Corso di dottorato di ricerca in:

Scienze Manageriali e Attuariali

in convenzione con Università di Trieste

Ciclo 35°

Titolo della tesi

OPPORTUNITIES IN DIFFICULTIES:
CUSTOMER EMOTIONAL AND BEHAVIOURAL RESPONSE TOWARD
ENVIRONMENTAL ISSUES AND HOSPITALITY FAILURES

Dottorando
Dott. Rana Muhammad Umar

Supervisore
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Summary

Consumers' perceptions of a market offering include several stimuli. Therefore, careful examination of how consumers respond to products or services across various situations warrants considerable importance. Accordingly, this dissertation consists of three essays and deals with two different patterns of consumer behavior: (a) the level of consumer participation in shaping the products on the market and (b) human activity during consumption, and investigates the emotional and behavioral responses of fast fashion and casual dining consumers. Accordingly, the first essay addresses: when and why do the environmental attitudes of Generation Y lead to socially responsible consumer behavior? This study investigates the relationships between consumers' environmental attitudes, sustainable purchase intentions, and socially responsible consumer behavior. In addition, it also examines the moderating role of participation in recycling between environmental attitudes and purchase intention, and socially responsible behavior. Results show that the environmental attitudes of both environmentalists and non-environmentalist consumers lead to sustainable purchase intentions and subsequent socially responsible behavior. Moreover, the relationship between sustainable purchase intention and socially responsible behavior is stronger for environmentalist consumers with higher participation in recycling.

Next the two manuscripts explore how service recovery can be better evaluated by consumers? The second essay examines the mediating role of consumer forgiveness between perceived employee emotional competence (EEC) and recovery satisfaction after a service failure experience. In addition, it assesses the moderating role of service failure type between perceived EEC and recovery satisfaction. Results show that perceived EEC leads to consumer forgiveness, which further results in increased recovery satisfaction. Moreover, the relationship

between perceived ECC and recovery satisfaction is weaker in process failure as compared to outcome failure. The third essay investigates the effect of service recovery efforts on consumers' desire to reciprocate and forgiveness through a mediating role of perceived justice. Results show that perceived justice underlies the relationship between service recovery efforts with consumers' desire to reciprocate and forgiveness. Moreover, high (vs. low) recovery efforts lead to high consumer forgiveness.

Introduction

Customers' cognitive efforts involved in buying behavior vary across individuals, products, and services. A highly involved consumer goes through an extensive evaluation of product attributes (information processing perspective). Likewise, another consumer may consider value trade-offs between price and quality (value perspective) or simply purchase a product that elicits positive feelings (emotional perspective). However, a single perspective on consumer behavior can merely explain consumer decision-making. Therefore, a combination of two or more perspectives can provide a better understanding. For example, the uncertainties involved in value trade-offs between price and quality are commonly addressed with the help of cues such as brand name, price, advertising, color, etc. (cue utilization perspective) (Hansen, 2005). Since the context of the present dissertation is to understand customers' emotional and behavioral responses toward environmental issues and hospitality failures, Zhong *et al.* (2020) suggest that a customer evaluates a product or service by using both cognitive and emotional perspectives.

Customers generally evaluate several stimuli, such as CSR activities (Le *et al.*, 2021), employee behavior (Zhang *et al.*, 2020), innovation (Truong *et al.*, 2020), recovery efforts (Cai and Qu, 2018), and green practices (Jiang *et al.*, 2022), etc., and respond to a market offering

in a favorable (or unfavorable) manner. Therefore, a careful examination of how consumers respond to products or services across various situations warrants considerable importance. Previous literature characterizes consumption patterns into four key dimensions. First, the social relationship (social relationship with other consumers); second, the domain of availability (availability of products and services for consumption); third, the level of participation (the level of consumer participation in shaping the products on the market); and fourth, human activity (a combination of human physical and mental activity during consumption) (Dholakia and Firat, 2003). Building on this criterion, this dissertation deals mainly with two dimensions and follows the structure of three essays to investigate the emotional and behavioral responses of fast fashion and casual dining consumers.

In the domain of consumer behavior, compassion and emotional responses are of great significance (Septianto *et al*., 2020). For instance, compassion, an individual's ability to empathize with others, and helping/pro-social behavior (Gruen and Mendelsohn, 1986) drive much of consumer behavior in the contemporary marketing era (Anand *et al*., 2021). Accordingly, the first essay of the thesis is based on the theory of planned behavior (TPB) and focuses on how consumer environmental attitudes lead to the socially responsible consumption of fast fashion. Next, the thesis focuses on consumer emotional responses in the context of service failure. More specifically, two separate essays using several behavioral models, such as the emotional contagion theory, affect infusion theory, justice theory, and resource exchange theory, provide new insights into the association between consumers' cognition, affection, and communication in the context of service failure.

The first essay of this dissertation deals with the level of participation required to shape market offerings. We examine how consumers' environmental attitudes influence socially

responsible behavior towards fast fashion products. Based on the theory of planned behavior (Ajzen, 1991), we examine the relationships between consumers' environmental attitudes, sustainable purchase intentions, and socially responsible consumer behavior. In addition, we examine the moderating role of participation in recycling between environmental attitudes and purchase intention, and socially responsible behavior. Results show that the environmental attitudes of both environmentalists and non-environmentalist consumers lead to sustainable purchase intentions and subsequent socially responsible behavior. Moreover, the relationship between sustainable purchase intention and socially responsible behavior is stronger for environmentalist consumers with higher participation in recycling.

The second essay is related to human activity. Building on the theory of emotional contagion (Hatfield *et al.*, 1993) and affect infusion theory (Forgas, 1995), we examine the mediating role of consumer forgiveness between perceived employee emotional competence (EEC) and recovery satisfaction after a service failure experience. In addition, we assess the moderating role of service failure type between perceived EEC and recovery satisfaction. Results show that perceived EEC leads to consumer forgiveness, which further results in increased recovery satisfaction. Moreover, the relationship between perceived ECC and recovery satisfaction is weaker in process failure as compared to outcome failure.

The third and final essay draws upon justice theory (Adams, 1963), and resource exchange theory (Foa and Foa, 1974) and deals with the human activity dimension. Accordingly, this essay examines the role of service recovery efforts on consumers' desire to reciprocate and forgiveness through a mediating role of perceived justice. Results show that perceived justice underlies the relationship of service recovery efforts with consumers' desire

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to reciprocate and forgiveness. Moreover, high (vs. low) recovery efforts lead to high consumer forgiveness.

In sum, this dissertation sheds light on customers' emotional and behavioral responses towards important issues in the fast fashion and hospitality industries. Consequently, it contributes to consumer behavior literature in a significant manner. For instance, it clarifies that there is no attitude-behavior gap existing among fast fashion consumers belonging to generation Y. This finding is important because previous literature raised concerns about the limited understanding of the attitude-behavior gap (Ladhari *et al.*, 2019; Park and Lin, 2018). Moreover, this research explains when and why perceived EEC results in positive recovery outcomes after service failure in casual dining restaurants. Moreover, it explains how perceived recovery efforts result in positive recovery outcomes. This finding is also worthwhile since previous research provides mixed findings on the effectiveness of service recovery efforts (Harun *et al.*, 2018). As a result, a large number of consumers remain dissatisfied with service recovery (Ma and Zhong, 2021). The study has also mentioned several important practical implications for managers.

Since the entire fashion industry is facing increased scrutiny from policymakers, a better understanding of pro-environmental consumption in Generation Y's fast-fashion context can reveal several policy development areas. For instance, a shift from the 'thrown-away fashion' model (Bhardwaj and Fairhurst, 2010) to embracing circular economy principles can favor new areas of growth both in terms of clothes made from safe and renewable materials and old clothes used to make new ones. Indeed, a partnership between retailers and consumers in clothing disposal opens another avenue for relationship management that could even contribute to loyalty (Lee *et al.,* 2013).

Furthermore, this study suggests that restaurant managers should prioritize recovery strategies that rely mainly on particularistic resources. However, sometimes the good behaviors of frontline employees may provoke a negative emotion like indebtedness instead of eliciting gratitude and a subsequent desire to reciprocate (Bock *et al.,* 2016). Therefore, managers should direct their efforts toward creating justice perceptions rather than a direct desire to reciprocate. Moreover, the emotional competence of service employees should be crucial in the recruitment process, and organizational-wide training programs for improving employee emotional competence skills are advised. In addition, managers should be more focused on service design that minimizes process failures. Consistent with Borah *et al.* (2020), this study highlights a need for employees to have rigorous training on the differentiation of service failure types and respective recovery strategies.

