) found that brand credibility increases perceived quality, decreases consumer risk perceptions and information search and increases consumer expected utility. Subsequent replication and extension studies confirm Erdem and Swait's (1998) framework cross culturally (Erdem et al., 2006) and show that celebratory endorser credibility increases brand credibility (Spry et al., 2011), and that brand credibility affects perceived value for money (Baek and King, 2011) and price sensitivity (Erdem et al., 2002) which is itself effected by brand prestige (Baek et al., 2010).

Erdem and Swait's (1998) framework includes three main brand credibility antecedents that are based on marketing mix strategies: *consistency*, *brand investments*, and *clarity* (Baek et al., 2010; Erdem and Swait 1998, 2004). First, *consistency* explains how well marketing mix components converge, as well as how stable brand attributes are over time (Erdem and Swait 1998). Second, *brand investments* show consumers that organisations are dedicated to their brands and enable brand promises to be delivered (Klein and Leffler, 1981). Third, *clarity* or having a clear brand signal (i.e., the absence of ambiguity in product information) implies credibility as consumers believe that firms that are willing and capable of delivering on their promises will send clear signals (Erdem and Swait, 1998). Thus, in accordance with Erdem and Swait (1998), a high level of consistency, brand investment and clarity increase brand credibility, which in turn improves perceived quality and expected utility while reducing perceived risk and information costs (Baek et al., 2010).

2.2. Brand credibility in services

As discussed earlier, brand credibility research has mostly focused on tangible dominant products and overlooked the consumer services domain. Yet, the credibility of a brand is particularly important for service firms, as consumer brand relationships are the result of consumer and firm interactions that are built over time (Sweeney and Swait, 2008). Of the two papers that have addressed service brand credibility (Sweeney and Swait, 2008; Baek and King 2011), both papers model brand credibility in terms of its outcomes. First, Sweeney and Swait (2008) link service brand credibility to a number of customer relationship management tools such as overall customer satisfaction, commitment, word of mouth (WOM) and switching propensity across retail banking and telecoms. Second, Baek and King (2011) replicate the Erdem and Swait (1998) framework across service categories and involvement level and contribute perceived value for money as a brand credibility outcome that moderates the relationship between brand credibility and purchase intentions. Overall, these studies confirm the relevance of brand credibility in the service domain and provide a solid platform for future research.

This paper contributes to the literature that examines brand credibility in consumer services. To the best of our knowledge, no study has examined the impact of service failure and complaint handling on brand credibility in a consumer service context. This is an important gap to address given the significant effort made by managers to build strong brands that enable them to reduce churn, reduce costs (Sweeney and Swait, 2008) and build and sustain long term consumer relationships (Leung et al., 2014; Hasan et al., 2014). The advent of social media allows dissatisfied customers to share their complaints broadly and thus impact the brand's image and presence in the market. When complaints are not handled effectively, consumers vent their frustrations online and this can have severe repercussions with a brand (Bambauer-Sachse and Mangold, 2011). Thus, there has never been a more important time to understand how complaints arising from a service failure can influence brand credibility.

Despite the best intentions, all firms can expect to experience service failure at some point in time; waiting in long queues at a

supermarket, experiencing lost baggage at an airport and eating cold meals delivered late in restaurants are common service failures that highlight how complex service delivery and processes can be (Esbjerg et al. 2012; Hess et al., 2003; Patterson et al., 2006). As such, what firms do (or fail to do) in situations involving a service failure is an important issue (Gabbott et al., 2011; Eisend and Stokburger-Sauer, 2013; Kunz and Hogreve, 2011) given that negative customer experiences harm consumer brand relationships (Keiningham et al., 2014). Within the realm of social exchange theory, equity theory (Adams, 1965; Homans, 1958; Walster et al., 1973) explains the distress that consumers feel when a failed service encounter is blamed on the actions of the firm. Customer focused managers seek to provide redress for their customers via some recovery effort that attempts to offset the experienced loss (Patterson et al., 2006). *Service recovery* then, or complaint handling as it is also known, refers to the actions a firm takes in response to a service failure (Grönroos, 1988).

2.3. Service failure

Service failure and complaint handling represent critical moments of truth in the relationship between a brand and a consumer (de Matos et al., 2013; Grönroos, 1988) and offer opportunities for firms to communicate with customers and therefore strengthen brand relationships, if well handled (Berry and Parasuraman, 1991; Choi and La, 2013; Tuskej et al., 2013). As such, brand managers must develop clear service failure and recovery procedures that are effectively communicated and shared with all staff, particularly front line staff, given they are face of the service brand and directly interact with customers (Maxham and Netemeyer, 2003), therefore influencing the customer brand relationship.

Customer relationships are important to service brands (Leung et al., 2014) and are a cumulative result of the long term experiences a customer shares with a firm's brand. In fact, the service brand acts as a 'summary statistic' characterising the customer brand relationship that has been formed over time. In the eyes of the consumer then, the service brand symbolises the service firm's credibility (or lack thereof). Using this perspective, service brand credibility is built and solidified over time through repeated customer/brand interactions (Erdem and Swait, 1998; Sweeney and Swait, 2008).

