ABSTRACT

Underpinned by coping theory, this study investigates the extent to which service recovery strategies (e.g., firm-level apologies; compensation; feedback loops) stimulate customer forgiveness and post-trust following service failure. Adopting a two-stage explanatory sequential mixed-method, it investigates the interplay between prior knowledge of service providers, service failure incident familiarity, recovery strategies, forgiveness, and consumer evaluations within an Iranian food delivery platform. Survey responses (n=925) reveal the role of recovery strategies in stimulating forgiveness and post-trust following service failure. Multi-group analyses reveal gender differences therein. Quantitative findings are extended narratively by customer interviews (n=45), which suggest proactive, open, and immediate recovery protocol enactment holds greatest value in avoiding negative consumer responses to service failure, mitigating negative outcomes (e.g., anger, frustration). This study thus expands extant understanding of foodservice platform consumption behaviors, providing valuable practical insight for industry stakeholders with regards to the nuances of service failure and recovery in the digital age.

1.Introduction

Service failure occurs when service experiences do not align with consumer expectations (Harrison-Walker, 2019a). This incongruence can stimulate feelings of betrayal, with consumer responses to service failure ranging from switching provider and sharing negative word-of-mouth through to engaging in revenge behaviours detrimental to the reputation and/or profitability of the 'offending' firm (Tan *et al*., 2021). To this end, NewVoiceMedia (a leading cloud-based ICT provider) published a 2018 whitepaper suggesting that 67% of consumers *would* switch providers following service failure; with poor service estimated to cost US businesses $62billion annually. Further, Accenture (2020) suggested that 80% of these potential 'service switchers' could be retained if appropriate reconciliation and resolution efforts were undertaken.

Accordingly, this study investigates the methods foodservice firms employ in response to service failure, drawing insights from customers of leading Iranian food delivery platform SnappFood. Herein, 'service recovery' captures all firm-driven actions deployed to counter perceived service issues, with the aim of altering consumers' negative post-service evaluations and attitudes with customer retention firmly in-mind (Wei *et al*., 2020). We thus seek to examine how organisations such as SnappFood can utilise service recovery methods to retain consumers whilst engendering forgiveness and re-establishing consumer trust in the process (Lu *et al*., 2020).

Service recovery is of particular importance in foodservice industries where, for example, delays or issues with food quality/billing can result in the experience being deemed below expectations (Namkung *et al*., 2011). This can range from trivial waiting time errors to more severe food poisoning, quality, and hygiene failures. Further, since early-2020, global Covid-19 lockdown restrictions have influenced consumers' foodservice preferences, with increased inclination towards home delivery stimulating growth in the trend of established traditional restaurants partnering with third-party foodservice platforms (Okumus *et al*., 2018; Wood, 2021).

However, this transition can prove challenging. The third-party nature of such delivery platforms reduces the level of control afforded to restaurants; with this adding complexity to the relationship between service failure and the timely implementation of service recovery protocols. Yet, Cho *et al*. (2019) contend that, across *all* demographic groups, the extent to which customers perceive food delivery platforms as 'trustworthy' remains paramount. Thus, with home delivery now successfully incorporated into business operations for many restaurants (Wood, 2021), onus is increasingly placed on partnering with

delivery platforms with demonstrable success in ensuring service recovery post-failure (i.e., those capable of developing consumer post-trust following sub-optimal service).

Many studies thus focus on how consumers 'cope' with service failure through negative emotional responses such as anger and frustration (Strizhakova *et al*., 2012), with little attention paid to whether positive coping strategies, such as openness to provider-led problem-solving mechanisms (e.g., feedback/complaint apparatuses; offering future discounts) can stimulate service recovery (Weitzl and Hutzinger, 2019). While extant research offers insight into *reactive* service recovery in response to angry consumers sharing negative word-of-mouth (Sengupta *et al*., 2015), there remains little understanding of consumer forgiveness and post-trust following service failure. Yet, company-initiated service recovery methods may encourage future re-purchase behaviour, positive word-of-mouth, and brand advocacy (Xie and Peng, 2009).

Nevertheless, scholarly consensus suggests that coping theory may provide the central framework required to understand consumer responses to service recovery procedures (Sengupta *et al*., 2015). However, as perceptions of service failure vary considerably across cultures, a range of contexts and consumer identities must be analysed in order to better-understand the nuances of consumer coping (Luo and Mattila, 2020). Service recovery research is often conducted in Western contexts (Luo and Mattila, 2020). Yet, understanding its machinations in the Middle-Eastern context is important as consumers may be less likely to take risks, complain, and initiate conflict (Shams *et al*., 2020); raising questions with regards to whether company-initiated proactive service recovery strategies can effectively respond to service failures therein (Ozuem *et al.,* 2017). We address this gap by focusing on Iranian food delivery app (SnappFood) customers to answer the following:

> **RQ1.** How does consumers' familiarity and knowledge of SnappFood influence their response to service recovery mechanisms (compensation; apologies; opportunities to voice concerns)?
>
> **RQ2.** To what extent can SnappFood's company-initiated and proactive service recovery mechanisms stimulate consumer forgiveness and trust following service failure?
>
> **RQ3.** What experiential aspects of service failure influence the consumer recovery journey?

We deploy a sequential mixed-method research design. Echoing the adoption of *coping theory* common across literature, we first quantitatively examine whether incident familiarity and consumers' subjective knowledge of the service provider influence their responses to common service recovery measures, which typically act as coping mechanisms (**RQ1**). Subsequently, we test the extent to which these factors (receiving an apology, compensation, and "being heard") stimulate forgiveness and post-trust (**RQ2)**. Thereafter, semi-structured interviews with 45 SnappFood customers were conducted and analysed, with emphasis placed on exploring their experiences of service failure/recovery. This provides insight into how SnappFood's existing approach shapes consumer responses to service recovery mechanisms, alongside how forgiveness and post-trust are developed following service failure (**RQ3)**. Insights derived therein underpin concluding suggestions on the implementation of service recovery strategies post-failure.

2. Theoretical Background

2.1 Coping theory

Coping theory contends that consumers employ multiple strategies to reduce stress and rationalise problems (Lazarus and Folkman, 1984). In service delivery and consumption contexts, customers employ these coping mechanisms when confronted with service failure as a means of rationalising (and recovering from) negative encounters (Sengupta *et al*., 2015). Lazarus and Folkman (1984) contend that coping strategies are broadly grouped into two categories: emotional and problem-focused. Emotional coping strategies are typically passionate, internal, or personal methods of dealing with negative service encounters (Gabbot *et al*., 2011), and include venting at service providers (Sengupta *et al*., 2015), denial (Tsarenko and Strzhakova, 2013), anger (Strizhakova *et al*., 2012), and frustration (Gelbrich, 2010).

Conversely, problem-solving coping strategies are 'active' responses; prioritising fair redress and recovery post-failure (Strizhakova *et al*., 2012). When adopting a problem-solving approach, consumers seek to alter the source of stress by resolving the problem, typically through negotiated compensation or the provision of feedback perceived as being "heard" by the service provider which has the potential to be acted upon (Gabbott *et al*., 2011). These active mechanisms allow consumers to cope with failure in a more positive manner, stimulating forgiveness as opposed to anger or frustration (Harrison-Walker, 2019a).

Yet, literature often focuses on the negative, emotional coping strategies adopted by consumers following service failure, as outlined in **Table 1**. Thus, understanding of how

active service recovery methods (e.g., apologising; compensation; giving consumers a "voice") can encourage positive post-failure coping strategies (e.g., forgiveness and post-trust) remains under-developed (Lu *et al*., 2020).

[TABLE1]

Table 1 also demonstrates that research overlooks mixed-method approaches and qualitative insight when investigating service failure/recovery (Witell *et al*., 2020). Non-Western cultures and food delivery sectors are also under-researched, despite the contention that service failure is ubiquitous and perceived trustworthiness serves as an important determinant of firm success irrespective of context (Cho *et al*., 2019; Namkung *et al*., 2011). Thus, while underpinned by coping theory, by adopting a mixed-method approach to understanding service failure and recovery within a non-Western foodservice consumption context, this study methodologically, conceptually, and contextually extends extant research.