Dissertation's editorial positioning

The three studies composing this dissertation have been published/accepted in leading research journals. Specifically:

- Part 1 has been the basis of a full research paper which is published in Waste Management (Elsevier Inc., IF 8.816; 139, 2022).

- Part 2 has been the basis of a full research paper which is published in the British Food Journal (Emerald publishing, IF3.475, 2022).

- Finally, Part 3 has been the basis of a full research paper which is published in the South Asian Journal of Marketing (Emerald

Publishing, the official journal of the Sri Lanka Institute of
Marketing, 2022).

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Part. 1

Recycling habits and environmental responses to fast-fashion consumption: Enhancing the theory of planned behavior to predict Generation Y consumers' purchase decisions

Michela Cesarina Mason

Rubens Pauluzzo

Rana Muhammad Umar

Department of Economics and Statistics, University of Udine, Udine, Italy

Abstract

Fast-fashion industry is characterized by short product life-cycles, high volatility, affordable prices, and consumers' high impulse purchase decisions, which result in massive levels of waste and greenhouse gas emissions. In this context, Generation Y, the largest consumer of fast-fashion products, is believed to make this situation even worse, since their attitudes/intentions do not usually translate into actual pro-environmental behavior and they are still reluctant to dispose of their clothes through sustainable methods. However, the attitude/intention- behavior gap among Generation Y's fast-fashion consumers remains poorly understood. The present study addresses this need by adopting the Theory of Planned Behavior to examine the link between attitudes, intentions, and behavior, taking into account consumers' participation in recycling as a moderating variable. Results from a two-steps cluster analysis

and a multiple moderated mediation analysis on a sample of 943 Italian Generation Y's consumers of fast-fashion products show that the attitude/intention-behavior gap seems not to exist in the Generation Y's context, since the favorable appraisal of sustainable products and consumption actually leads to socially responsible consumer behavior. However, participation in recycling is found to reinforce the intention-behavior link only for individuals with high environmental attitudes. The present paper contributes to both fashion consumption and solid waste management literature by drawing connections between socially responsible consumer behavior and recycling habits within the Generation Y's cohort, thus deepening comprehension of this rather unexplored context. Moreover, this study reveals policy development areas that allow the fashion industry to meet customers' needs in new ways.

Keywords: Fast-fashion, Generation Y, Attitude, Intention, Socially responsible consumer behavior, Participation in recycling, Theory of Planned Behavior

1. Introduction

In the fashion industry, products follow a linear life-cycle and are usually disposed to landfill rather than reused or recycled (Navone *et al*., 2020). Indeed, this linearity becomes even more critical in the fast- fashion sector. Fast-fashion satisfies customers' demand of quality and style keeping prices low and reducing the time cycles from production to consumption (Bruce and Daly, 2006). This retail culture shrinks the product life-cycle (Joung, 2014) and encourages consumers to keep garments for a very short period due to their lower price (Weber *et al*., 2017). Such 'thrown-away fashion' (Bhardwaj and Fairhurst, 2010) results in an enormous clothing waste (Joung, 2014), in significant social issues mainly in terms of lower wages and poor working conditions (Bick *et al*., 2018), and in a deterioration of human values and social wellbeing (Perez-Barea *et al*., 2018).

The United States Environmental Protection Agency estimated that US landfills received 11.2 million tons of municipal solid waste textiles in 2017, the main source of which was discarded clothing, representing 8% of all municipal solid waste landfilled (EPA, 2019). Similarly, the waste footprint for the whole life-cycle of clothing consumed in Europe was 11.1 million tons in 2015. This included supply chain waste, as well as all garments disposed of at the end of their life (WRAP, 2017). In particular, Italy, Germany, the UK, and France had the highest amounts of clothing in residual waste in the EU, with Italy being the highest (440,170 tons of clothing going to residual waste in 2014, 7.2 kg per person) (WRAP, 2017). The textile industry is thus one of the fastest-growing waste producing industries in the world and fast-fashion in particular deeply affects the landscape of clothing business with severe repercussions on the environment (Armstrong *et al.*, 2015).

Prior literature suggests that young consumers are the primary target demographics for fast-fashion marketers (Hill and Lee, 2015). They consume more fast-fashion products, are more likely to throw away clothes, and are less likely to get rid of their unwanted clothes through sustainable means than past generations (Ekstrom *et al.*, 2015; Lundblad and Davies, 2016). Young consumers generally belong to the Generation Y and Generation Z cohorts. Among these cohorts, Generation Z has grown up in a heightened era of environmental sustainability; thus, they are indeed pro-environmentalists (Gomes *et al.*, 2023). However, several scholars suggest a pro-environmental attitude-behavior gap among Generation Y. This suggests Generation Y warrants further investigation. Generation Y, individuals born between 1980 and 2000 (Goldman Sachs, 2018) is known to be a highly consumption-oriented group characterized by low price sensitivity, hedonism, high purchasing power, fashion awareness, and technological literacy (Hume, 2010; Ladhari *et al.*, 2019; Sullivan and Heitmeyer, 2008).

The members of Generation Y are also far more knowledgeable, environmentally aware, and socially conscious than their predecessors. They are idealistic individuals who prefer experiences over possessions and hold very positive attitudes towards sustainability and social issues (Hume, 2010; Lu *et al*., 2013). They are concerned about environmental and social impacts, and they can deepen or lessen a business relationship because of the company ethical and sustainable behavior (Deloitte, 2019). They are also willing to pay more for products and services that come from companies committed to positive environmental and social impacts (Nielsen, 2015). Nonetheless, such attitudes/intentions do not always lead to actual behavior, even though Generation Y's sustainability beliefs would suggest otherwise (Hume, 2010; McDougle *et al*., 2011; McNeill and Moore, 2015). Hence, understanding socially responsible consumer behavior (SRCB) and how to close the gap between attitudes/intentions and buying behavior of this generational cohort could represent a significant breakthrough for sustainability issues. Surprisingly, little is known about this gap. In particular, limited research has investigated it with respect to fast-fashion products (Ladhari *et al*., 2019; Park and Lin, 2018; Sullivan and Heitmeyer, 2008) and to the role played by recycling behaviors (Birtwistle and Moore, 2007; Morgan and Birtwistle, 2009).

The study employs rigorous quantitative techniques to test the hypotheses. We conducted an on-line survey and collected data from a sample of 943 young Italian fast-fashion consumers. We focused on Italy because it has the highest per capita consumption expenditure on clothing in the EU and the largest quantity of clothing in household residual waste (WRAP, 2017). A two-steps cluster analysis and a multiple moderated mediation analysis were performed to analyze the data. The paper is organized as follows. Theoretical foundation, hypotheses development, and conceptual framework are discussed in Section 2. Methodology

is described in Section 3. The model estimation is then provided in Section 4. Finally, the main contributions of the study, limitations, and future research directions are reported in Section 5.

Several theories postulate a positive relationship between attitude and behavior. However, Anisimova and Weiss (2022) suggest that the theory of planned behavior (TPB) helps us better understand the attitude-behavior gap in sustainable consumption. Thus present study addresses these issues by using Ajzen's (1991) Theory of Planned Behavior (TPB) to examine Generation Y's SRCB and recycling behavior, as well as the links between attitudes, intentions, and behavior towards fast-fashion products, since TPB has been extensively adopted by previous literature to understand responsible environmental behavior (Wang *et al*., 2018), green product consumption (Paul *et al*., 2016), sustainable consumption (Si *et al*., 2020), and consumer's recycling behavior (Park and Ha, 2014). The current research provides three main contributions. First, it explains the process of Generation Y's SRCB in the fast-fashion setting. Second, the study extends previous research in waste management by drawing connections between SRCB and recycling behavior for fast-fashion products. Third, following Taufique and Vaithianathan's (2018) recommendations for pro-sustainable consumer behavior, the study examines the attitude-behavior relationship, as well as the mediating effect of behavioral intentions.

2. Theoretical foundation and hypotheses development

The TPB (Ajzen, 1991) is an extended form of the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), designed to explain the behavior of individuals in various contexts. According to this theory, three constructs, namely attitude, "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question", subjective norms, "the perceived social pressure to perform or not to perform the behavior", and perceived

behavioral control, "the perceived ease or difficulty of performing the behavior" (Ajzen, 1991, p. 188) can illustrate individuals' intentions to accept or reject a specific behavior.