Since effective complaint handling can result in more satisfied and loyal customers (Patterson et al., 2006; Smith and Bolton, 1998), much research has focused on understanding consumer *satisfaction with complaint handling* (Brock et al., 2013; Davidow, 2003; Gustafsson, 2009; Hess et al., 2003; Keiningham et al., 2014; Roschk and Kaiser, 2013). Satisfaction with complaint handling is defined as "a customer's evaluation of how well a service firm has handled a problem" (Orsingher et al., 2010, p. 170). Satisfaction with complaint handling is an effective tool to reduce customer churn (Sweeney and Swait, 2008) and maintain customer brand relationships (Fornell and Wernerfelt, 1987). Orsingher et al. (2010) developed a framework that highlights the role of equity theory in explaining satisfaction with complaint handling, through distributive, procedural and interactional justice dimensions. The paper also details how Satisfaction with complaint handling explains consumer retention through increasing consumer intention to return, word of mouth behaviour and overall satisfaction.

2.4. Hypotheses development

Customers don't expect service failure. Social exchange theory tells us that in relationships between firms and consumers, resource exchange, like service delivery and payment, should be viewed by both parties as fair and equitable. Yet in the instance of a service failure, negative disconfirmation occurs (Oliver, 1977). According to equity theory (Walster et al., 1973), the exchange relationship becomes unbalanced, with a loss perceived by the consumer. The amount of loss a consumer perceives, depends on the magnitude of failure they experience (Smith et al., 1999). *Magnitude of failure* is an individual difference variable (Mattila, 2001) that refers the extent to which a consumer perceives a service failure as major or minor (Smith et al., 1999). What one customer perceives to be a major service failure, another may see as relatively minor. Hess et al. (2003) found that customer expectations of service recovery increase with the perceived magnitude of a service failure. Consistent with the justice framework from equity theory, it seems likely then, that as consumer perceptions of the magnitude of service failure increase, it will be harder to satisfy them. Thus,

H1. As magnitude of failure increases, satisfaction with complaint handling decreases.

We argue that effective complaint handling communicates to a customer that a service brand is trying to mend a broken brand promise. By engaging in complaint handling efforts, a service brand says to its customer 'we are sorry, you are important to us and we want to continue our relationship with you'. Embedded in equity theory (Adams, 1965), these complaint handling efforts, which seek to redress the service failure, should lead to greater customer satisfaction with complaint handling. Two key complaint handling responses in the literature are *apology* (Boshoff, 1997; Davidow, 2003; Fang et al., 2013) and *compensation* (Bitner, 1990; Fang et al., 2013; Mattila and Patterson, 2004) with compensation considered a higher form of redress than apology and a combination of both the highest (Levesque and McDougall, 2000). Prior research on complaint handling and satisfaction has shown that as higher forms of redress are offered the level of satisfaction increases (Wirtz and Mattila, 2004). Thus,

H2. As complaint handling efforts increase, satisfaction with complaint handling increases.

As brand credibility is comprised of two components, trustworthiness and expertise (Erdem and Swait, 2004), we argue that customer satisfaction arising from effective complaint handling by a service brand is likely to result in increased perceptions of trustworthiness toward the brand. When satisfied with the outcome of a complaint, a consumer is more likely to believe that a service brand is willing (trustworthy) to continuously deliver their brand promises now and into the future. Thus,

H3. As satisfaction with complaint handling increases, brand credibility increases.

Customer satisfaction is often viewed in the literature in terms of a particular transaction, ignoring the importance of overall satisfaction as a long term process that impacts and guides consumer choices (Fournier and Mick 1999; Maxham and Netemeyer, 2002). While satisfaction with complaint handling is transaction specific (Homburg and Fürst, 2005), overall satisfaction is a long term *satisfaction with complaint handling* consequence which represents a consumer's cumulative perception of their overall experience with a brand. Overall satisfaction is defined as the degree to which a complainant perceives a company's general performance in a business as meeting or exceeding expectations (Maxham and Netemeyer, 2002). As satisfaction with complaint handling for a particular service failure is an outcome of a consumer's perception that justice has been served (that the service recovery efforts by a service brand meet or exceed expectations), this is likely to lead to greater long term satisfaction with the service brand (Maxham and Netemeyer, 2002). As noted by Orsingher

et al. (2010), satisfaction with the service brand's recovery efforts for a particular service failure incident tends to increase the general'stock'of overall satisfaction a consumer feels about the service brand. Thus,

H4. *As satisfaction with complaint handling increases, overall satisfaction increases.*

Sweeney and Swait (2008) found that service brand credibility increases overall satisfaction in telephone and retail banking services. They argue that when customers believe a firm is performing well and is delivering on its promises (being credible) this contributes to greater overall satisfaction. In this study however, given we are investigating the impact of a particular service failure incident and the complaint handling efforts designed to recover the service failure, we argue that overall satisfaction (arising from satisfaction with complaint handling) informs consumer perceptions of a service brand's credibility. Sweeney and Swait (2008) acknowledge that their model is continuously updated through customer-firm interactions, and that satisfaction is likely to update brand credibility. As such, since service brand credibility represents a summary statistic of the customer brand relationship forged over time (Sweeney and Swait, 2008), we argue it is likely to be explained in part by long term, enduring notions of customer satisfaction with the service brand that has been similarly forged over time. Thus,