3. Conceptual framework and hypotheses development

3.1 Subjective knowledge of service provider and incident familiarity

Customers with varying knowledge levels of a given service provider and/or service setting typically adopt different coping strategies when it comes to rationalising service failure. For example, knowledgeable consumers, those who possess in-depth understanding of a service provider, service processes, and service expectations are more likely to experience, recognize, and reflect upon incidents of service failure (Manika *et al*., 2017). This 'incident familiarity' captures consumer awareness within service environments more generally, alongside the extent to which they are informed about service failures therein (Manika *et al*., 2017). Previous studies indicate that consumers with greater subject knowledge are more likely to conduct informational searches online to further enhance understanding and gain insight into firms/brands (Utkarsh *et al*., 2019). Doing so, these consumers develop greater awareness of (and sensitivity to) service failure. Accordingly:

> **H1**. Subjective knowledge of service providers is positively related to incident familiarity.

3.2 Service Recovery Strategies

The term 'service recovery' captures the approach employed by businesses to identify and develop resolutions *with* consumers, helping them to cope with service failure (Wolter *et al*., 2019). Studies exploring common service recovery strategies are presented in **Table 2.**

[TABLE2]

Service recovery strategies identified across literature can be divided into those that are company-initiated and proactively offered to consumers (apologies, compensation, offering a forum to voice concerns) versus those associated with the individualised delivery of service recovery efforts (empathy, immediacy, accountability). Company-initiated recovery efforts are problem-solving mechanisms that can be proactively implemented to restore the firm-consumer relationship by finding solutions and reducing post-failure stress (Gabbot *et al*., 2011). We focus on these mechanisms (apology, compensation, and consumer voice) hereafter.

3.2.1Apology: Organisational apologies are messages to consumers whereby the service provider accepts responsibility for an incident and conveys regret to those affected (Harrison-Walker, 2019a). The issuance of apologies is typically taken by service providers as a first response to service failure, and can be delivered in a public capacity or directed towards specific failure cases and individuals. The perceived empathy and intensity of organisational apologies is a key driver of consumer coping and service recovery in both online and offline platforms (Guo *et al.,* 2022; Kaur *et al.,* 2022). Manika *et al*. (2017) suggest that the extent to which consumers are informed about service failures increases their likelihood of seeing organisational apologies via social media. Similarly, Brinol *et al*. (2015) suggest incident familiarity increases exposure to apology messaging irrespective of apology sincerity. Thus:

> **H2**: Incident familiarity is positively related to receiving a service failure apology.

3.2.2Compensation: In contrast to apologies, compensation represents tangible recompense for service failure, coming in the form of refunds, coupons, discounts, or the offer of repeat experiences (Wei *et al*., 2020). Compensation measures attempt to restore the provider-customer relationship by 'making-up' for perceived losses endured via service failure (Kaur *et al.,* 2022). Wolter *et al*. (2019) suggest familiarity and self-association with a brand may

result in greater consumer entitlement with regards to compensation. Strong provider-consumer relationships also provide customers with the familiarity to comfortably seek compensation (Li *et al*., 2016). Hence:

> **H3**: Incident familiarity is positively related to receiving compensation post-service failure.

3.2.3Voice: Voice refers to customers having the opportunity to complain post-failure, allowing them to explain their feelings to the offender (Harrison-Walker, 2019a). This can be proactive on the part of the business who may, for instance, openly solicit consumer feedback on how to rectify service failure in both online and offline contexts (Kaur *et al.,* 2022). Informed and knowledgeable consumers are more likely to raise complaints, and familiarity with service providers' complaints procedures may encourage consumers to voice concerns (McQuilken and Robertson, 2011). Therefore:

> **H4**: Incident familiarity is positively related to consumers' post-service failure voice.

3.2.4Forgiveness

Forgiveness captures consumers' willingness to forego retaliation following service failure, with emphasis instead placed on developing future positive, constructive service exchanges (Yuan *et al*., 2020). Yet, Harrison-Walker (2019a) asserts that forgiveness is overlooked as a consumer coping strategy and that it should be core to service recovery modelling. Thus, we also examine the relationship between organisational apologies, compensation, voice, and post-failure forgiveness.

Consumers typically favour empathetic and apologetic service recovery strategies (Azemi *et al*., 2019); Wei *et al*. (2020) encourage firms to share sincere apologies that politely explain the situation in order to elicit consumer forgiveness. Lu *et al*. (2020) suggest heart-felt and personal apologies more effectively stimulate consumer forgiveness than economic compensation as compensatory strategies are complex and inappropriate in some contexts (Harrison-Walker, 2019b). Yet, studies also contend that consumers prioritise compensation-based coping strategies when they incur financial losses due to service failure (Azemi *et al*., 2019). Further, literature stresses the importance of allowing consumers to voice concerns and negative feedback, emphasising its ability to stimulate positive post-

failure resolutions (McQuilken and Robertson, 2011). Indeed, Harrison-Walker (2019a) claims it is important for consumers to feel 'heard' as this directly influences reconciliation and forgiveness. The relationship between post-failure recovery mechanisms and consumer forgiveness extends to online and/or offline peer-to-peer contexts, with increasing calls for greater investigation of consumers' responses to service failures across hospitality industry sharing economy platforms (Guo *et al.,* 2022; Kaur *et al.,* 2022; Shugair *et al.,* 2021). Thus:

H5: Following service failure, apologies can stimulate forgiveness.

H6: Following service failure, compensation can stimulate forgiveness.

H7: Following service failure, giving voice can stimulate forgiveness.

3.2.5 Post-trust evaluations of service failure and recovery

Consumer trust captures a belief that a service is competent, sincere, and delivered with integrity (Bozic, 2017). Therefore, post-trust captures whether consumers perceive that service providers can once again meet normalised relational expectations after the firm-consumer relationships is fractured (e.g., following service failure). Post-trust is conceptually positioned following negative events (Xie and Peng, 2009), with the reparation of trust important in stimulating service recovery under such circumstances. Trust reparation is particularly important for food delivery platforms (Cho *et al*., 2019); according to FoodThink, such companies must build a foundation of trust into their business model in order to be successful (Sexton, 2019). Yet, there remains limited understanding of the determinants of post-trust within the foodservice context (Bozic, 2017).

Nevertheless, literature supports the relationship between organisational apologies and trust reparation (Kaur *et al.,* 2022). Yet, few studies explore the influence of compensation on post-trust; it is, however, suggested financial resolutions can turn negative impressions into positive irrespective of online/offline context (Kaur *et al.,* 2022; Ozuem *et al.,* 2017). Tan *et al*. (2021) suggest that providing offers as compensation can encourage consumers to return to firms/brands following service failure, mending relationships and stimulating post-trust in-turn. Further, listening, responding to, and engaging with negative feedback can improve consumers' perceptions of how 'trustworthy' a service provider is (Sparks *et al*., 2016). If an organisation demonstrates openness to receiving and acting upon negative feedback, consumer trust can be enhanced following service failure (Umashankar *et al*., 2017). Similarly, consumers typically place greater trust in organisations if feedback mechanisms are clearly articulated (Stevens et al., 2018). Finally, Zhang (2012) states that the propensity

for consumers to forgive service failure positively influences trust reparation, with this echoed by Xie and Peng (2009) who highlight the importance of forgiveness in rebuilding consumer trust following failure. Therefore:

H8: Following service failure, apologies can stimulate post trust.

H9: Following service failure, compensation can stimulate post trust.

H10: Following service failure, giving voice can stimulate post trust.

H11: Following service failure, forgiveness can stimulate post trust.

Hypothesized direct relationships are presented below (**Figure1**).

[**FIGURE1**]

3.2.6 Mediating effect: Forgiveness

Psychology literature identifies the mediating role forgiveness plays in shaping the relationship between post-traumatic symptoms (e.g., undesirable memories of events) and personal relationships. Therein, studies hypothesise the direct impact of voice, compensation, and apologies on forgiveness (Kaur *et al.,* 2022; McQuilken and Robertson, 2011; Sengupta *et al.*, 2015), alongside the direct effect of forgiveness on post-trust (Xie and Peng, 2009). Moreover, Harrison-Walker, (2019a), Kaur *et al.,* 2022 and Yuan *et al.* (2020) contend that forgiveness acts as a mediating mechanism between service recovery strategies and potential outcomes across online/offline service environments. Thus:

H12: Forgiveness mediates relationships between voice and post-trust.