The TPB has been widely adopted as a grounded framework for numerous investigations in the fashion industry. For example, Iran *et al*. (2019) found that consumer intention towards collaborative fashion consumption is determined by attitude, subjective norms, and perceived behavioral control. The study revealed that TPB provides different results in two different contexts: while in Iran attitude was proved to be a strong predictor of intention, in Germany, perceived behavioral control was a stronger determinant than attitude. Similarly, Lang and Armstrong (2018) extended TPB to examine the impact of consumers' personality traits on intention towards collaborative fashion consumption. They added three personality traits into the original framework, which proved to be significant predictors of intentions towards collaborative consumption. Jain and Khan (2017) examined the influence of consumers' beliefs on luxury fashion products by adding attitudinal, normative, and control beliefs into TPB. They reported a significant relationship between attitudinal beliefs, subjective norms, and perceived behavioral control. Blazquez *et al*. (2020) used TPB to examine sustainable fashion consumption, considering consumer's knowledge as an additional predictor of attitudes, subjective norms, and perceived behavioral control. Furthermore, Jain (2019) explored the predictors of sustainable luxury fashion consumption by integrating TPB into Schwartz's value theory. However, even though several fashion consumption studies have adopted TPB as a framework of reference, there is still limited and scattered evidence of how TPB can be used to understand the behavior of fast-fashion consumers.

On the other hand, TPB has been often criticized for its limited predictive accuracy. For example, Iran *et al*. (2019) argued that attitudes can only provide stimuli for certain

behaviors. More specifically, despite their positive attitudes, individuals can be prevented to perform a behavior due to unfavorable situations, demographic factors, or moral obligations (Si *et al.*, 2020). In this context, Ajzen (1991, p. 199) claimed that "[TPB] is, in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behavior after the current variables of the theory have been taken into account". As a consequence, several scholars (e.g., Hosta and Zabkar, 2020; Hu *et al.*, 2018; Pakpour *et al.*, 2014; Yazdanpanah and Forouzani, 2015) have suggested to extend and upgrade TPB in order to improve its predictive power. In particular, when researching broader social and ethical issues, additional factors should be added, since traditional TPB is more suited to the prediction of self- interested behaviors (Hosta and Zabkar, 2020; Shaw *et al.*, 2000). For instance, enhanced versions of the theory have been adopted to study food recycling (Mak *et al.*, 2018), construction waste recycling (Mak *et al.*, 2019), food management behavior (Soorani and Ahmadvand, 2019), purchase intentions towards green products (Yadav and Pathak, 2016), intentions towards genetically modified food (Akbari *et al.*, 2019), smartphones recycling intentions (Zhang *et al.*, 2020).

Other studies have also claimed that the predictive significance of attitude, subjective norms, and perceived behavioral control may vary according to specific behavioral types and situations (e.g., Ajzen and Fishbein, 2004; De Canni`ere *et al.*, 2009). In an extensive review of the literature on consumers' intentions, Akbari *et al.* (2019) recognized that attitude is the main determinant of behavioral intentions and suggested to adapt the TPB model by removing other predictors when they are unlikely to significantly influence consumers' intentions.

In this context, previous recycling research has suggested that subjective norms and perceived behavioral control do not appear to be good predictors of behavior (Barata and

Castro, 2013; Boldero, 1995; Davis *et al*., 2006). Mannetti *et al*. (2004) stated that subjective norms are the weakest determinant of behavioral intentions, while Yazdanpanah and Forouzani (2015) revealed that subjective norms and perceived behavioral control are not significant predictors of behavioral intentions towards renewable energy sources. Similarly, Hosta and Zabkar (2020) revealed that traditional measures of perceived behavioral control and social norms add less to explain the intentions to perform an environmentally/socially responsible consumer behavior.

Subjective norms, in particular, are the weakest predictors of intentions in consumer research (Mannetti *et al.*, 2004), especially in the recycling domain (Davies *et al*., 2002) and in studies on young consumers (Aboelmaged, 2021). More specifically, intentions based on attitudes better predict behavior than intentions based on subjective norms (Bagozzi *et al*., 2000; Sheeran *et al*., 1999). In the same vein, Paul *et al*. (2016) found no evidence of a relationship between subjective norms and green purchase intention. More specifically, in the Italian setting, Vesci and Botti (2019) showed that perceived behavioral control is not associated with purchase intention. Hence, following the conclusions of Armitage and Conner's (2001) *meta*-analysis, according to which the relationship between subjective norms and intention is consistently the weakest link within the TPB model, subjective norms were not considered in the current study.

Likewise, with reference to ethical behavior, scholars have recognized the limited role of perceived behavioral control in the formation of consumers' purchase intentions (e.g., Armitage and Conner, 2001; Carrington *et al*., 2010; Gomez-Olmedo *et al*., 2021). As argued by Ajzen (1991), perceived behavioral control acts as a determinant of intention and action when there is a strong connection between availability of resources/opportunities and

behavioral achievement. However, the relative significance of perceived behavioral control in the prediction of a specific behavior tends to vary according to situational factors (Agag and Colmekcioglu, 2020). When the situation/behavior allows an individual to keep control over the behavioral performance, perceived behavioral control becomes largely irrelevant (Ajzen, 1991). Indeed, the assumption that perceived behavioral control can be used as a proxy for actual behavioral control in the relationship between purchase intentions and actual buying behavior is mostly inaccurate (Sheeran *et al*., 2003). Perceived behavioral control reflects an imagined scenario and may not be realistic when an individual has relatively little information about the behavior or when the situational factors have changed (Ajzen, 1991). Hence, these perceptions may be unstable over time, thus providing an inaccurate representation of behavior (Carrington *et al*., 2010). More specifically, as regards SRCB, in which volitional control allows internal and external barriers to be circumvented, perceived behavioral control becomes an inaccurate determinant of intentions and behavior (Gomez-Olmedo *et al*., 2021). Consequently, since young consumers can volitionally control SRCB achievement, perceived behavioral control was not included in the present analysis.

In line with these arguments, the current study focused on the attitude-intentions-behavior relationship. Even though TPB has been widely used in recycling studies (e.g., Boldero, 1995; Davies *et al*., 2002), several scholars have argued that its ability to explain recycling behavior can be enhanced by including additional variables within the model (Cheung *et al*., 1999; Macey and Brown, 1983, Terry *et al*., 1999). A new construct, participation in recycling (PIR), was thus added as a moderator to the original TPB framework, with the assumption that this dimension would be able to enhance the TPB model ability to predict behavioral responses towards fast-fashion products in the Generation Y's cohort (Joung

and Park-Poaps, 2013; Lee *et al*., 2013; Morgan and Birtwistle, 2009). In this regard, PIR has been recognized as a key determinant of consumer behavior, especially in the fashion sector (Domina and Koch, 2002; Shim, 1995).

2.1. Fast-fashion and socially responsible consumer behavior

Fast-fashion has revolutionized the textile industry in the last decades, changing how fashion items are produced as well as the consumers' attitudes towards clothing consumption (Bruce and Daly, 2006). For example, low-cost production and short product life-cycles have led to a culture of impulse buying (McNeill and Moore, 2015), which has contributed to higher frequency of clothing purchases as well as disposal (Joung, 2014; Weber *et al*., 2017). In this respect, Generation Y has shown high levels of fast-fashion consumption and little awareness of its impact on society (Morgan and Birtwistle, 2009). More specifically, even though young adults are more concerned than previous generations about sustainability and social issues (Hume, 2010; Lu *et al*., 2013) and show higher willingness to spend more for sustainable products and services (Nielsen, 2015), they welcome and encourage fast-fashion (Ekstrom *et al*., 2015; Lundblad and Davies, 2016). Hence, merely believing in the importance of protecting the environment does not always lead to actual behavior, with particular reference to the fashion context (McNeill and Moore, 2015).

In this regard, an increasing number of studies have examined SRCB over the past few years (Han and Stoel, 2017). SRCB can be described "as a person basing his or her acquisition, usage, and disposition of products on a desire to minimize or eliminate any harmful effects and maximize the long-run beneficial impact on society" (Mohr *et al*., 2001, p. 47). Similarly, Roberts (1993, p. 140) defined SRCB as "one who purchases products and services perceived to have a positive (or less negative) influence on the environment or who patronizes businesses

that attempt to affect related positive social change". Nonetheless, despite the growing interest in socially responsible consumerism, existing research has provided limited information about purchasing intentions and behaviors of such consumers (Han and Stoel, 2017).