H5. *As overall satisfaction increases, brand credibility increases.*

3. Research design

(Fig. 1) A hypothetical airline is the service brand employed to empirically test our conceptual model. The airline industry is a relational service industry where the brand focus is on customer experiences and interactions with the brand (Tuzovic, Simpson et al. 2014; Sweeney and Swait, 2008). In this study, we employ a scenario-based, online survey design (Fernandes. and Calamote, 2015; McCollough, Berry and Yadav, 2000), with four levels of (increasing) complaint handling methods (Levesque and McDougall, 2000) and a flight delay as the service failure (Grewal et al., 2008). When a consumer experiences a service failure, typically they expect the service provider to take action (Tax, Brown and Chandrashekaran, 1998), however the form of action may differ for individual consumers; some may be satisfied with an apology and a rescheduled flight, while other may demand a flight plus compensation. In general, service recovery strategies can consist of three distinct actions, either alone or in combination; *apology*, *compensation*, *apology* and *compensation* (Hart et al. 1990). An apology is considered the minimum action that can be taken (Bitner et al., 1990) and while an apology is better than no apology (Smith et al., 1999), we included the 'no apology' condition in order to establish a baseline. Compensation involves a monetary payment for the inconvenience the customer has experienced (Levesque and McDougall, 2000). Accordingly, each respondent was exposed to one of the four service failure responses made by the airline in order to capture all possible alternative actions. Hypothetical scenarios for the service failure were used as stimuli to maximise internal validity (Grewal et al., 2008; Mattila and Patterson, 2004; Casidy and Shin, 2015).

Panel data were purchased from a national online research firm in Australia, using an opt-in technique. An email was sent to 4000 panel members with 879 responses resulting in a response rate of 21.9%. This panel has been used previously with success and typically achieves responses rates between 5% and 10% (Zainuddin et al., 2013). Respondents were screened to ensure they had recently flown internationally with a commercial airline, resulting in a final sample size of 875. Following a similar procedure to Grewal et al. (2008), respondents read a scenario that described them arriving at an airport with their confirmation ticket and luggage
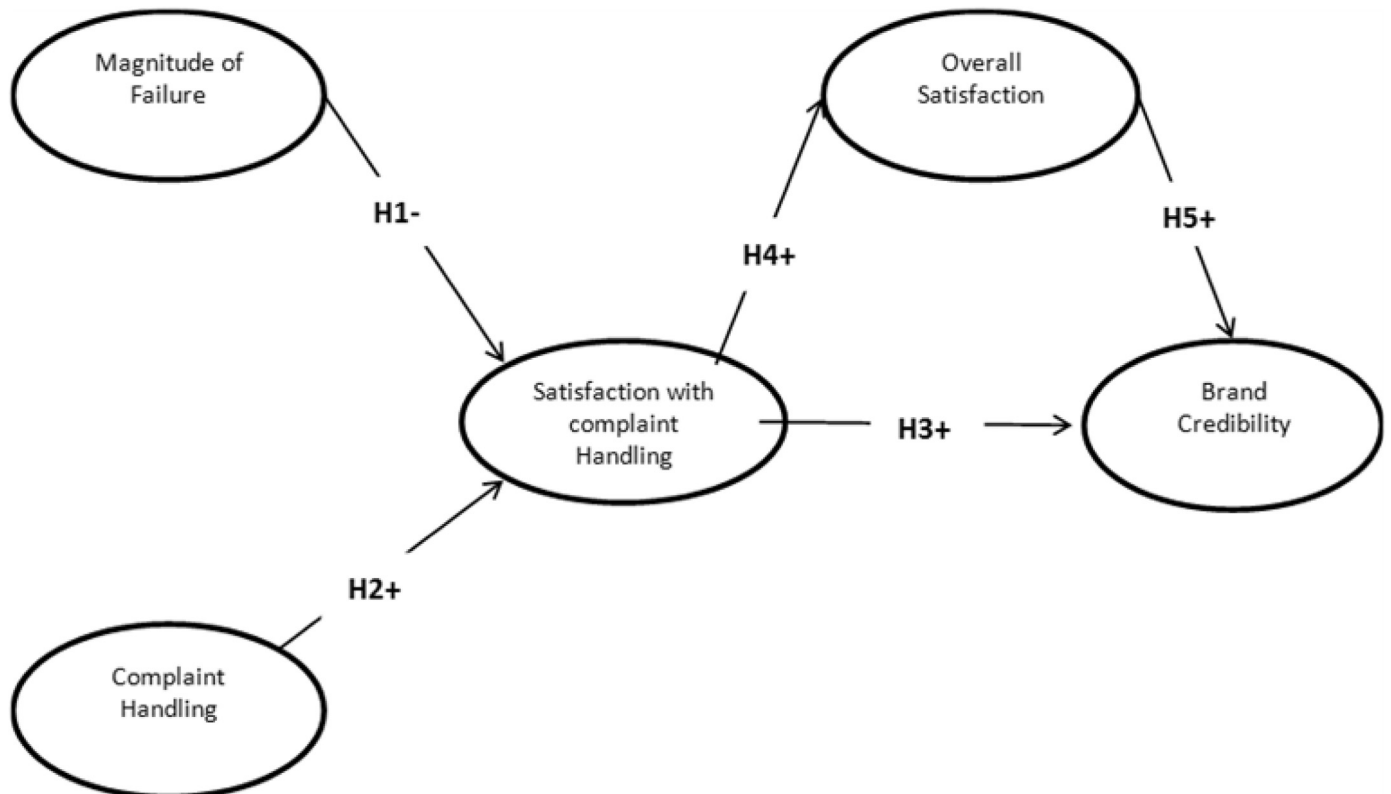