H13: Forgiveness mediates relationships between compensation and post-trust.

H13: Forgiveness mediates relationships between apologies and post-trust.

3.2.7 Moderator: Gender

Literature suggests that men and women respond to and process service failure differently (Aguilar-Rojas *et al.*, 2015). The emotion-regulation process concerning forgiveness and negative feelings has been identified as higher in females than males (Zhang *et al.*, 2020). Fan *et al.* (2018) suggest that, following service failure, men can be more emotional in venting frustrations. In contrast, women have been found to respond to service failure in a

more positive manner; raising awareness of issues and seeking fair resolutions (Fan *et al*., 2018). However, Aguilar-Joas *et al*. (2015) note that women are more likely to complain, are less likely to revisit post-failure, and often 'punish' online *and* offline service providers by sharing negative WoM. Accordingly, Hur and Jang (2019) contend that women's forgiveness of service providers is directly linked to the severity of the failure, while men are influenced by how long they ruminate over negative experiences. Thus:

> **H14:** Gender moderates the relationship between service recovery strategies, subjective knowledge of service provider, incident familiarity, and post-trust.

4. Research design

This study adopted a two-stage explanatory sequential mixed-methods design to study the interplay between service recovery strategies, forgiveness, and consumers' post-trust evaluations of food delivery services. Quantitative and qualitative strands were conducted in sequence, as qualitative insight was required to narratively enrich the quantitative findings. The quantitative phase focused on hypotheses testing; followed by the qualitative study focused on exploration and narrative exposition (Thompson et al., 2022). First, 925 SnappFood users were surveyed to test our conceptual model. This was followed by 45semi-structured interviews to better-understand SnappFood's service encounter and customer experiences therein (Witell *et al*., 2020).

Data was collected from SnappFood customers. Launched in 2009, SnappFood was first-to-market, and is the largest online food ordering platform in Iran. Through the SnappFood website and mobile application, customers can order from 15,000 restaurants and foodservice providers across the country, primarily for delivery to homes and offices. Beyond restaurants, SnappFood allows consumers to order from cafés, patisseries, and supermarkets. SnappFood attributes its success to the quality of its service, expanding into multiple cities since launch. The platform boasts over 2million online visits each month (GI, 2020).

4.1Study 1: Quantitative phase

Using non-probability judgmental and snowball sampling, data was collected from SnappFood customers in 2018 via an online survey (https://www.ucheck.me/), focusing exclusively on those who had prior experience of using SnappFood's services. Participants received information about the purpose of the study and were entered into a draw to win a $10-$30 prize. Surveys were coded against IP addresses to avoid multiple entries. Only those

who indicated they had experienced service failure when using SnappFood's services qualified.

Participants were encouraged to distribute the survey to others with prior experience of service failure within SnappFood in order to collect a greater volume of relevant responses. The survey was translated into Farsi and back-translated into English by a polyglot on the research team to confirm question meanings remained relevant to the Iranian consumer sector. The survey was pilot tested (n=50). Following the pilot, some questions were modified for clarification. Overall, 925 surveys were returned. 56.1% of participants were 18-35, 32% aged 36-55, and 11.9% aged 55+; 46% of participants were female; 58.9% held university degrees.

4.1.1 Measures

Measurement scales were adapted from previous studies to ensure content validity. Participants rated their subjective knowledge of SnappFood's services (3-items) and incident familiarity (3-items) via Manika *et al*.'s (2017) scale. Measures for apology (5-items), compensation (4-items), and voice (9-items) came from Harrison-Walker (2019a), operationalised using a 7-point scale ('1=strongly disagree'; '7=strongly agree'). Per Harrison-Walker (2019a), forgiveness was operationalised as a second-order construct with two subscales: absence of negative responses (10-items)/presence of positive responses (8-items). Similarly, the 7-point post-trust scale (6-items) was borrowed from Xie and Peng (2009) (**Table 3**).

[**TABLE3**]

4.1.2 Non-response bias and Common Method Variance (CMV)

Testing for non-response errors, early and late participant responses were compared, with no evidence of bias identified. Further, two attention-checking questions were used to identify incongruent responses, decreasing the likelihood of Type1 or Type2 errors tainting the final dataset. Participants were informed all answers would remain anonymous. Independent and dependent scales were separated within the questionnaire (Podsakoff *et al*., 2003).

Harman's single-factor test captured whether variance majority could be explained by a single factor; an un-rotated exploratory factor analysis acknowledged seven factors with an eigenvalue >1 (62.128% of variance). The highest portion of variance explained by a single factor was 28.104% (below the 50% suggested cut-off point). Kaiser–Meyer–Olkin (KMO)

was 0.880 (>0.5) and Bartlett's Test of Sphericity was significant at 0.000 ($p<0.05$). Finally, the unmeasured method factor approach suggested by Liang *et al.* (2007) helped further examine CMV. A common method factor was introduced to the structural model. Average variance of indicators and method factor were calculated. Findings suggested that average variance demonstrated by indicators was 66.6%, whereas average method-based variance was 1.6% (41:1). Consequently, CMV was not a concern.

4.1.3 Analytical technique

Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to test the conceptual model as it is apposite for early theory building and for testing multi-indicator models. Wetzels *et al.* (2009, p.190) argue "model complexity does not pose as severe a restriction to PLS path-modelling as covariance-based SEM, since PLS path-modelling at any moment only estimates a subset of parameters". PLS-SEM is appropriate for formative, reflective and second-order models, and its "statistical properties provide robust model estimations with data that have normal as well as extremely non-normal (skewness and/or kurtosis) distributional properties" (Hair *et al.*, 2017, p.22). Skewness and Kurtosis indicators for each item did not fall within the acceptable range ($\pm$3), indicating non-normal data distribution. SmartPLS3.2.4 was used to analyse the conceptual model; non-parametric bootstrapping drew upon 925 cases, with 5,000 sub-samples randomly generated (Hair *et al.*, 2017).

4.2 Study 1: Quantitative results and discussion

4.2.1 Measurement model

The measurement model was assessed by testing construct reliability, convergent validity, and discriminant validity for first-order reflective variables. First-order construct reliability was tested using composite reliability (CR), Cronbach's Alpha, and Dijkstra-Henseler's rho (ρ_A). CR, α, and ρ_A values exceeded 0.70, supporting scale reliability (**Table 3**). Convergent and discriminant validity were assessed in multiple ways. First, square roots of average variance extracted (AVE) for all first-order constructs exceeded all other cross correlations (**Table 4**). Second, all AVEs exceeded 0.50 (**Table 3**). Third, correlations among all first-order constructs were <0.70. Fourth, all factor loadings exceeded 0.60, with significant *t*-values for PLS (**Table 4**). Finally, per Henseler *et al.* (2015), heterotrait-monotrait ratio of correlation (HTMT) was used. HTMT values for first-order constructs were below the cut-off (0.85), confirming discriminant validity for all first-order scales.

[TABLE4]

Higher-order constructs were validated via the weights of first-order constructs, significance of weights, and multi-collinearity. Weights of underlying sub-scales to their respective higher-order construct were significant; all variance inflation factor (VIF) values were <5 (Hair *et al.*, 2017). Thus, there is no evidence of multi-collinearity. Per **Table 5**, weights of all first-order constructs surpassed 0.1 (Hair *et al.*, 2017). All item weight *t*-values were >1.96, demonstrating first-order construct significance at 0.05.