In particular, little attention has been devoted to understanding the attitude-intention-behavior relationship. Positive attitudes towards sustainable consumption can positively affect SRCB, since a favorable attitude is usually an important determinant of specific behaviors (Park and Lin, 2018). However, several studies have revealed that even strong intentions do not always translate into a given purchasing behavior (e.g., Pakpour *et al*., 2014; Sheeran, 2002). In the socially responsible consumption domain, even though consumers show sustainable attitudes, recycling intentions, and willingness to pay more for sustainable products, few of them actually end up purchasing such products (Joshi and Rahman, 2015). Indeed, only a few scholars have investigated this behavioral paradox with reference to fast-fashion consumption (Ladhari *et al*., 2019; McNeill and Moore, 2015; Sullivan and Heitmeyer, 2008). SRCB in the fast-fashion domain comprises several determinants: for example, individual characteristics, quality perception, experience, price (Bray *et al*., 2011), ethical attitudes and values (Connolly and Shaw, 2006), the choice between fashion and sustainability (McNeill and Moore, 2015). This makes the comprehension of SRCB more challenging. In particular, in the fast-fashion context, conventional TPB models may not be suitable to explain situations in which ethics is subordinated to other factors (Bray *et al*., 2011). Consequently, a better comprehension of the link between attitude, intentions, and SRCB of fast-fashion Generation Y' consumers can provide a fruitful contribution to our understanding of fast-fashion and sustainability.

2.2. Research questions

The aim of this study is to investigate Generation Y's SRCB and recycling behavior in the fast-fashion domain, and to clarify the gap between attitudes/intentions and buying behavior of this generational cohort. The current study therefore addresses the following research questions:

1. How do environmental concerns of young fast-fashion consumers drive socially responsible consumer behavior?

2. Does the attitude-intention-behavior gap occur among Generation Y' fast-fashion consumers?

3. Does recycling behavior provide a better understanding of the relationship between attitudes/intentions and socially responsible consumer behavior?

To answer these questions, we propose a conceptual model based on the theoretical lens of Ajzen's (1991) TPB.

2.3. Environmental attitudes and socially responsible consumer behavior

Even though attitude has been recognized to be the most significant predictor of purchase behavior (Zhao *et al*., 2014) and several studies in the environmental domain have empirically confirmed this relationship (e.g., Asvatourian *et al*., 2018; Casalo and Escario, 2018; Taufique and Vaithianathan, 2018; Vantamay, 2018), other scholars suggested that this is not always the case (e.g., Hume, 2010; McDougle *et al*., 2011; Pakpour *et al*., 2014; Sheeran, 2002).

In particular, Bagozzi *et al*. (1990) stressed the direct and indirect (through intentions) nature of this relationship. When a specific behavior requires substantial effort, the mediating

effect of intentions is strong, thus no direct relationship can be found between attitude and behavior, consistent with the TPB. However, when the behavior requires little effort, the mediating role of intentions is reduced, and attitude could directly predict the behavior. In this respect, Buerke *et al*. (2017) highlighted the role of a sustainability-focused value orientation as a fundamental basis of SRCB, since those individuals who regard sustainability as important are also more conscious of how society and the environment are affected by consumption decisions.

With reference to the fashion industry, Razzaq *et al*. (2018) stressed that environmental attitudes (ENA) are significantly and positively associated with SRCB. Miafodzyeva and Brandt (2013), in their *meta-* analysis of recycling behavior, pointed out that ENA are the most consistent predictor of behavior. Similarly, Joung (2014) highlighted that individuals with high ENA are more reluctant to purchase fast- fashion products, while Lee *et al*. (2012) found that consumers' green consciousness and their perceptions about green private brands have a significant impact on green behavior. In the same vein, Butler and Francis (1997) reported that individuals' general ENA positively affect purchase behavior, and Shim (1995) suggested that ENA have a positive influence on several environmentally oriented apparel disposal methods, such as donations to charities and reuse. More specifically, as for the Generation Y's cohort, Koch and Domina (1997) found that ENA are positively related to textile disposition methods and consumers with high ENA are extremely interested in consuming recycled or reprocessed clothes. However, in the same context, other studies argued that individuals who give importance to environmental issues and have positive ENA often fail to follow through (McNeill and Moore, 2015) and that environmental concern and knowledge are not so strongly related to specific environmental behaviors for apparel consumption (Kim and Damhorst,

1998). In this regard, even though the wide range of previous results provides little clarity about the ENA-SRCB relationship in the fashion industry, it seems reasonable to conclude that ENA do influence in some way SRCB. Following this rationale, the present paper hypothesizes that:

H1: Environmental attitudes of Generation Y's fast-fashion consumers positively affect socially responsible consumer behavior.

2.4. The mediating role of sustainable purchasing intentions

Following the TPB framework (Ajzen, 1991), the attitude-intention-behavior relationship has been extensively examined by previous studies on SRCB (e.g., Park and Ha, 2014; Paul *et al*., 2016; Si *et al*., 2020; Wang *et al*., 2018). According to this framework, environmentally conscious consumers are more likely to have the intention to engage in SRCB and to be pro-environmental in their consumption behaviors. In particular, specific individual and situational characteristics, such as involvement with sustainability, certainty with respect to sustainability claims, and perceived consumer effectiveness, can positively affect such a relationship (Vermeir and Verbeke, 2006). Behavioral intentions refer to "how hard people are willing to try, […] how much of an effort they are planning to exert, in order to perform the behavior" (Ajzen, 1991, p. 188). Accordingly, the higher the level of such willingness, the higher the chance of performing a behavior (Ajzen, 1988). However, a socially responsible consumer is "one who purchases products and services perceived to have a positive (or less negative) influence on the environment or who patronizes businesses that attempt to affect related positive social change" (Roberts, 1993, p. 140). As a result, the actual purchase of fast fashion products determines SRCB toward fast fashion. More specifically, the higher the SRCB, the lower the purchase frequency for fast fashion. Consistent with our theorization that

a higher environmental attitude leads to a higher SRCB, we argue that integrating intention as a mediating effect in the attitude-behavior relationship is fundamental to properly understand SRCB (Follows and Jobber, 2000).

In this context, several studies have recently confirmed the positive mediating effect of sustainable purchasing intentions (SPI) on the ENA- SRCB relationship, with reference to food waste behavior (Bhatti *et al*., 2019), young consumers' ecologically conscious behavior (Taufique and Vaithianathan, 2018; Vantamay, 2018), college students' pro-environment behavior (Levine and Strube, 2012), and tourists' responsible environmental behavior (Wang *et al*., 2018). Intentions can also encourage SRCB through repetition and the formation of sustainable purchasing habits, thus promoting the transition to pro-environmental behaviors (White *et al*., 2019).

In the fashion sector, Gam (2011) confirmed that environmental concern and eco-friendly behavior factors are significantly related to consumers' purchase intention regarding environmentally friendly clothing. Similarly, Albloushy and Hiller Connell (2019) found that the attitude towards environmentally sustainable apparels leads to SPI, while Maloney *et al*. (2014) highlighted the positive link between consumers' attitude and intention to purchase organic apparel. In the same vein, Iran *et al*. (2019) also confirmed the mediating role played by the intention to adopt collaborative fashion consumption in the relationship between attitude and actual behavior in a cross-cultural setting. Based on these observations, the present paper examines this indirect effect and hypothesizes that:

H2: Sustainable purchasing intentions of Generation Y's fast-fashion consumers positively mediate the relationship between environmental attitudes and socially responsible consumer behavior.

2.5. The moderating role of participation in recycling

SRCB involves pre-purchase, purchase, and post-purchase elements (Jacoby *et al*., 1977; Morgan and Birtwistle, 2009). In this regard, the relative strength of the relationship between attitude-intention-behavior can be moderated by different factors, with particular reference to personal moderators that may operate in or beyond the research context, especially among study participants (Marcinkowski and Reid, 2019). For instance, personal efforts can directly moderate the relationship between attitudes and SRCB among young consumers who participated in recycling programs (Schultz and Oskamp, 1996; White *et al*., 2019). In this context, attitudes are considered as motivations for action that reflect an individual's willingness to overcome behavioral barriers (Schultz and Oskamp, 1996). Nonetheless, limited research has investigated the role played by disposal methods on consumers' behavior (Birtwistle and Moore, 2007; Holbrook, 1995; Koch and Domina, 1997). In particular, the impact of recycling habits in the fashion sector has been largely neglected (Birtwistle and Moore, 2007; Morgan and Birtwistle, 2009).

In this respect, Jacoby *et al*. (1977) suggested that individual psychological characteristics, intrinsic factors to the product, and situational aspects affect consumers' disposal behavior and help divide consumers into redistributors and end-users. Roberts and Bacon (1997) considered recycling while examining the relationship between environmental concern and ecologically conscious consumption behavior. De Young (1985-1986) analyzed the impact of recycling, reusing, and saving materials on SRCB. Webb *et al*. (2008) described SRCB based on corporate social responsibility and stressed that recycling is one of the main elements affecting SRCB. In a more direct study on the link between recycling and SRCB, Mainieri *et al*. (1997) found that PIR is positively related to general environmental buying

behavior. In the same vein, Ebreo *et al.* (1999) revealed the existence of a positive relationship between recycling behavior and environmental consumerism, while Kautish *et al.* (2019) suggested that recycling intentions significantly moderate the impact of the willingness to be environmentally friendly on green purchasing behavior.