Fig. 1. Proposed Model.

ready to go on a long awaited holiday. The scenario explained that upon check in, they are advised there is a lengthy delay and the flight is likely to be more than three (3) hours late, which means they may miss a connecting flight. The scenario further explained that when they make a complaint to the airlines service representative the response they receive is one of the following; *nothing, an apology, compensation*, or, *an apology plus compensation* (Levesque and McDougall, 2000). To measure the focal constructs, multiple item scales were pooled from the literature. For *brand credibility*, the 7-item scale from Erdem and Swait (2004) was adopted. To measure *magnitude of failure*, the 3-item scale by Varela-Neira et al. (2010) was used. Satisfaction with complaint handling was measured using a 5-item scale by Vázquez-Casielles et al. (2010). *Overall satisfaction* was adopted from Montoya-Weiss et al. (2003). All items were measured using a 7-point Likert scale and anchored by (1)= not at all satisfied/strongly disagree to (7)= completely satisfied/strongly agree. Respondents were also asked to report demographic information, prior flying experience and frequency of travel.

4. Results

The hypotheses were tested using structural equation modelling (SEM) and the results show support for all five hypotheses. The two-step method was used (Anderson and Gerbing, 1988) with the measurement model assessed followed by the structural model. Tests for any mediation effect of satisfaction with complaint handling and overall satisfaction were also performed indicating partial mediation.

4.1. Measurement model

Psychometric properties of the constructs were evaluated by conducting CFA using AMOS 21. The fit of the CFA is acceptable, with $\chi2=202.348$, df=56, $\chi2$/df=3.613, (p <0.01), comparative fit index (CFI)=0.986, incremental fit index (IFI)=0.986, standard root mean square residual (SRMR)=0.035 and root mean square error of approximation (RMSEA)=0.055. Considering all these goodness of fit measures, the model has adequately suitable fit to the data from the sample (see Table 1). Items having cross (<0.3) or poor (<0.5) factor loading were deleted. Table 1 shows that the values of Composite Reliability scores of all constructs were above the recommended cut-off i.e. 0.70, demonstrating good reliability (Nunnally and Bernstein, 1994). Table 1 further demonstrates that all item loadings are significant (p <0.01), in support of convergent validity (Gerbing and Anderson, 1988). Inspection of inter-factor correlation matrix revealed (see Table 2) moderate correlations between *satisfaction with complaint handling* and *brand*

Table 2
Correlations matrix.

Constructs	BCRED	MOF	SATCOM	SR	OS
BCRED	1				
MOF	-0.318	1			
SATCOM	0.434	-0.586	1		
COMPHAND	0.046	-0.078	0.109	1	
OS	0.584	-0.22	0.275	0.031	1
Mean	3.798	2.120	2.558	2.410	5.15
SD	1.692	1.535	1.585	1.09	1.50

(N=875), All values are significant at p < 0.01 level. Where; **BCRED**= Brand credibility, **MOF**= Magnitude of failure, **SATCOM**= Satisfaction with complain handling, **COMPHAND**= Complaint Handling and **OS**= Overall satisfaction.

credibility and *magnitude of failure* constructs. Examining these moderate correlations between *magnitude of failure* and *satisfaction with complaint handling* and *brand credibility* and *overall satisfaction*, Chi-square difference test (Segars, 1997) was used to assess discriminant validity between each pair of constructs.

In this method, the first model analysed through CFA is a model where the two constructs are not correlated, while the second is one where we allow for correlation. Each model presents a value for Chi-square and degrees of freedom (df). After doing the difference between the values of the two models we can see if the test is significant or not (Segars, 1997; Zait and Bertea, 2011). A significant value of chi-square difference test represents the discriminant validity between each pair of constructs in the model. The chi-square difference test is significant for *magnitude of failure* and *satisfaction with complaint handling* (Δ $\chi2(1)=372.852$ (9) 45.714(8)=327.138, p <0.01), *magnitude of failure* and *brand credibility* (Δ $\chi2(1)=348.201$ (20) -253.849 (19)=94.352, p <0.01), *satisfaction with complaint handling* and *brand credibility* (Δ $\chi2(1)=433.932$ (20) 258.183(19)=175.749, p <0.01) and *overall satisfaction* and *brand credibility* (Δ $\chi2(1)=579.166(10)$ 230.79=348.376, p <0.01).