[TABLE5]

4.2.2 Structural model and discussion

Inter-construct relationships were tested via PLS, investigating: (1)cross validation communality and redundancy indices; (2)R^2 values of endogenous variables; (3)standardized root mean square residuals (SRMR) (Hair *et al.*, 2017). Results support the model's predictive relevance; all R^2 endogenous construct values exceed 0.30. Using SmartPLS blindfolding (Hair *et al.*, 2017), Stone-Geisser's Q^2 values were >0 for each scale, signifying predictive relevance (Hair *et al.*, 2017). The model explained 38.112% of incident familiarity, 37.131% of apology, 41.601% of voice, 38.709% of compensation, 31.020% of forgiveness, and 45.017% of post-trust. The PLS-SRMR value was 0.061; below the .08 threshold (Hair *et al.*, 2017). Following Khalilzadeh and Tasci (2017), Cohen's effect sizes (f^2) signifies 0.01 for small, 0.06 for medium, and 0.14 for large effects when conducting structural equation modelling. **Table 6** shows f^2 effect sizes for inner-model significant, direct paths; the majority of direct paths hold medium and large effect sizes for postulated relationships.

[TABLE6]

Following Lee *et al.* (2016), the correlation between each sub-scale of forgiveness and post-trust were tested (**Table 7**). Findings identify significant positive relationships between the absence of negative responses, presence of positive responses, and post-trust.

[TABLE7]

4.2.3 Indirect effects

PLS-SEM identified possible mediating relationships between some constructs. Thus, bootstrapping analysis for the significance of indirect effects (considering the *t*-values and the

confidence interval (CI)) was conducted (**Table 8**). Findings indicate that voice indirectly influences post-trust through forgiveness. As a significant, direct relationship was previously established, forgiveness *partially* mediates the impact of voice on post-trust. Findings also indicate that compensation indirectly influences post-trust through forgiveness. Again, as the direct relationship was significant, forgiveness *partially* mediates the impact of compensation on post-trust. Similarly, results reveal that apologies indirectly influence post-trust through forgiveness. Again, as the direct relationship was significant, forgiveness *partially* mediates the impact of apology on post-trust.

[**TABLE8**]

4.2.4 Moderating role of gender: multi-group analysis

Before conducting multi-group analysis (MGA) to compare path coefficients between male and female customers, measurement invariance was tested (Hair *et al*., 2017). Henseler *et al*.'s (2016) three-step Measurement Invariance of Composite Models (MICOM) (i.e., configural; compositional; and scalar invariance) was adopted. Results indicated that the differences in factor loadings between the two groups is non-significant (Welch-Statterthwaite and permutation tests *p*-value>0.05), determining configural invariance. For full measurement invariance, compositional and scalar invariance were tested. As measurement invariance was evidenced, MGA was employed to evaluate the role of gender on hypothesised relationships. For each group, CR [Female:0.71-0.91; Male:0.72-0.90], AVE [Female:0.51-0.68; Male:0.50-0.66] and factor loadings [Female:0.68-0.84; Male:0.70-0.86] of all reflective measures surpassed acceptable thresholds to assess result validity. Two techniques were followed to test path model differences for males and females: a)Henseler *et al*.'s (2009) bootstrap-based MGA; and b)the permutation test (Rasoolimanesh *et al*., 2017). These approaches use *p*-values to examine differences between male and female responses.

[**TABLE9**]

4.2.5 Discussion of quantitative results

Consistent with previous studies (Manika *et al*., 2017; Utkarsh *et al*., 2019), our findings support **H1**; consumers with greater subjective knowledge are more likely to conduct informational searches online to gain insight into brands or service providers. Interestingly, rejecting **H2**, **H3** and **H4,** the results suggest that incident familiarity negatively influences

consumer responses to firm apologies and offers of compensation following service failure, while also negatively impacting upon the extent to which they feel that their "voice" is likely to be heard by the firm. This contradicts previous studies (Brinol *et al*., 2015; Manika *et al*., 2017; McQuilken and Robertson, 2011; Wolter *et al*., 2019) which ascribe positive relationships between incident familiarity and the aforementioned service recovery mechanisms. Nevertheless, consistent with prior literature (Harrison-Walker, 2019a; McQuilken and Robertson, 2011; Wei *et al*., 2020), consumer forgiveness was positively influenced by each service recovery strategy, supporting **H5, H6** and **H7**. Post-trust was positively influenced by apology, compensation, voice, and forgiveness; again, echoing extant literature (Sexton, 2019). Accordingly, the findings support **H8, H9, H10,** and **H11.** Customer forgiveness also mediates the effect of service recovery strategies on post-trust. This supports Harrison-Walker (2019a) and Yuan *et al*. (2020). Finally, results indicate that gender moderates the direct relationships between service recovery strategies, subjective knowledge of service providers, and post-trust (Aguilar-Rojas *et al*., 2015).

4.3 Study 2: Qualitative phase

Following quantitative data analysis, we sought greater understanding of the experiential aspects of service failure and recovery. This was particularly important given **H2, H3,** and **H4** were rejected, as narrative exposition can provide valuable understanding for *why* participants with greater familiarity with service providers and failure therein did not respond positively to service recovery mechanisms.

Interviews were conducted with SnappFood customers using purposeful and snowball sampling. To ensure participants were available and willing to share open evaluations of their experiences, all were conducted at times and locations of the interviewees' preference. Interviews were conducted both individually and in groups, as participants in groups often share deeper insights and perceptions about given phenomena (Jafari et al., 2013). Participants of these group interviews were family members of the same household. We interviewed them either together in their house or in nearby cafes for their convenience. Thematically, group discussions revealed results similar to those of individual interviews. Data from both individual interviews and group discussions offered interesting and meaningful insight into SnappFood's service failure and recovery mechanisms. Overall, 45 interviews were conducted, ranging from short intercept-style interviews to longer, in-depth discussions (**Table10**). Each was audio-tape-recorded and transcribed manually; strict confidentiality was guaranteed. Prior to the main interviews, three open-ended individual

discussions (pilot interviews) took place in order to gain foundational understanding of the SnappFood experience from a consumer perspective. Interviews were in Farsi. For consistency in tone and approach, one author conducted all interviews while taking field notes to disseminate nascent findings to team members prior to more comprehensive data analysis.

[**TABLE10**]

Following a 'funnel-like' thematic process, interviews proceeded from general discussions to comprehensive dialogue. All began with general questions such as '*how was your most recent experience with SnappFood?*' or '*do you regularly order food from SnappFood?*' These ice-breaking questions led to more in-depth conversations, with participants probed on their experiences and perceptions of service failure and recovery therein. Given the sequential nature of data collection, interview questions were informed by the study's quantitative phase. We sought greater understanding of the experiential aspects of service recovery, with emphasis on whether-and-how this elicits forgiveness and trust. We also questioned participants about their familiarity of service failure to better understand the rejected **H2-H4**. This offered greater insight into our quantitative findings by drawing upon narrative data pertaining to participating consumer experiences of service encounters in their own words (Witell *et al*., 2020).

Qualitative analysis was 'abductive'; initial coding was comprehensive with all points of significance coded, whilst subsequent rounds were more selective to only include codes that reflected the narratives within the corpus (Thompson, 2022). The conceptualisation of themes from codes was guided by literature on service failure, recovery, and coping theory as we used key terminology therein alongside our exploratory coding to inform finalised themes. Transcripts and findings from the coding process were shared among the team to enhance the validity of results (Jafari et al., 2013). Where there were minor differences in interpretation for interview quotes, this was resolved by in-depth discussions guided by empirical material on service recovery and coping theory.

4.4 Study 2: Qualitative analysis and discussion

Exploring SnappFood customers' experiences of service failure, three prevailing themes (anger; resolution; frustration) emerged consistently across qualitative interviews. Each

provides narrative insight into SnappFood customers' service recovery journey over-and-above the quantitative findings. These themes are discussed hereafter.