Fig. 1. Conceptual model
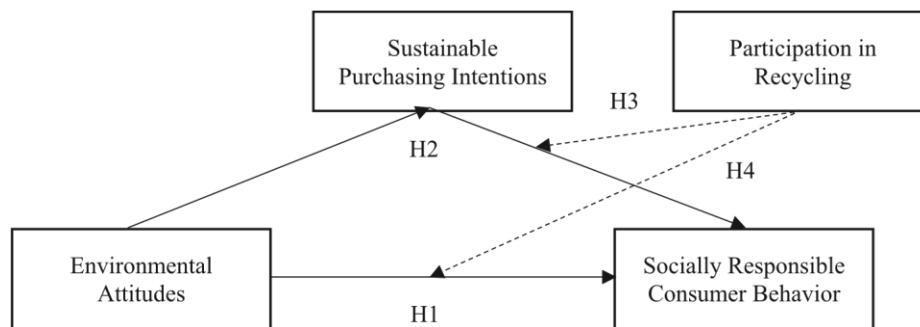
Fig. 1. A model in which sustainable purchasing intention acts as a mediator between environmental attitudes and socially responsible consumer behavior, and participation in recycling acts as a moderator between environmental attitudes and socially responsible consumer behavior, as well as between sustainable purchasing intention and socially responsible consumer behavior.

However, even though the findings in the fashion sector highlighted the need to reduce the volume of post-consumer waste textiles and apparel being sent to landfill by increasing the frequency of recycling practices (Koch and Domina, 1997; Morgan and Birtwistle, 2009), scarce empirical research exists on the role played by PIR in affecting the attitude-intention-behavior relationship, especially in the fast-fashion market. Indeed, Joung (2014) argued that fast-fashion purchase is negatively related to PIR. Nonetheless, the current study claims that Generation Y's individuals who make the effort to recycle and are more worried about the environment are more likely to accept and adopt a SRCB. Based on this reasoning, the present study hypothesizes that:

H3: Participation in recycling strengthens the impact of sustainable purchasing intentions of Generation Y's fast-fashion consumers on socially responsible consumer behavior.

H4: Participation in recycling strengthens the impact of environmental attitudes of Generation Y's fast-fashion consumers on socially- responsible consumer behavior.

Fig. 1 shows a conceptual diagram of this model.

3. Methodology

3.1. Instrument development

A series of 18 pre-test face-to-face interviews with individuals aged between 21 and 29 were conducted in January 2019 to assess instrumentation rigor and identify measures to address any potential limitations or risk of bias before carrying out the formal quantitative analysis. The interviews, which took an average of 10 min to complete, helped discover errors in language relevance and word ambiguities, and reveal potential issues in the measurement of the variables. In addition, they served as a basis for gathering relevant information about the cognitive foundation of individuals' behavior and the variables of the study: ENA, SPI, SRCB, and PIR. In particular, the open-ended questions were used to determine the salient behavioral beliefs to assess the environmental attitudes. In order to elicit such beliefs, interviewees were asked to respond to the following questions: 'What do you consider to be the major current sustainability issues?' and 'What are your thoughts/concerns about future sustainability trends?'. Two important environmental attitudes emerged from this phase, namely 'Environmental issues are very important to me' (ENA1) and 'I believe everybody should try to preserve for future generations' (ENA2).

In order to achieve content validity, a thorough investigation of ongoing studies, previous instruments, models, and past research findings on recycling habits and environmental responses to fast-fashion consumption has been made. The design of the questionnaire, edited in Italian, was structured according to the literature review and the results of the interviews. The questionnaire comprised 35 statements covering the dimensions of the study: ENA, SPI, SRCB, PIR, and demographics. The measure for ENA was assessed from the scale developed by Shim (1995), SPI from Hou *et al*. (2008), PIR from Joung (2014), and SRCB from Lee *et al*. (2018).

The survey was then administered to 5 professors involved in fashion and sustainability-focused research who evaluated the instrument and the questions on how well they cover the subject of the study. Respondents were asked to express their views by ticking a box on a 7-point Likert scale, from strongly disagree (scored as one) to strongly agree (scored as seven). Statements were dropped if there was any disagreement between the experts, in order to remove ambiguous or unclear statements. The remaining instrument included 22 items grouped into sections that reflected the dimensions of the analysis: ENA (2 items); SPI (3 items); PIR (4 items); SRCB (13 items). Following previous TPB researchers that have used two-item scales (Jaspers and Pearson, 2022), we considered our instrument appropriate for further analysis. The main aim of this phase was to refine and reduce the survey, while retaining those items with the greatest capacity to identify potential areas of concern in the environmental responses to fast-fashion consumption. The items included in the eventual instrument are reported in the Appendix (Table A1.).

3.2. Sample

Proportional quota sampling was used to ensure that selected participants were representative of the Italian fast-fashion Generation Y's consumers, with quotas set according to age (individuals born between 1980 and 2000), gender, education (lower secondary, upper secondary, higher), and residential location (North-Western, North-Eastern, Central, and Southern and Insular Italy). Proportional quota sampling helps in selecting the participants who better represent the key characteristics of a population (Kim *et al*., 2009). Using social media, this study identifies individuals with specific interests, the respondents who showed interest in fast-fashion products were first contacted on Facebook and Instagram and then the survey was distributed to them through Google Forms, during the period April-June 2019. Participants were asked to complete and return the survey within 1 week. Anonymity was assured and two reminders were sent out after 1 and 2 months.

The eventual sample included 943 individuals (93% response rate). All respondents were habitual customers of fast-fashion brands. The high response rate is likely driven by the great interest shown by participants in fast-fashion products and the high levels of motivation to complete the survey. The sample consisted of 678 women (71.90%) and 265 men (28.10%). Participants were aged between 19 and 39 years at the time of the survey. 517 were aged between 19 and 22 years (54.83%), 384 between 23 and 29 years (40.72%), and 42 aged 30 or older (4.45%). 263 respondents were from North-Western Italy (27.89%), 229 from North-Eastern Italy (24.28%), 163 from Central Italy (17.29%), and 288 from Southern and Insular Italy (30.54%). With reference to socio-economic status, 778 participants were in no paid employment (82.50%) and 165 were employed (17.50%). 221 had a university degree (23.44%), 691 completed upper secondary education (73.28%), and 31 lower secondary school

studies (3.29%). As for the family members, 620 respondents belonged to a family with 4 or more members (65.75%), 230 to a family with 3 members (24.39%), and 93 to a family with 1 or 2 members (9.86%).

Table 1: Mean, standard deviation, correlations, convergent and discriminant validity indexes.

Variables	Mean	SD	α	AVE	CR	√AVE	1	2	3	4	5	6	7	8	9
1 Age	-	-	-	-	-	-	-								
2 Gender	-	-	-	-	-	-	.026	-							
3 Education	-	-	-	-	-	-	.538**	.043	-						
4 Employment	-	-	-	-	-	-	.283**	.054	.198**	-					
5 Family members	-	-	-	-	-	-	-.228**	-.063	-.151**	-.117**	-				
6 ENA	6.12	1.00	.705	.689	.753	.830	.044	-0.66*	.050	-.052	-.009	**.830**			
7 SPI	5.02	1.41	.877	.701	.832	.837	.006	-.182**	-.026	.028	-.012	.532**	**.837**		
8 SRCB	5.22	1.18	.900	.656	.942	.810	.043	-.168**	.017	.036	.004	.586 **	.808**	**.810**	
9 PIR	4.09	1.14	.833	.556	.736	.746	.007	-.113**	-.032	.038	.016	.197**	.184**	.198 **	**.746**

Note: Diagonal elements (bold) are the square roots of average variance extracted (AVE) by latent constructs from their indicators. Off-diagonal elements are correlations between latent constructs. For convergent and discriminant validity, AVE should be higher than 0.5, composite reliability (CR) should be higher than 0.7, and diagonal elements should be larger than off-diagonal elements in the same row and column. *: p-value<.05; **: p-value<.01.

We considered Harman's single-factor test to check common method bias (Podsakoff and Organ, 1986), but this research study has reported no common method bias. An exploratory factor analysis, incorporating the varimax option (KMO = 0.895; Sig. = 0.000) was then conducted. Internal consistency reliability measured with Cronbach's alpha and construct

validity were also verified. The results reported in Table 1 showed good internal consistency reliability, as well as convergent and discriminant validities.