4.2. Structural model

In order to test the hypotheses, relationships were modelled and tested using Amos 21. The fit of the structural model is acceptable, as shown in Table 3. Chi-square $\chi2$ (59)=210.881 (p <0.01) and root mean square error of approximation (RMSEA)= 0.054. Comparative fit index (CFI)=0.985, incremental fit index (IFI)=0.986, and standard root mean square residual (SRMR)= 0.048. A direct negative impact of *magnitude of failure* ($\beta=-.581$, P <0.01) and *complaint handling* ($\beta=.064$, P <0.05) on *satisfaction with complaint handling* was found. Furthermore, *satisfaction with complaint handling* has a positively significant impact on *overall satisfaction* ($\beta=.222$, P <0.01) and *brand credibility* ($\beta=.233$,

Table 1
CFA results for multi-item constructs, following item purification.

Construct	Item number	Items description	Estimate	Z-value	CR	AVE
MOF	MOF1	In your opinion, this service failure is **a minor problem(1), major problem(7)**	.960	1	0.944	0.849
	MOF2	In your opinion, this service failure is **a little inconvenience (1), a big inconvenience (7)**	.901	47.987		
	MOF3	In your opinion, this service failure is **a mild failure (1), serious failure (7)**	.903	48.260		
BCRED	BCRED1	The airline delivers what it promises.	.879	1	0.928	0.728
	BCRED2	The airline service claims are believable.	.892	56.975		
	BCRED3	The airline has a name you can trust.	.937	42.533		
	BCRED4	The airline reminds of someone who's competent and knows what he/she is doing.	.932	42.062		
	BCRED5	The airline pretends to be something it isn't.	.572	18.760		
SATCOM	SATCOM1	I am satisfied with the way my complaint was dealt with and resolved.	.892	1	0.951	0.730
	SATCOM3	I am satisfied with the treatment from the airlines employees involved in resolving my complaint	.935	45.044		
	SATCOM4	I am satisfied with the produce (way of working) and the resources used to resolve my complaint	.964	48.182		

(N=875), All items were measured using seven-point scales anchored by 1="strongly disagree" and 7="strongly agree" unless otherwise stated. All item loading are significant at p < 0.01 level, where **MOF**= Magnitude of failure, **BCRED**= Brand credibility and **SATCOM**= Satisfaction with complain handling.

Table 3
Structural model results.

Hypotheses	Estimate	Z-value	Hypothesis
H1. *Magnitude of failure* has a significant negative impact on *satisfaction with complaint handling*.	−.581**	−18.615	Supported
H2. *Complaint handling* has a significant positive impact on *satisfaction with complaint handling*.	.064*	2.221	Supported
H3. *Satisfaction with complaint handling* has a significantly positive impact on *brand credibility*.	.233**	6.478	Supported
H4. *Satisfaction with complaint handling* has a significantly positive impact on *overall satisfaction*.	.222**	5.280	Supported
H5. *Overall satisfaction* has a significantly positive impact on *brand credibility*.	.504**	17.010	Supported
Variance explained (%) for (Satisfaction with complaint handling)	35.0		
Variance explained (%) for (Overall satisfaction)	7.7		
Variance explained (%) for (Brand credibility)	41.0		

Two tailed tests

* $p < 0.05$
** $p < 0.01$

$P < 0.01$). OS ($\beta = .504$, $P < 0.001$) also has positive and significant relationships with *brand credibility*. Overall variance explained ranged from 8.1% (overall satisfaction) to 41.3% (*brand credibility*). Accordingly, all five hypotheses were supported (see Table 3).

As discussed earlier, consumers expect service providers to take action to remedy service failures (Tax, Brown and Chandrashekaran, 1998), however the form of expected action may differ between consumers. In the context of air travel, some may consider a flight delay as 'par for the course' and expect no recovery other than a rescheduled flight, while others may demand free flights, upgrades and compensation. A one-way between subjects ANOVA was employed to determine whether different methods of complaint handling were effective at increasing satisfaction with complaint handling in customers. The means and standard deviations are presented in Table 4.

Results demonstrates that there was a significant effect of complaint handling method on satisfaction with complaint handling at the $p < 0.05$ level for the four conditions [$F(3, 871) = 3.547$, $p = .014$]. Examining significant difference in mean scores of complaint handling methods, post hoc comparisons using the Tukey HSD test were conducted. The test indicated that the mean score for the 'No Recovery' condition (M = 2.400, SD = 1.484) was significantly different (p = .014) than the combined condition 'Apology and Compensation' (M = 2.811, SD = 1.549). However, the 'Apology' (M = 2.442, SD = 1.505, p = .286) and 'Compensation' condition alone (M = 2.656, SD = 1.470, p = .052) did not significantly differ from the 'No Recovery' condition. Surprisingly, these results suggest that an apology without compensation (and visa-versa) has no effect on the customers' level of satisfaction with complain handling method. Finally, we wanted to ensure the effect on brand credibility was not related to a consumers' overall satisfaction with the airline. Accordingly, a one-way ANCOVA was conducted to determine a statistically significant difference between Complaint Handling Methods on Satisfaction with

Complaint Handling, controlling for Overall Satisfaction. A non-significant effect of Complaint Handling methods on satisfaction with complaint handling after controlling for overall satisfaction (F (1), 869) = .393, p = 5.31) when control was established on overall satisfaction.