4.4.1 Anger

Given the study's focus, with participants asked to discuss incidents of service failure they had experienced at any stage of the food ordering/delivery process on the SnappFood platform, it is of little surprise that qualitative narrative accounts predominantly capture negative emotional responses. This extended beyond understandable disappointment at service failure in isolation, with several participants indicating strong negative perceptions of SnappFood as a result. An important distinction, all comments coded thematically under 'anger' were therefore not related to the service failure itself, but instead centred on the perception that they felt SnappFood had been incompetent in responding to consumer-initiated coping efforts. This sentiment was captured thus:

> "I've had a couple of incidents with SnappFood. They don't know how to handle complaints, which made me angrier and more annoyed"(N12)

An early procedural 'cog' in the service complaint handling and recovery 'machine', the qualitative data suggests that consumer anger following service failure was often driven by poorly-implemented feedback processes. Some interviewees contended that while the mechanisms for submitting complaints following service failure were available, there was an over-riding feeling that their 'voice' was unlikely to be heard because of the perceived manner in which these complaints are handled. Accordingly, the findings echo literature in suggesting that unclear or untimely complaint-handling procedures and response mechanisms serve as key drivers of post-failure anger (Guo *et al*., 2018; Sparks *et al*., 2016):

> "Why create a comment box on your website if you don't answer them?! Seriously, this is very annoying and makes me angry"(N8)

> "I called them couple of times. Nobody picked up the phone or the phone was busy. I waited for ages but gave up. I cannot wait my whole life. I'm busy...It makes me angry when nobody helps!"(N23)

Participant responses reflect literature (Harrison-Walker, 2019a) in so much as firm-level failure to respond and rectify consumer-initiated complaints emerged as a key source of anger; stimulating dissatisfaction towards SnappFood and its services more generally. Results show that when participants do not receive tailored responses from a company to rectify problems; this can exacerbate negative emotional responses and limit the likelihood of service recovery (Stevens *et al*., 2018). In particular, temporally-delayed responses can elicit anger, with this capable irreparably damaging firm-customer relationships:

> "I emailed them about my bad delivery experience. I'm still waiting for someone to get back to me after a month! I won't use them again"(N35)

4.4.2 Frustration

Extending the visceral anger elicited by SnappFood's response (or lack thereof) to service failure, our findings echo Gelbrich (2010) as frustration emerged as a prominent coping mechanism for participating consumers. Some interviewees voiced their disappointment at the way complaint-handling processes were enacted, with service recovery strategies deemed impersonal and generic, exacerbating frustration therein:

> "They should consider that customers might have different reasons to believe there's been service failure and should try to accommodate different customers' needs. It's annoying when the customer service person doesn't have a clue about the service or talks like a stuck old cassette, repeating the same thing again-and-again"(N1)

This frustration is distinct from anger as participants attribute greater blame on the systems and processes that comprise the complaint-handling process than directly onto the service provider (Harrison-Walker, 2019b). This emerged across our findings, where participants exhibit an overwhelming sense of frustration underpinned by the fundamental desire to see SnappFood adapt its complaint-handling processes and service recovery strategy to deal with perceived service failure in a more nuanced, timelier manner, with the nature of this approach tailored on a case-by-case basis:

> "There's no urgency. I think they should re-think their complaint handling service"(N12)

"I think they need to set up their service failure handling differently. Maybe make it more user-friendly. I don't have time to keep calling them or to understand their silly system"(N23)

The narratives supporting this theme illustrate *how* frustration is manifest following service failure; predominantly stimulated by the aforementioned response delays and the processing limitations of SnappFood's website and customer complaint-handling services. Nevertheless, while participants who felt frustrated with SnappFood's handling of service failure may engage in negative retaliatory behaviours, this is less common than in cases where anger emerges as the dominant emotional response (Harrison-Walker, 2019b). Instead, as participant frustration was borne primarily from the mechanisms in place, many felt that these complaint-handling processes could be improved and rectified if the firm was willing to listen, opening avenues for service recovery accordingly:

"I call a few times every day and wait in line. It's frustrating. I don't want to wait for 30-minutes and then someone puts me on hold or sends me to another person. If they want a happy customer, they should recognise this"(N15)

4.4.3 Resolution

Despite the perceptible anger and frustration which dominates the qualitative data, when confronted with service failure many participants nevertheless suggested that they had developed strategies for seeking apposite resolution from SnappFood. These customers indicated that, following their previous interactions and experiences, they had been forced to adopt a range of coping strategies which allowed them to reach an acceptable resolution following poor service. However, this rarely ventures into specifics, with participants instead suggesting that 'expecting the worst' is the order of the day when it comes to coping with service failure and the service recovery process within the context of SnappFood:

"After several disappointing incidents with SnappFood, I now know how to deal with them. I have a good strategy and plan" (N41).

"I often think about good strategies to handle bad service experiences. It's important to plan carefully and cope with them" (N32).

Nevertheless, service recovery literature demonstrates the importance of support when dealing with the functional and emotional impact of service failure (Sengupta *et al*., 2015). While this support often manifests from firms engaging in service recovery at the firm-customer level, findings indicate that this is rarely the case for SnappFood customers, with a dearth of firm-level support leading to anger and frustration. However, participants offer insights into how another form of support can help in the pursuit of resolution following service failure; support offered by peers who have previously gone through similar experiences:

"I asked my friends about their experiences with SnappFood. They told me how to handle the complaints process there. It's good to have supportive people around who have been through the process, given the unclear and annoying nature of it" (N13).

Findings thus indicate that while consumers believe that particular tactics can be employed on a case-by-case basis to reach a resolution with SnappFood following service failure, the formulaic nature of the complaint-handling process and lack of nuance in dealing with customer complaints nevertheless means that customers often have to cope with negative emotional stimuli (e.g., anger, frustration). Though pre-complaint planning is a cited coping mechanism in literature discussing how consumers can deal with service failure (Gabbot *et al*., 2011), narratives from our participants show that knowledge is only accrued through past personal experiences or via support from knowledgeable friends who have experienced likewise.

5. Conclusions and implications

Using mixed-methods and consistent with the central tenets of coping theory, this study investigated customer post-trust and its antecedents within the context of a leading foodservice delivery platform. It sought to quantitatively determine the interplay between consumers' subjective knowledge of the service provider, incident familiarity, apology, compensation, and voice (**RQ1**) and the resultant impact on consumer forgiveness and post-trust **(RQ2)**. To develop a more comprehensive understanding of service failure and recovery mechanisms (**RQ3**), the study also qualitatively explored context-specific service failure incidents via semi-structured interviews.

Testing the conceptual model, the results supported most hypotheses. However, findings demonstrate that incident familiarity negatively influences post-failure apologies, compensation, and voice (i.e., service recovery strategies), rejecting **H2-H4**. This contradicts previous studies (Brinol *et al*., 2015; Manika *et al*., 2017; Wolter *et al*., 2019), which indicate positive relationships between the aforementioned concepts. It also, however, emphasises the benefit of the mixed-method approach adopted herein, with the qualitative phase providing the narrative depth required to illustrate the emotional and functional responses to service failure elicited in consumers post-event. Core themes (anger, frustration, resolution) emerged, with sentiment with regards to the potential for consumer-initiated service recovery ranging from hopeful to near-impossible. Nevertheless, qualitative findings generally echo those discussed in previous studies into consumer responses to service failure and firm-level service recovery strategies (e.g., Gabbot *et al*., 2011; Guo *et al*., 2018; Sparks *et al*., 2016).

5.1 Theoretical implications

Extending prior literature (Azemi *et al*., 2019; Harrison-Walker, 2019b), the results contribute to theoretical understanding of how consumers cope with service failure. Findings from structural model testing and quantitative analysis identify significant relationships between company-initiated coping mechanisms (apology, compensation, voice) and consumer forgiveness (**H5, H6 & H7**) and post-trust (**H8, H9, H10 & H11**). This illustrates the importance of active responses to service failure in the foodservice/delivery industries, which can reduce stress, redress problems, and help consumers to feel "heard". In turn, this encourages consumers to rationalise suboptimal experiences; progressing from service *failure* to *recovery* (Gabbott *et al*., 2011).

However, the complexity of service recovery is also clear, partially stimulated by a perceived lack of "care" on the part of service providers, with this underpinned by poor responses to consumer complaints and obfuscated complaint-handling processes. For example, quantitative results indicate a negative relationship between incident familiarity and consumers' perceptions of firm apologies, compensation, and voice following service failure (**H2, H3, & H4**). Our qualitative results further indicate that, when consumers were aware of a service failure, they enacted consumer-initiated service recovery efforts with expectations for prompt, efficient, and personalised recovery; the absence of which resulted in anger or frustration. Thus, firms must provide more active problem-solving mechanisms in order to restore relationships with consumers through openness and honesty *before* consumers

become increasingly aware, knowledgeable, and initiate their own service recovery efforts (Gabbot *et al.*, 2011).