3.3. Cluster analysis

A two-steps cluster analysis was implemented to profile fast-fashion Generation Y's consumers based on their ENA. Cluster analysis was used to identify specific target groups with different ENA and needs. First, we pre-clustered the data to reduce the size of the matrix that contains distances among all possible pairs of cases. Second, we used a standard hierarchical clustering algorithm on the pre-clusters to explore a range of solutions with different numbers of clusters. On the basis of our theoretical framework and the results of the pre-test interviews, we focused on ENA1 and ENA2 to define the clusters. Schwarz's Bayesian Information Criterion (BIC) was used for model selection and log likelihood as distance measure. Table 2 shows that the ratio of BIC changes was significant for a three-cluster solution (0.351), while the remaining ratios of cluster solutions were relatively small. The number of silhouette measure of cohesion and separation (average silhouette = 0.6) was well above the acceptable level of 0.2. Hence, three clusters were finally identified. ENA2 was the most important predictor of the cluster analysis, while ENA1 had a moderately high impact on the process (Table 3). We further implemented ANOVA and chi-square tests to deepen the analysis of each cluster, which was named according to the items that loaded more heavily on it. Table 4 shows the results of cluster comparison among individual characteristics, ENA, SPI, SRCB, and PIR.

Cluster 1 ('Environmentalists') involved young adults with high ENA, both in terms of ENA1 (M_{ENA1} = 6.63) and ENA2 (M_{ENA2} = 6.97). Compared to the other two clusters, respondents showed higher levels of SPI, SRCB, and PIR. More specifically, this segment

attached relatively greater importance to the individual consumption volume ($M_{CVO} = 5.54$), the origin of the products ($M_{GEO} = 5.38$), and the firm's behavior ($M_{FBE} = 4.95$). Notably, individuals belonging to this cluster showed a higher level of SPI ($M_{SPI} = 5.53$) compared to the other two segments. As for the individual characteristics, the members of this cluster were mostly female (74.13%) and had a university degree or higher (24.04%). Only 14.50% of them were employed, while 17.61% of them belonged to a large family group (with more than 4 members).

Cluster 2 comprised individuals who showed medium ENA: $M_{ENA1} = 4.88$ and $M_{ENA3} = 6.45$. It seems that Generation Y's consumers belonging to this segment were mostly focused on the reduction of their consumption volume ($M_{CVO} = 5.14$) and the geographic origin of the products ($M_{GEO} = 5.04$). With reference to the individual characteristics, the cluster showed a relatively lower number of female respondents (71.75%) and a lower education level (23.79% of them had a university degree or higher).

Cluster 3 ('Non-environmentalists') included young adults who appeared to be less concerned about environmental issues. Compared to the other two segments, they showed lower levels of ENA1 ($M_{ENA1} = 3.84$) and ENA2 ($M_{ENA2} = 4.60$). In particular, they did not care much about the firm's behavior ($M_{FBE} = 3.52$), shopping in small local businesses ($M_{SMB} = 3.29$) or buying cause-related products ($M_{CRP} = 3.20$). Regarding their individual characteristics, the members of cluster 3 were likely less educated (20.15% of them had a university degree or higher). The segment also comprised a lower number of female respondents (62.79%).

Table 2. Auto-clustering statistics.

Number of Clusters	BIC	BIC Change[a]	Ratio of BIC Changes[b]	Ratio of Distance Measures[c]
1	1333.672			
2	738.976	-594.696	1.000	2.635
3	530.317	-208.659	.351	2.366
4	457.941	-72.376	.122	1.530
5	420.116	-37.826	.064	1.247
6	395.189	-24.927	.042	1.035
7	372.037	-23.152	.039	1.260
8	359.299	-12.737	.021	1.609
9	361.756	2.457	-.004	1.211
10	368.550	6.794	-.011	1.494
11	382.154	13.604	-.023	1.209
12	398.144	15.991	-.027	1.011
13	414.260	16.115	-.027	1.353
14	433.315	19.056	-.032	1.109
15	453.192	19.877	-.033	1.073

Note: a. The changes are from the previous number of clusters in the table, b. The ratios of changes are relative to the change for the two-cluster solution, c. The ratios of distance measures are based on the current number of clusters against the previous number of clusters.

Table 2. Summary of predictors' importance.

Category	Predictor	Predictor Importance	Strength
ENA-related variables	ENA2	1	Strong (0.8-1)
	ENA1	0.73	Moderate (0.2-0.8)

Table 3. Cluster characteristics.

Dimensions	Cluster 1 Environmentalists	Cluster 2 Medium ENA	Cluster 3 Non-environmentalists	F or χ^2 value	p
Size	545 (57.8%)	269 (28.5%)	129 (13.7%)		
INDIVIDUAL CHARACTERISTICS					
Age				.002	.998
19-22	298	149	70		
23-29	224	106	54		
30-39	23	14	5		
Gender				3.333	.036
Male	141	76	48		
Female	404	193	81		
Education				.768	.464
Lower secondary	15	10	6		
Upper secondary	399	195	97		
Higher	131	64	26		
Employment				4.385	.013
Yes	79	61	25		
No	466	208	104		
Family members				.112	.894
1	11	4	2		
2	45	17	14		
3	138	62	30		
4	253	143	58		
>4	98	43	25		
ENA					
ENA1 (average)	6.63[2, 3]	4.88[1, 3]	3.84[1, 2]	899.120	.000
ENA2 (average)	6.97[2, 3]	6.45[1, 3]	4.60[1, 2]	1,557.788	.000
SPI (AVERAGE)	5.53[2, 3]	4.59[1, 3]	3.70[1, 2]	134.959	.000
SRCB					
Firm's behavior (average)	4.95[2, 3]	4.19[1, 3]	3.52[1, 2]	66.041	.000

Cause-related products	4.54[2, 3]	3.70[1, 3]	3.20[1, 2]	61.959	.000
(average)	3.92[2, 3]	3.49[1]	3.29[1]	16.700	.000
Small businesses (average)	5.38[2, 3]	5.04[1]	4.67[1]	10.446	.000
Geographic origin (average)	5.54[2, 3]	5.14[1, 3]	4.63[1, 2]	21.780	.000
Consumption volume	4.23[3]	4.05[3]	3.61[1, 2]	15.808	.000
(average)					
PIR (AVERAGE)					

Note: Superscripts indicate that there are significant contrast comparisons in the corresponding groups according to the results of post-hoc tests.

3.4. Model estimation

In order to test the direct relationship between ENA and SRCB, as well as the underlying effect of SPI, we first conducted a simple mediation analysis with the SPSS MACRO PROCESS (Model 4; 5,000-bootstrap sample; Hayes, 2013). ENA were used as the independent variable, SPI as the mediator, SRCB as the outcome variable. Results indicated a significant direct effect of ENA on SRCB (Coeff. = 0.257, 95 %CI 0.207; 0.307, p = .000). Furthermore, the ENA-SRCB relationship was mediated by SPI (Coeff. = 0.436, 95 %CI 0.374; 0.501). The mediation effect accounted for 62.90% of the total effect of ENA on SRCB. More specifically, ENA had a positive effect on SPI (Coeff. = 0.749, 95 %CI 0.673; 0.825, p = .000), which, in turn, had a positive effect on SRCB (Coeff. = 0.582, 95 %CI 0.547; 0.618, p = .000). A multiple moderated mediation analysis was then run to test the conceptual model presented in Fig. 1 with the SPSS MACRO PROCESS (Model 15). A 5,000-bootstrap sample was employed to generate bias- corrected confidence intervals with the mean composite scores on ENA, SPI, SRCB, and PIR (Hayes, 2013). In this model, PIR was added as a moderator. The analysis combined mediation and moderation to estimate the conditional indirect effect of ENA on SRCB through SPI as moderated by PIR. The specific testing procedure involved two model

tests to compare Cluster 1 and Cluster 3 results. Cluster 2 was used as a control group and not included in the model testing. Fig. 2 displays the results of the analysis.

Table 5: Multiple moderated mediation analysis.