4.3. Mediation analysis

(Fig. 2) We tested direct and indirect effects for a mediation effect, as guided by Hayes (2009), Rucker et al. (2011), and Vaske and Kobrin (2001). The relationship between the independent variable (IV) and dependent variable (DV) is represented by relationship 'c' in Tables 4 and 5; (2) the relationship between the IV and mediator variable (MV) is represented by relationship 'a' in Tables 4 and 5; (3) the relationship between the mediator and the DV is represented by relationship 'b' in Tables 4 and 5; and (4) the original relationship between the IV and the DV, when the mediator is added, is represented by relationship c* in Tables 4 and 5.

Once mediation is detected significant, it is then examined by bootstrapping the product of the IV → MV and MV → DV effects (Delcourt et al., 2013; Shrout and Bolger, 2002). If the direct effect between the IV and the DV is non-significant, there is full mediation. If all effects remain significant, there is partial mediation. By applying a non-parametric bootstrapping procedure, we tested the mediating role of *satisfaction with complaint handling* on the relationships between *magnitude of failure* and *overall satisfaction*, and between *magnitude of failure* and *brand credibility*. We further tested the mediation of *overall satisfaction* for the effect of *satisfaction with complaint handling* on *brand credibility* (Delcourt et al., 2013; Preacher and Hayes, 2008; Shrout and Bolger, 2002).

Table 4 shows that *satisfaction with complaint handling* partially mediates the relationships between *magnitude of failure* and *brand credibility*, and *magnitude of failure* and *overall satisfaction*. Table 5 demonstrates the partial mediation of *overall satisfaction* between

Table 4
Mediated role of satisfaction with complaint handling.

Hypotheses	Dependent variable (DV)	a MOF→ SATCOM	b SATCOM→ DV	c MOF→ DV	c*MOF→ DV (Mediator Controlled)	Confidence Interval (CI) (LLCI) - (ULCI)	Sobel's Z-value	Type of Mediation
SATCOM mediates the relationship between MOF and OS	OS	−.581**	.222**	−.090	−.129**	(−.172) – (−.084)	−5.178*	Partial
SATCOM mediates the relationship between MOF and BCRED	BCRED	−.581**	.233**	−.070	−.246**	(−.264) –. (−168)	−8.659*	Partial

Two tailed tests, LLCI = Lower level confidence interval, ULCI = Upper level confidence interval. Where; **BCRED** = Brand credibility, **MOF** = Magnitude of failure, **SATCOM** = Satisfaction with complain handling, and **OS** = Overall satisfaction.
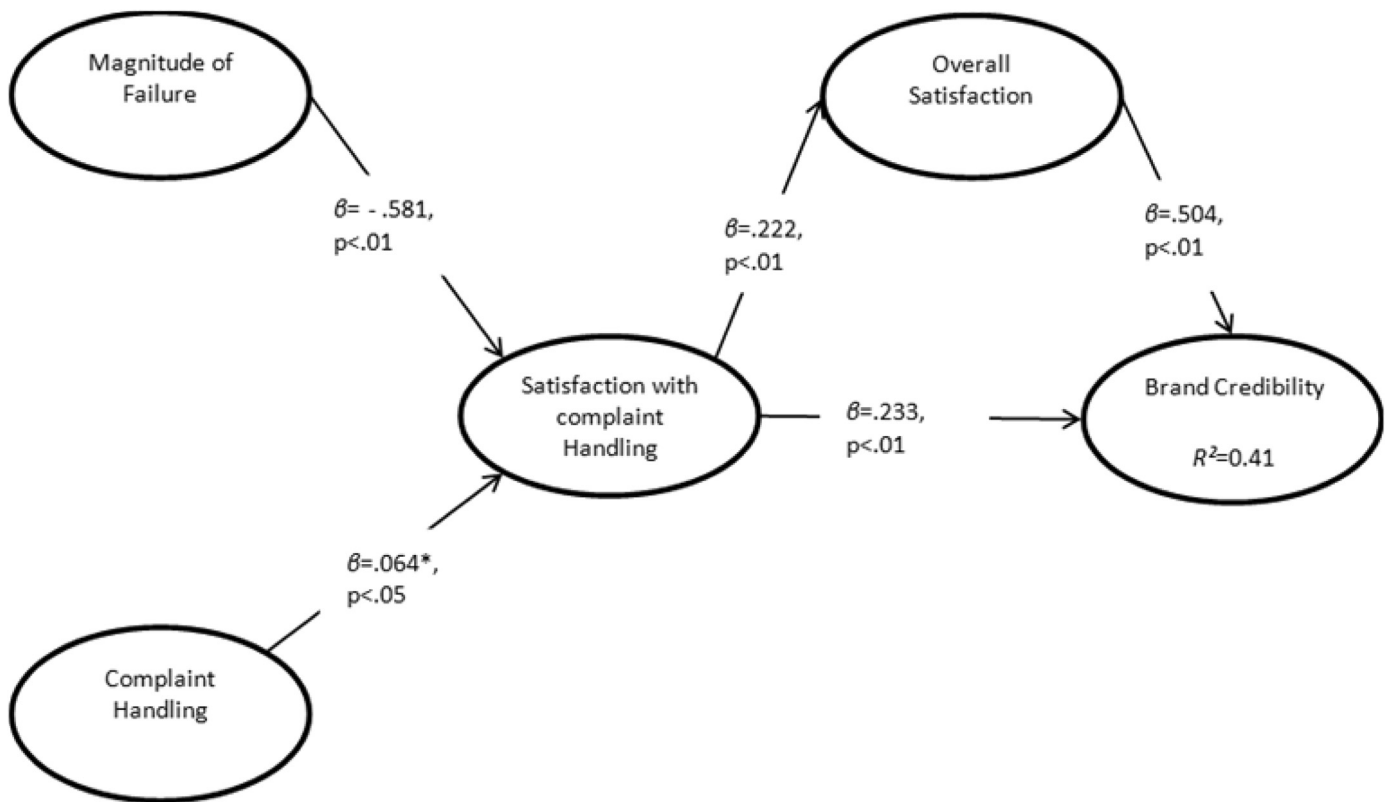
* $p < 0.05$
** $p < 0.01$