Further, customer forgiveness mediates the effect of service recovery strategies on post-trust (Harrison-Walker, 2019a; Yuan *et al.*, 2020). This supports the assertion that consumers may forgive a non-personal entity (e.g., brands; firms) because of reparative actions and service recovery/failure responses. This also echoes studies that contend forgiveness is vital to service recovery (Yuan *et al.*, 2020). Findings indicate that gender moderates direct relationships between service recovery strategies, subjective knowledge of service provider, and post-trust (Aguilar-Rojas *et al.*, 2015). The understanding of consumer coping mechanisms herein is complemented by our qualitative analysis, which reveals that consumers experience greater emotional responses (anger; frustration) when foodservice providers do not actively initiate recovery strategies. Indeed, consumers are only satisfied and capable of coping with failure when firms adopt *proactive* service recovery strategies and seek resolutions (Sparks et al., 2016).

Findings thus extend extant work investigating post-trust (Harrison-Walker, 2019a) by highlighting the important role service recovery strategies play in stimulating forgiveness; with this capable of rebuilding firm-customer relationships. For consumers to trust a firm post-failure, they must first cope with the service failure through forgiveness. As such, coping theory can help us understand consumer responses to inadequate service delivery and service failure, with compensation, apologies, and voice essential coping mechanisms capable of stimulating forgiveness and post-trust. To repair trust and to prove that the service provider can once again meet normalised relational expectations, it is crucial that sincere apologies, adequate compensation, and evidence of listening to, responding to, and engaging with negative feedback are perceived by consumers following foodservice industry service failure (Tsarenko, and Strizhakova, 2013).

Qualitative findings complement the quantitative findings by providing greater conceptual insight into the determinants of poor service recovery following failure; emphasis emerged with regards to the role a delayed response to service failure plays in stimulating anger and frustration. Combined, the findings contribute theoretically to understanding of consumer coping mechanisms by indicating that there are firm-initiated tactics which should be employed to reach resolutions with consumers following service failure. Such proactive measures can stimulate forgiveness, building long-term relationships and create loyal consumers. We further discuss these concerns hereafter.

5.2Practical implications

This study suggests that incidents of service failure within the platform-based foodservuce context can stem from (and be exacerbated by) the inherent disconnect between consumers and service provider expectations therein. Findings suggest that when service recovery is perceived as prescriptive, bureaucratic, and overly-automated consumers are likely to react negatively, with longer-term positive outcomes unlikely.

Post-Covid, foodservice platforms will continue to be increasingly important for restaurants, pubs, cafés, and takeaways (Okumus *et al*., 2018). Yet, while Covid-19 continues to reshape the hospitality industry, it is unlikely to change our fundamental understanding of service failure and recovery. Thus, while this study draws from data collected in the past, it nonetheless looks to the future thanks to the opportunities sharing economy platforms will continue to provide. Platform-based foodservices (e.g., SnappFood) already compete to attract food vendors to partner with their online operations. One vital yet overlooked source of differentiation may be born from an ability to evidence competence in generating consumer forgiveness and trust following service failure. Therefore, our findings indicate that platform-level recovery strategies (e.g., targeted apologies, compensation) should be enacted proactively, swiftly, and with purpose to restore customer satisfaction and loyalty, while also helping to avoid conflict with partner restaurants (Jiang *et al*., 2020).

We encourage firms to accept responsibility immediately in order to stimulate forgiveness and service recovery, with a constantly-monitored live chat function for foodservice failure complaints introduced in a comprehensive manner, giving greater opportunity for consumers to feel their voice is being heard. Though an expensive strategy, findings also reveal that customers cope best with service failure when the above is complemented by swift compensation. Therefore, foodservice providers could offer full refunds to consumers, or propose a voucher to the vendor associated with the service failure by way of redemptive opportunity. Accordingly, our findings encourage a three-pronged approach to post-failure service recovery, marrying proactive apologies, avenues for customers' 'voices' to be heard and appropriate compensation in order to increase retention.

The findings do, however, suggest that this combined strategy is most powerful when consumers are well-informed about failures. If foodservice failures receive media coverage or are discussed on social media consumers are more likely to voice their concerns and seek compensation. Thus, when an incident has become public knowledge and awareness amongst consumers is high, firms should quickly and proactively accept responsibility and provide

automatic compensation as these may be inevitable; positioning their response in a manner likely to provide the best chance of recovery and retention. The findings also highlight that men and women react differently to service failure, thus marketing managers should focus on providing curated recovery services accordingly.

Most compellingly, the qualitative findings provide much-needed practical exposition of the headline quantitative findings, suggesting that it is not simply the intention to engage in service recovery on the part of a service provider which offsets the negative impact of service failure (Gabbott *et al*., 2011), but also the way such strategies are enacted (Harrison-Walker, 2019b). Within SnappFood, when consumers perceive service failure has occurred, the findings demonstrate a preference for service recovery strategies that are both swift and effective, with delayed responses, ambiguous communication, and obtuse complaint-handling mechanisms leading to anger and frustration. While the importance placed upon the timely response to customer complaints herein is not unusual, the findings stress the importance of managing consumer perceptions during the service recovery process (Gabbott *et al*., 2011).

Further, the findings encourage decisive firm action at the point of maximum frustration (e.g., as close to the service failure as possible), with this capable of shaping the extent to which customers perceive resolution as possible. Ultimately, this is predicated on customers feeling their complaints are heard following service failure (i.e., they have a 'voice'), with timely and sincere apologies crucial in rebuilding the customer-firm relationship therein. Service providers in the food delivery industry should thus reduce the layers of complexity in complaint-handling procedures, and instead provide frontline customer service teams with the authority to handle customer complaints effectively at an early stage. This can satisfy the desire for customers to feel 'heard', allow service issues to be dealt with swiftly, and may increase the potential for service resolution following failure and repeat custom; bringing commensurate long-term benefits associated with customer retention (Bozic, 2017).

5.3 Limitations and future research

This study is not without limitation. *First*, findings should be viewed through the geographical context of Iran. Consumer perceptions, trust, and the value ascribed to services therein are culture-specific, limiting generalizability (Liu *et al*., 2019). *Second*, this study is cross-sectional; findings stem from theoretical reasoning, the research design cannot confirm causal predictions. Future research should thus adopt an experimental or longitudinal

approach. *Third*, data were collected from customers of one firm. Additional data should be collected from alternate sources via qualitative or mixed-method means to further improve understanding of the nuances of service failure and recovery. *Finally*, future research could analyse segment responses based on consumer characteristics (e.g., education levels) to identify whether targeted approaches and mechanisms could improve service recovery strategies, customer coping, and post-trust evaluations of service failure.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Table 1. Coping Theory

Authors	Method	Service failure, recovery, and related theories	Outcomes
Gelbrich, K. (2010).	Scenario-based and survey	Examines how helplessness can explain idiosyncratic coping responses to anger and frustration after service failure in German tourism-based contexts.	Anger and frustration are distinct emotions enhancing idiosyncratic coping responses to service failure.
Strizhakova *et al.* (2012)	Scenario-based survey	Proposes a theoretical framework to examine customer coping strategies—expressive, active, and denial—and rumination about the incident as mediators of anger on customer intentions in US hospitality.	Rumination increases negative word-of-mouth intentions.
Gabbott *et al.* (2011)	Scenario-based	Using coping strategy, examines the role of emotional intelligence (EI) in shaping customer response to airline service failure.	Level of EI predicts consumer responses to service failure with regards to customer satisfaction and behavioural intentions.
Tsarenko and Strizhakova (2013)	Online panel	Examines antecedents and outcomes of consumer coping in Australian hotel-based service failure.	EI has a positive association with active and expressive coping strategies but a negative relationship with denial.
Sengupta *et al.* (2015)	Scenario-based	Examines different coping mechanisms used by consumers when confronted by service failure in air travel context.	After severe service failure businesses should involve customers in the solution. For less severe failures, empathy and concern should be shown.