Effects	Cluster 1 - Environmentalists						Cluster 3 - Non-environmentalists					
	Coeff.	SE	t	p	LLCI	ULCI	Coeff.	SE	t	p	LLCI	ULCI
H1: ENA on SRCB	.293	.114	2.572	.010	.069	.516	.389	.093	4.162	.000	.204	.574
H2: Mediation of SPI on ENA-SRCB	.772	.125	6.165	.000	.527	1.016	.290	.106	2.780	.006	.081	.498
H3: Moderation of PIR on SPI-SRCB	.042	.020	2.130	.034	.003	.081	-.077	.045	-1.725	.087	-.166	.011
H4: Moderation of PIR on ENA-SRCB	-.166	.103	-1.620	.106	-.368	.035	.130	.075	1.738	.085	-.018	.279

Note: LLCI=lower-limit confidence interval; ULCI=upper-limit confidence interval.
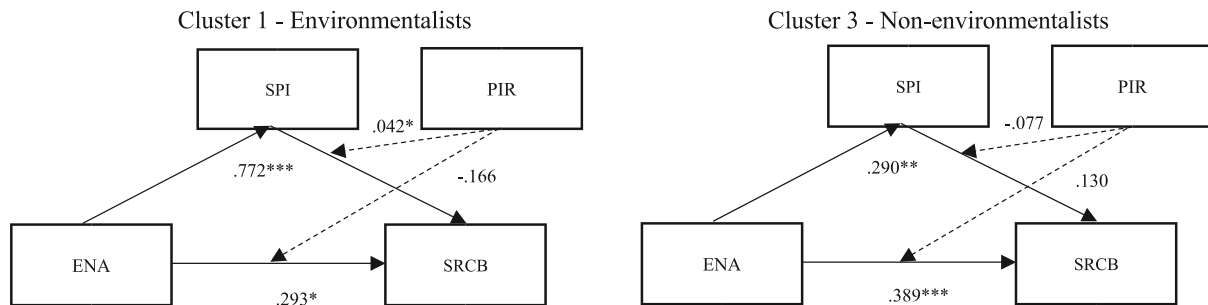

Fig. 2. Conceptual model for Cluster 1 and 3 with estimates.

Table 6. Conditional effects at values of the moderator (PIR).

Relationship	Effects	Cluster 1 - Environmentalists						Cluster 3 - Non-environmentalists					
		Coeff.	SE	t	p	LLCI	ULCI	Coeff.	SE	t	p	LLCI	ULCI
SPI on SRCB	Low	.543	.032	16.783	.000	.480	.607	.625	.063	9.841	.000	.499	.751
	High	.639	.033	19.285	.000	.574	.705	.465	.073	6.407	.000	.322	.609
ENA on	Low	.483	.164	2.951	.003	.161	.804	.254	.093	2.686	.008	.067	.442
SRCB	High	.103	.163	.629	.530	-.218	.423	.524	.143	3.657	.000	.240	.808

Note: LLCI=lower-limit confidence interval; ULCI=upper-limit confidence interval.

4. Results and discussion

The results of Cluster 1 model testing showed a significant direct effect on SRCB (Coeff. = 0.293, p = .010, 95 %CI 0.069; 0.516), providing support for H1. Similarly, the indirect effect of ENA on the outcome variable through SPI was significant (Coeff. = 0.772, 95 %CI 0.527; 1.016). These results suggested a partial mediation of SPI on the ENA-SRCB relationship, thus supporting H2. As advanced in H3, PIR significantly moderated the effect of SPI on SRCB (Coeff. = 0.042, p = .034, 95 %CI 0.003; 0.081). More specifically, the relationship between SPI and SRCB was stronger for individuals with high levels of PIR (effects at the values of moderator: PIR_{low} = 0.543; PIR_{high} = 0.639). The findings also revealed no significant effects of PIR on the ENA-SRCB relationship (Coeff. = -0.166, p = .106, 95 %CI -0.368; 0.035).

As for Custer 3, results showed a significant direct effect on the outcome variable (Coeff. = 0.389, p = .000, 95 %CI 0.204; 0.574) and a significant indirect effect through the mediator (Coeff. = 0.290, 95 %CI 0.081; 0.498). The findings suggested that the relationship between ENA and SRCB was partially mediated by SPI, thus providing support for H1 and H2. However, contrary to Cluster 1, the moderation effects of PIR were not significant.

The results of the analysis conducted on the two main clusters based on ENA ('Environmentalists' and 'Non-environmentalists') (Tables 5 and 6) show that the highest SRCB was observed for Generation Y's consumers with high ENA and high PIR. In particular, the findings highlight that the attitude-intention-behavior gap seems not to exist in Generation Y's fast-fashion consumers context. Indeed, not only for young adults belonging to the pro-environmental group, but also for those with lower levels of ENA, the favorable appraisal of sustainable products and consumption translates into actual SRCB. Unlike past literature on fast- fashion consumption (Birtwistle and Moore, 2007; Kim and Damhorst, 1998; McNeill and Moore, 2015) and on young consumers' sustainable behavior (Hume, 2010; McDougle *et al.*, 2011), the current study reveals a potential shift in Generation Y's behavior from the conventional view, which prioritizes constant change and subscribes to a culture of hedonistic and impulse buying, to embrace more sustainable and conscious decisions. In this regard, McNeill and Moore (2015) argued that a number of perceived barriers currently prevent the widespread adoption of sustainable behaviors in the fast-fashion market. However, consistent with the findings of Bagozzi *et al*. (1990), the present research highlights that, since the ENA-SRCB relationship can be also direct in nature, the barriers perceived by Generation Y' consumers do not prevent them from translating ENA into actual SRCB even for fast-fashion products.

As for the moderating role of PIR, the findings highlight a significant effect only for young fast-fashion consumers with high levels of ENA. Indeed, PIR strengthens the relationship between SPI and SRCB, thus showing that recycling habits influence the attitude-intention-behavior link (Ebreo *et al*., 1999; Kautish *et al*., 2019; Mainieri *et al*., 1997), even in the fast-fashion context. More specifically, within the environmentalist group, individuals who

are used to dispose of outdated or unwanted clothes through sustainable means and reported higher levels of recycling participation are also more engaged in ecologically conscious consumption behavior. However, for the non- environmentalist cluster, recycling behavior for fast-fashion products has no significant effect on SRCB development. Even though pro-environmental attitudes/intentions actually translate into SRCB for both environmentalist and non-environmentalist groups, recycling behavior is still restricted to those who are more worried about the environment. Hence, there is still potential for improving the post- purchase side of SRCB. The disposal of outdated, used, or unwanted apparel products through sustainable means can thus become the next frontier to reduce waste generation and the related carbon and water footprints of fast-fashion consumption.

5. Conclusions

Fast-fashion is characterized by short product life cycles, high volatility, affordable prices, and consumers' high impulse purchase decisions (Joung, 2014; Weber *et al*., 2017). This retail culture encourages consumers to keep clothes for a very short period and results in massive levels of waste and greenhouse gas emissions (Joung, 2014), since most part of fast-fashion products are usually disposed to landfill rather than reused or recycled (Navone *et al*., 2020). In this context, Generation Y represents the largest consumer of fast-fashion products (Hill and Lee, 2015) since, even though they are more concerned than previous generations about environmental issues (Deloitte, 2019) and show high willingness to pay more for socially responsible products (Nielsen, 2015), their attitudes/intentions do not usually translate into actual behaviors (Hume, 2010; McDougle *et al*., 2011) and they are still reluctant to dispose of their clothes through sustainable methods (Ekstrom *et al*., 2015). Nonetheless, the attitude-intention-behavior gap among Generation Y's fast-fashion consumers remains poorly

understood (Ladhari *et al*., 2019; Park and Lin, 2018; Sullivan and Heitmeyer, 2008). In particular, limited attention has been paid to investigate this gap with respect to recycling behaviors (Birtwistle and Moore, 2007; Morgan and Birtwistle, 2009).

The present paper contributes to both fashion consumption and solid waste management literature by drawing connections between SRCB and recycling behavior for fast-fashion products within the Generation Y's cohort, thus deepening comprehension of this rather unexplored context. The results of the analysis highlight the existence of a significant and positive link between ENA and SRCB for both the environmentalist and non-environmentalist clusters. Similarly, the current study shows the positive mediating effect of SPI on the ENA-SRCB relationship. In this regard, contrary to previous studies on fast- fashion consumption (Birtwistle and Moore, 2007; Kim and Damhorst, 1998; McNeill and Moore, 2015) and on young consumers' sustainable behavior (Hume, 2010; McDougle *et al*., 2011), these findings confirm that, in the Generation Y's cohort, individuals translate their ENA into actual SRCB. This has relevant implications for the research investigating the purchase behavior of young consumers, who have been traditionally considered little aware of the social impacts of their consumption habits (McNeill and Moore, 2015; Morgan and Birtwistle, 2009), thus viewing fast-fashion and its consequences as accepted social norms (Ekstrom *et al*., 2015; Lundblad and Davies, 2016). Likewise, following the TPB framework (Ajzen, 1991), according to which environmentally conscious consumers are more likely to have the intention to engage in SRCB and to be pro-environmental in their consumption behaviors, the results of the present paper confirm, even in the fast- fashion industry, the positive role played by SPI in reinforcing the link between ENA and SRCB (e.g., Levine and Strube, 2012; Taufique and Vaithianathan, 2018; Vantamay, 2018). The findings of this study also support the moderating

effect of PIR on the SPI-SRCB relationship for just the environmentalist group. For Generation Y's consumers with high levels of ENA, recycling habits reinforce the SPI-SRCB link, thus showing that individuals who are used to recycle, reuse, and repurpose outdated or unwanted apparel products are also more engaged in SRCB (Ebreo *et al*., 1999; Kautish *et al*., 2019; Mainieri *et al*., 1997).