Fig. 2. Final Model.

Table 5
Mediated role of overall satisfaction.

Hypotheses	Dependent variable (DV)	a SATCOM→ OS	b OS→ DV	c SATCOM→ DV	c*SATCOM→ DV (Mediator Controlled)	Confidence Interval (CI) (LLCI) - (ULCI)	Sobel's Z-value	Type of Mediation
OS mediates the relationship between SATCOM and BCRED	BCRED	.222**	.504**	.233**	.112**	(.105) -(.167)	7.469*	Partial

Two tailed tests, LLCI= Lower level confidence interval, ULCI= Upper level confidence interval. Where; **BCRED**= Brand credibility, **MOF**= Magnitude of failure, **SATCOM**= Satisfaction with complain handling, and **OS**= Overall satisfaction

* p < 0.05
** p < 0.01

satisfaction with complaint handling and its outcome variable (i.e. brand credibility). In order to further test the mediation effect of mediators, we use Sobel's test and confidence interval (CI) for each mediation and report significant Sobel z-values and values of lower level confidence interval and upper level confidence interval in Tables 4 and 5. Sobel test statistics support all of our mediation results.

5. Discussion

While earlier studies have examined the consequences of brand credibility (Baek and King, 2008, 2011; Ghorban and Tahernejad, 2012; Sweeney and Swait, 2008), the objective of this study was to examine the impact of antecedents on brand credibility, in this case; service failure, responses to such failures and satisfaction with service recovery methods. The data demonstrates that when a service failure occurs, service brand credibility is affected by how the complaint is handled, the magnitude of the failure and the overall satisfaction generated. When the service failure is perceived as severe, satisfaction with the complaint reduces and this

then reduces service brand credibility. The findings of this study highlight the importance of satisfaction with the complaint handling process in mediating the relationship between complaint handling methods and service brand credibility.

We contend that consumers expect organisations to make efforts to resolve service failures (Tax et al., 1998) however these expectations may differ for individual consumers. Our respondents were presented with four different levels of service recovery efforts, from 'no recovery efforts' to an 'apology with compensation'. Our immediate results illustrate that means scores increased in line with the recovery efforts and that significant statistical differences existed between the extremes ('no recovery efforts' to an 'apology with compensation'). Surprisingly we found no significant differences were detected between 'no recovery efforts', 'apology' and 'compensation', although 'compensation' was only marginally non-significant (p=.052), suggesting that compensation is a more effective recovery tool than an apology. We proffer that such recovery efforts, when offered in isolation, have no impact on the consumers' level of satisfaction and therefore overall brand credibility. Even though the receipt of compensation is considered better than an apology alone, customer satisfaction

remains non-significant. Together however, both an apology and compensation appear to significantly increase customer satisfaction with service recovery efforts. This important finding contends organisations must offer a full range of service recovery mechanisms, such as those listed and other options like upgrades, meal vouchers and accommodation, to protect brand credibility in the event of a service failure. Further, while consumers may demonstrate attitudinal loyalty toward a major brand and therefore overall satisfaction with the brand, we wanted to check that the impact on brand credibility was related to satisfaction with the complaint handling process and not the overall satisfaction with the brand. Our results demonstrated a non-significant effect when control was established on overall satisfaction. This indicates a consumers' satisfaction with the complaint handling process has a positive impact on the organisations' brand credibility, independent of overall satisfaction with the firm.