Table2. Consumer service recovery strategies

Consumer service recovery strategies	Author(s)
Apology	Azemi *et al*., 2019;Harrison-Walker, 2019a;Lu *et al*., 2020;Sharifi *et al.*, 2020;Wei *et al., 2020*;Wu *et al*., 2018.
Compensation	Azemi *et al.,* 2019;Cummings and Yule, 2020;Harrison-Walker, 2019a;Liu *et al.,* 2019;Sharifi *et al.,* 2020;Wolter *et al*., 2019;Wu *et al.,* 2018.
Consumer voice	Harrison-Walker, 2019a;Liu and Li, 2022;Umashankar *et al.,* 2017.
Empathy	Azemi *et al.,* 2019;Cummings and Yule, 2020;Lv *et al., 2022.*

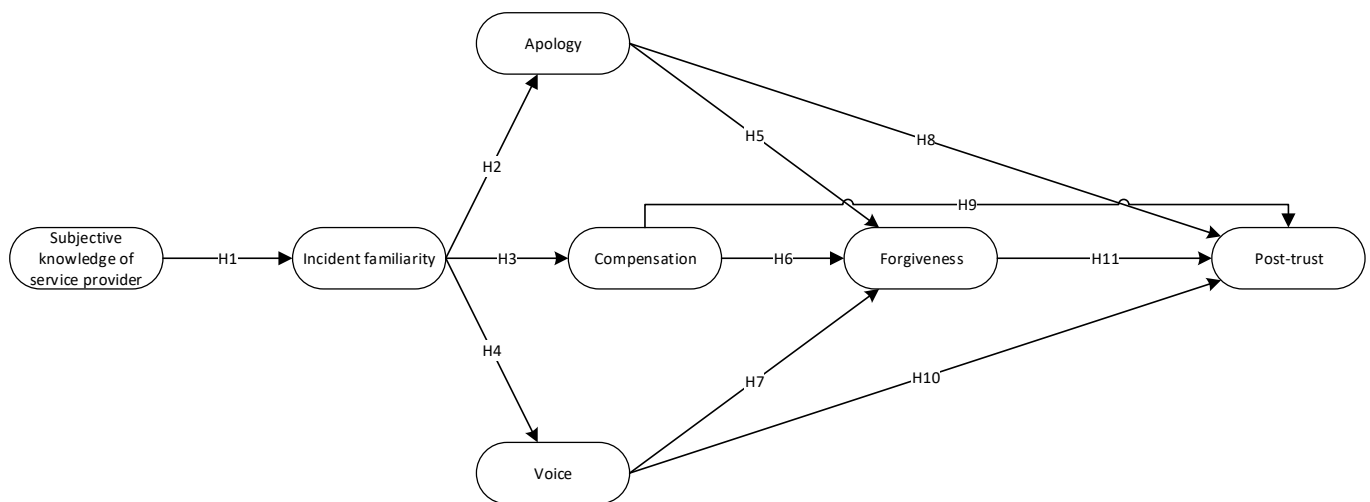| Immediacy of response | Kaur *et al.,* 2022;Liu *et al.*, 2019;Ozuem *et al.*, 2017;Wu *et al.,* 2018. |
| Personalised communication | Lu *et al.*, 2020;Ozuem *et al.*, 2017. |
| Taking accountability | Cummings and Yule, 2020;Kim *et al.,* 2022. |

Figure1. Conceptual model

Table3. Items and Measurement Model Assessment.

Constructs	Items	Factor loading	t-value
Subjective knowledge of service provider(SKS)	**(CR=0.795;α=0.803;ρ$_A$=0.823;AVE=0.623)**		
	SKS1.I know a lot about SnappFood's products and services…(1=strongly disagree,7=strongly agree)	0.779	20.350
	SKS2.My knowledge of SnappFood's products and services is…(1=inferior,7=Superior)	0.776	18.560
	SKS3.My knowledge of SnappFood's products and services is…(1=very poor,7=very good)	0.761	10.289
Incident familiarity(IFI)	**(CR=0.811;α=0.776;ρ$_A$=0.871;AVE=0.611)**		
	IF1.In general would you consider yourself familiar or unfamiliar with any SnappFood Service Failure?(1=Very familiar,7=Very unfamiliar) R)	0.733	23.098
	IF2.Would you consider yourself informed or uninformed about any SnappFood Service Failure?(1=Not at all,7=Highly informed)	0.789	10.769
	IF3.Would you consider yourself knowledgeable about any SnappFood Service Failure?(1=Know a great deal,7=Know nothing at all)(R)	0.802	11.098
Apology(APO)	**(CR=0.888;α=0.811;ρ$_A$=0.871;AVE=0.642)**		
	APO1.The service provider made an apology to me for what had happened.	0.792	8.298
	APO2.The service provider apologized for the inconvenience the problem brought to me.	0.835	7.459
	APO3.The service provider expressed regret for the mistake the company made.	0.876	7.410
	APO4.The service provider said she or he was sorry for the service failure.	0.893	7.891
	APO5.I received an "I'm sorry" from the service provider regarding the service failure.	0.907	8.579
Compensation(CMP)	**(CR=0.829; α=0.809; ρ$_A$=0.871; AVE=0.652)**		
	CMP1.The service provider offered fair redress (e.g., refund/other compensation) for the problem.	0.876	12.396
	CMP2.The service provider provided extra compensation (e.g., coupon, cash, gift-certificate).	0.874	13.297
	CMP3.The service provider made a very generous offer to compensate me for the breakdown in service.	0.780	10.296
	CMP4.I received no compensation for the service problem. (R)	0.777	10.578
Voice(VOI)	**(CR=0.806;α=0.822;ρ$_A$=0.808;AVE=0.607)**		
	VOI1.The company gave me the opportunity to explain my point of view of the problem.	0.765	28.678
	VOI2.Customers have a variety of ways by which they can report failures to the service provider (e.g., Internet, telephone, email, in-person).	0.756	20.680
	VOI3.The company provides the means whereby customers can voice their complaints.	0.702	20.078
	VOI4.It's easy for customers of this service provider to notify the provider about problems they encounter.	0.765	17.478
	VOI5.Customers with service problems have many ways to inform this service provider of the failure.	0.711	18.570
	VOI6.There are different ways that a customer could make a complaint to this organization about a service failure (e.g., e-mail, face-to-face, web site, phone).	0.743	15.923
	VOI7.Making a complaint to this organization about a service failure would be straightforward.	0.701	16.682
	VOI8.It would be convenient to make a complaint to this organization about a service failure.	0.704	11.009
	VOI9.It would be easy to find out how to make a complaint to this organization about a service failure.	0.722	17.592
Forgiveness-Second-order(FO)	**(α=0.783)**		
Absence of negative responses-	**(CR=0.723;α=0.711;ρ$_A$=0.820;AVE=0.523)**		

First-order(FAB)			
	FAB1.I can't stop thinking about how I was wronged by the service provider(R)	0.723	5.378
	FAB2.I spend time thinking about ways to get back at the service provider who wronged me(R)	0.745	5.852
	FAB3.I feel resentful toward the service provider who wronged me(R)	0.724	5.820
	FAB4.I avoid certain people and/or places because they remind me of the service provider who wronged me(R)	0.751	6.492
	FAB5.This service provider's wrongful actions have kept me from enjoying life(R)	0.732	5.007
	FAB6.I have been able to let go of my anger toward the service provider who wronged me.	0.720	5.028
	FAB7.I become depressed when think of how I was mistreated by this service provider(R)	0.746	7.456
	FAB8.I think many of the emotional wounds related to this service provider's wrongful actions have healed.	0.711	5.670
	FAB9.I feel hatred whenever I think about the service provider who wronged me(R)	0.723	5.980
	FAB10.I think my life is ruined because of this service provider's wrongful actions(R)	0.756	5.692
Presence of positive responses-First-order(FPR)	**(CR=0.750;α=0.782;ρ_A=0.791;AVE=0.562)**		
	FPR1.I wish for good things to happen to the service provider who wronged me.	0.703	6.802
	FPR2.I pray for the service provider who wronged me.	0.738	6.765
	FPR3.If I encountered the service provider who wronged me, I would feel at peace.	0.711	7.023
	FPR4.I have compassion for the service provider who wronged me.	0.742	8.011
	FPR6.I hope the service provider who wronged me is treated fairly by others in future.	0.703	9.762
	FPR7.I forgive the service provider for what they did to me.	0.711	5.900
	FPR8.Even though the service provider's actions hurt me, I have goodwill for them.	0.735	5.703
Post-trust(PTU)	**(CR=0.835;α=0.808;ρ_A=0.811;AVE=0.634)**		
	PTU1.Generally, I trust this company.	0.823	12.973
	PTU2.Generally, this company is dependable.	0.835	10.359
	PTU3.Generally, this company is reliable.	0.845	19.003
	PTU4.I will buy this company's products/services when I need food delivery.	0.801	15.062
	PTU5.I'm willing to recommend this company to relatives/friends.	0.877	15.077
	PTU6.I'm willing to try new products/services introduced by this company	0.811	14.396

Note:t-values for item loadings two-tailed test:t>1.96 at p<0.05,t>2.57 at p<0.01,t>3.29 at p<0.001;R=Reverse coded.

Table4. Discriminant validity(Fornell-Larcker's approach)

Construct	IFI	SKS	APO	CMP	VOI	FO	FAB	FPR	PTU
IFI	**0.781**								
SKS	0.234	**0.789**							
APO	0.241	0.121	**0.801**						
CMP	0.201	0.125	0.266	**0.807**					
VOI	0.322	0.367	0.274	0.142	**0.779**				
FO	0.218	0.493	0.048	0.160	0.223	**N/A**			
FAB	0.218	0.420	0.127	0.362	0.368	0.489	**0.729**		
FPR	0.319	0.573	0.112	0.379	0.360	0.211	0.307	**0.749**	
PTU	0.318	0.576	0.034	0.334	0.392	0.362	0.202	0.454	**0.796**

*Note:*Post-trust(PTU);Presence of positive responses-First-order (FPR);Absence of negative responses-First-order(FAB);Forgiveness-Second-order(FO);Voice(VOI);Compensation(CMP);Apology(APO);Subjective knowledge of service provider(SKS);Incident familiarity(IFI).AVE value for FO construct absent(N/A) as FO was specified as higher-order(AVEs only relevant to dimensions).

Table5. Multicollinearity and weights of first-order constructs on second-order construct.

Second-order	First-order	Weight	*t*-value	VIF
Forgiveness	Absence of negative responses	0.456	10.087	2.289
	Presence of positive responses	0.436	12.069	2.681

Table6. Direct paths and effect size.

Direct Paths	Path coefficient	*t*-value	f^2	Effect size
Knowledge of service provider→Incident familiarity	0.601	11.682	0.247	Large
Incident familiarity→Apology	- 0.431	10.578	0.161	Large
Incident familiarity→Compensation	- 0.382	11.790	0.110	Medium
Incident familiarity→Voice	- 0.432	21.003	0.050	Small
Apology→Forgiveness	0.382	16.023	0.097	Medium
Apology→Post-trust	0.561	14.387	0.123	Medium
Compensation→Forgiveness	0.388	15.269	0.211	Large
Compensation→Post-trust	0.511	10.398	0.111	Medium
Voice→Forgiveness	0.332	18.187	0.172	Large
Voice→Post-trust	0.629	12.056	0.207	Large
Forgiveness→Post-trust	0.387	8.276	0.258	Large

Note:t-values item loadings two-tailed test:$t>1.96$ at $p<0.05$, $t>2.57$ at $p<0.01$, $t>3.29$ at $p<0.001$.

Table7. Correlations between Forgiveness sub-scales and post-trust.

Dimensions	Correlations	Lower-bound CI	Higher-bound CI
Absence of negative responses<- Post-trust	0.311*	0.266	0.376
Presence of positive responses<->Post-trust	0.355*	0.306	0.387

*Note:*Significant at * *t*>3.29 at *p*<0.001;CI:confidence interval.

Table8. Indirect Path Estimates.

Path	Path coefficient	*t*-values	Lower bound CI	Higher bound CI
Voice→Forgiveness→Post-trust	0.235	6.359	0.202	0.289
Compensation→Forgiveness→Post-trust	0.312	9.287	0.265	0.368
Apology→Forgiveness→Post-trust	0.327	9.110	0.275	0.355

Note:t-values for item loadings two-tailed test: *t*>1.96 at *p*<0.05; *t*>2.57 at *p*<0.01; *t*>3.29 at *p*<0.001. 95% CI:confidence interval.

Table9.MGA results.

Paths	Maleβ	Femaleβ	βdifferences	Henseler's p-value	Permutation p-value	Supported?
Knowledge of service provider→Incident familiarity	0.272***	0.420***	0.148	0.05*	0.072*	Yes/Yes
Incident familiarity→Apology	0.142**	0.152***	0.010	0.351	0.221	No/No
Incident familiarity→Compensation	0.321***	0.374***	0.053	0.224	0.229	No/No
Incident familiarity→Voice	0.352***	0.389***	0.037	0.372	0.186	No/No
Apology→Forgiveness	0.211***	0.388***	0.177	0.001***	0.001***	Yes/Yes
Apology→Post-trust	0.178***	0.307***	0.129	0.001***	0.001***	Yes/Yes
Compensation→Forgiveness	0.147***	0.321***	0.174	0.001***	0.001***	Yes/Yes
Compensation→Post-trust	0.201***	0.467***	0.266	0.000***	0.000***	Yes/Yes
Voice→Forgiveness	0.011	0.175***	0.164	0.022**	0.021**	Yes/Yes
Voice→Post-trust	0.007	0.107***	0.100	0.017**	0.032**	Yes/Yes
Forgiveness→Post-trust	0.162***	0.286***	0.124	0.031**	0.022**	Yes/Yes
Voice→Forgiveness→Post-trust	0.006	0.004	0.002	0.267	0.319	No/No
Compensation→Forgiveness→Post-trust	0.006	0.005	0.000	0.321	0.427	No/No
Apology→Forgiveness→Post-trust	0.011	0.032	0.021	0.125	0.177	No/No

Note:$*p<0.1,**p<0.05,***p<0.01$.

Table10. Interviewee Profile.

Name[a]	Age	Gender	Occupation	Interview type
N1	53	Male	Teacher	Individual
N2	27	Female	Retail	Individual
N3	26	Male	Student	Individual
N4	33	Male	Human Resources	Individual
N5	41	Male	Technician	Individual
N6	32	Female	Saleswoman	Individual
N7	58	Female	Teacher	Individual
N8	40	Male	Policeman	Individual
N9	34	Male	Student	Individual
N10	25	Female	Retail	Individual
N11	26	Female	Nurse	Individual
N12	26	Male	Technician	Group1
N13	54	Male	Lecturer	Group1
N14	62	Female	Businessman	Group1
N15	51	Female	Nurse	Individual
N16	33	Male	Lecturer	Individual
N17	26	Male	Student	Individual
N18	45	Male	Technician	Individual
N19	32	Male	Policeman	Individual
N20	44	Female	Saleswoman	Individual
N21	31	Female	Lecturer	Individual
N22	23	Male	Student	Individual
N23	53	Male	Technician	Individual
N24	56	Female	Housewife	Group2
N25	60	Male	Teacher	Group2
N26	24	Female	Student	Group2
N27	48	Female	Housewife	Group3
N28	56	Male	Businessman	Group3
N29	28	Female	Nurse	Group4
N30	24	Male	Student	Group4
N31	35	Female	Human Resources	Individual
N32	34	Male	Retail	Individual
N33	45	Female	Nurse	Individual
N34	58	Female	Lecturer	Individual
N35	37	Male	Teacher	Group5
N36	42	Female	Lecturer	Group5
N37	27	Female	Retail	Individual
N38	28	Female	Student	Individual
N39	25	Male	Student	Individual
N40	50	Male	Businessman	Individual
N41	42	Female	Saleswoman	Individual
N42	53	Male	Teacher	Individual
N43	25	Male	Retail	Individual
N44	32	Female	Nurse	Individual
N45	22	Female	Retail	Individual

[a]Anonymised