It was noted that although significant, the effect size between the complaint handling methods (the type of service recovery offered) and satisfaction with complaint handling efforts was small. This suggests that other moderators are at play and we suggest future work should seek to add other moderators to our model. It is understandable that complaint handling is just 'part of the value' that a consumer receives from the overall process of service recovery, therefore its impact on satisfaction would be marginal unless a customer's benefits (recovery) exceed from the cost associated with service failure. Previous research has shown that customers' perceptions of complaint handling methods are often moderated by trust (Orsingher et al., 2010) between the two parties, past experience and frequency of transaction (Maxham and Netemeyer, 2002). Similarly, satisfaction with the complaint handling process accounts for only a small amount of the variance in consumer overall satisfaction. This suggests that consumers don't feel satisfied by just receiving a 'stock-standard' response, i.e. an apology or compensation, and require a full gambit of service recovery efforts. This also indicates that other predictors may will enhance the level of customer overall satisfaction. Accordingly, managers of service organisations should work hard on complaint handling methods that generate trust and ensure that service will be recovered. A non-effective complaint handling method ruins the cultivation of perception of effective service recovery process and consequently brand credibility.

5.1. Theoretical implications

Overall, this study contributes to the literatures in branding and services marketing and updates the brand credibility nomological network in terms of its drivers. In addition to a high level of consistency, brand investment, clarity (Erdem and Swait, 1998) and endorser credibility (Spry et al., 2011), this study demonstrates that organisational response to service failure (complaint handling), perceived magnitude of service failure and satisfaction with complaint handling also impact a service firm's brand credibility. Further, this work has responded to calls to examine the impact of service failure across new contexts, in this instance the airline industry and in relation to severity of failure (Mostafa et al., 2015). Our findings show effective complaint handling results in satisfied consumers, which in turn increases the brand credibility of service organisations and are consistent with the justice dimensions of equity theory (Adams, 1965; Walster et al., 1973) and social exchange theory (Homans, 1958). We contribute to extant brand credibility literature by demonstrating that complaint handling efforts aimed at service recovery, results in higher perceived brand credibility. Our findings also support the complaint handling-customer loyalty relationship, where customer loyalty can be greater following a service failure, if a consumer is the recipient of a well-managed complaint (Smith et al., 1999).

5.2. Managerial implications

The findings of this study reveal the important role front line teams have in maintaining a service firm's brand credibility. Accordingly, we reiterate the need for complaint handling procedures that are implemented by competent front line staff (Hess et al., 2003). In a service organisation the customer's brand experiences depend greatly moments on truth. Many times these moments of truth involve front line staff who deliver the firm's brand promises (Morhart et al., 2009) and as our study shows, the service firm's brand credibility. Our results show that the magnitude of failure negatively impacts service brand credibility through satisfaction with complaint handling. Overall, this strongly suggests that front line staff should be empowered to respond differently to individual customers (Hasan et al. 2014), rather than having a fixed, one-size-fits-all approach (Mattila, 2001). Certainly, it would be prudent for staff to identify those customers for whom a service failure is particularly perceived as more extreme, and to be able to respond in a way they believe may effectively mitigate the loss. The ability to help customers put a service failure in context, reduce any perceived risk associated with the failure or to attribute blame reasonably may alter the perception of the severity of the failure and thus increase satisfaction with the complaint. This in turn, increases a consumer's perception of a service firm's brand credibility.

5.3. Limitations and areas for future research

The results of this study, while important, are bound by the context of a number of limitations, which then offer areas which may be fruitful for future research efforts. First, data were collected in one country, Australia. A general weakness of the brand credibility literature is a lack of external validity tests. With the exception of Erdem et al., (2006) and Spry et al. (2011), little work reports on empirical evidence outside the US. Hofstede (2001) has highlighted a number of response patterns that are different in different cultures and Wardrobe (2005) and LeBaron (2003) also maintain that cultures have a significant impact on the way communication is carried out between the exchange partners. Accordingly, future research should seek to provide empirical evidence from culturally and economically dissimilar countries to the US so that we can see if service brand credibility is a universal phenomenon or one that exists only in what Steenkamp (2005) refers to as 'the US Silo'.

Second, this study uses cross sectional data, similar to other studies in services (Sweeney and Swait, 2008) and brand credibility (Erdem and Swait, 2004). However, it would be meaningful to examine how time influences service brand credibility over a period of multiple service failures that can occur during the long term social exchange that is a consumer brand relationship. As such, longitudinal research is welcome in this research area. Third, it would be interesting to test the moderation effect of variables such as trust, involvement, perceived value of relationship with airline, past experience and frequency of transactions on the predictors and dependent variables of satisfaction of complaint handling. As such, we suggest this data should be gathered and tested. Fourth, this study used a single industry scenario and future investigations should focus on comparing different services industries, hospitality, banking or retail. It would also be interesting to examine brands within an industry that hold different competitive positions, such as a premium airline versus a budget airline, to see what impact this has on the relationship between service failures, complaint management and brand credibility. Finally, social media is increasingly being used as a tool by consumers to vent complaints and by service organisations to respond to these complaints. Future research should investigate the effect

of complaint handling on social media complaints and the effect this has not only on the consumer but on anyone else who reads the complaint on a social media channel.

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