This study has also important practical implications for both managers and policy-makers. Since the entire fashion industry is facing increased scrutiny from policy-makers, who are recommending the introduction of extended producer responsibility on clothing, and from customers themselves, who are requesting more attention to clothing waste and greenhouse gases, a better understanding of pro- environmental consumption in the Generation Y's fast-fashion context can reveal several policy development areas. For instance, a shift from the 'thrown-away fashion' model (Bhardwaj and Fairhurst, 2010) to embrace circular economy principles can favor new areas of growth both in terms of clothes made from safe and renewable materials and old clothes used to make new ones. This would allow the fashion industry to meet customers' needs in new ways, providing them with environmental benefits as well. Indeed, a partnership between retailers and consumers in clothing disposal opens another avenue for relationship management that could even contribute to loyalty (Lee et al., 2013).

Such an approach also needs to improve customers' education through holistic solutions able to highlight the relationships between the environmental, social, and economic dimensions of sustainable issues in the fashion industry. This multidisciplinary perspective would support the development of core competences and critical thinking needed to empower young consumers' problem-solving and decision-making abilities, to increase their demand for

ethical products, and to reduce waste and environmental impacts (McNeill and Moore, 2015). In this regard, the present paper emphasizes the need to improve recycling- focused learning outcomes. Individuals are usually not familiar with recycling clothing and other textiles and this may have severe consequences for waste generation of fast-fashion consumption (Navone *et al*., 2020). A better comprehension of the complex sustainability issues within the textiles industry and the life-cycle of fast-fashion products can thus support young generations in developing their environmental sensitivity and promote the disposal of outdated, used, or unwanted apparel products through sustainable means.

The present study highlights that, even for fast-fashion products, young consumers are concerned about the environmental and social impacts of their purchasing decisions and tend to align their purchase behavior with their attitudes/intentions. This has significant implications for ethical fashion. Generation Y's consumers expect fashion brands to show an active engagement into ethical trade through a constant improvement in their production processes and supply chains. Adhering to strict sustainable and ethical practices pushes fashion companies to raise their ethical standards in terms of sourcing, manufacturing, assembly, and distribution. In addition, consumers may be interested in accessing more reliable information about the ethical stance of fashion products in order to make more informed decisions. Fashion brands could thus improve the transparency of their product life-cycles through the introduction of specific ethical and environmental labeling systems. Hence, it makes sense that these interventions should be tailored to reflect the specific motivations, needs, benefits, and barriers of Generation Y's consumers (White *et al*., 2019).

6. Limitations and future research directions

The present analysis suffers from some limitations. Since this research is carried out among Generation Y's consumers in Italy, respondents from other countries and cultures may exhibit different attitudes, intentions, and behaviors. Culture influences how sustainability issues are viewed and approached in different contexts and situations, and cultural differences affect the ways environmental values and behaviors are interrelated. For example, individualistic and collectivistic value orientations can have different effects on the perception of sustainability issues as social norms in different cultures, thus influencing individual attitudes and behaviors. Hence, results cannot be generalized without investigating other contexts and cultures. In addition, even though the model used in the current study provided good ability to predict pro-environmental behavioral responses in the Generation Y's cohort, other dimensions of the TPB framework (Ajzen, 1991), such as subjective norms and perceived behavioral control, or other constructs, such as self-identity and personal norms, may prove relevant in shaping such a behavior. Further studies can thus incorporate these dimensions in the proposed model. Moreover, even though self-report questionnaires have been frequently used in previous studies of similar nature, they may suffer from specific disadvantages. While responding to the items, participants may respond in a socially acceptable way (social desirability bias), they may have a tendency to respond in a certain way regardless of the question (acquiescence and non-acquiescence response bias), or their responses may be biased by their feelings at the time they filled out the questionnaire (e.g., if they feel bad at the time they fill out the questionnaire, their answers could be more negative). Future studies can thus adopt other research designs to improve the model proposed in the current paper. For instance, field experiments conducted in retail and outlet stores and field observations can provide

interesting insights into the development of SRCB among Generation Y's fast-fashion consumers, while case studies can investigate if fast-fashion brands can evolve into more sustainable fashion brands.

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Appendix 1

Constructs	Indicators	Questions
Environmental	ENA1	Environmental issues are very important to me.
Attitudes (Shim,	ENA2	I believe everybody should try to preserve for future
1995)		generations.
Sustainable	SPI1	I would be willing to pay a higher price for the product
purchasing		of the firm which offer cause campaign than that of
intentions (Hou *et*		others.
***al.*, 2008)**	SPI2	I would be willing to influence others to purchase the
		product related to a cause.
	SPI3	I would be willing to purchase the product related to a
		cause.
Socially	SRCB1	I try not to buy products from companies that employ
responsible		children.
consumer	SRCB2	I try not to buy products from companies that don't
behavior (Lee *et*		respect their employees.
***al*., 2018)**	SRCB3	I try not to buy products from companies or shops that
		are narrowly linked to political parties that I condemn.
	SRCB4	I try not to buy products from companies that strongly
		harm the environment.
	SRCB5	I pay attention to not buy products from companies that
		are narrowly linked with mafia or sects.

	SRCB6	I buy some products of which a part of the price is transferred to a humanitarian cause.
	SRCB7	I buy some products of which part of the price goes to developing countries.
	SRCB8	I buy fair trade products.
	SRCB9	I avoid doing all shopping in big businesses (large retailers).
	SRCB10	I buy in small businesses (bakeries, butchers, book-shop) as often as possible (small shopkeepers).
	SRCB11	I help local small businesses to live through my purchases.
	SRCB12	When I have the choice between an Italian product and a non-Italian product, I choose the Italian product.
	SRCB13	I try to reduce my consumption to what I really need.
Participation in Recycling (Joung, 2014)	PIR1	I reuse my outdated/used/unwanted apparel products for other purposes (e.g., rags, quilts, etc.).
	PIR2	I resell my outdated/used/unwanted apparel products through consignment shops, eBay, garage (yard) sales, etc.
	PIR3	I pass on my outdated/used/unwanted apparel products to my family and friends.

PIR4   I drop off my outdated/used/unwanted apparel products

              to clothing and/or shoe collection bins to be used for

              other purpose.

Part. 2

Employee emotional competence and service recovery satisfaction: The mediating role of consumer forgiveness

Rana Muhammad Umar

Department of Economics and Statistics, University of Udine, Italy,

Salman Saleem

Department of Marketing, Tampere University, Finland

Abstract

Purpose. Employees' emotional competence (EEC) is gaining increasing attention in service failure and recovery research. This study investigates the mediating role of consumer forgiveness between perceived EEC and recovery satisfaction among casual dining consumers. Additionally, this study examines the effect of perceived EEC on recovery satisfaction across process failure vs. outcome failure.

Design/methodology/approach. A critical incident technique (CIT) in conjunction with a self-administered online survey was carried out. Using the snowball sampling technique, a total of 204 usable responses were collected. To test the hypotheses, the study used partial least squares structural equation modeling (PLS-SEM).

Findings. The study finds that perceived EEC influences service recovery satisfaction. Additionally, the study identifies the mediating role of consumer forgiveness in the relationship between perceived EEC and recovery satisfaction. Multi-group moderation analysis shows that the relationship between perceived EEC and recovery satisfaction is weaker in process failures as compared to outcome failures.

Practical Implications. Based on obtained results, this study recommends that after service failure consumer forgiveness and subsequent recovery satisfaction can be obtained with perceived EEC. To do so managers need to incorporate emotional competence while recruiting and training the employees. Moreover, managers need to train employees on failure types and respective recovery strategies. Lastly, the study suggests that in emerging markets managers should pay greater emphasis on process failure, because such failure decrease customer satisfaction greatly than outcome failure.

Originality/value. To the authors' knowledge, this is the first study that investigates the impact of perceived EEC on consumer forgiveness which subsequently determines the recovery satisfaction in the emerging markets. It extends the application of the emotional contagion and affect infusion theories by exposing the effect of perceived EEC on recovery satisfaction through consumer forgiveness. In addition, the study provides insights that the influence of perceived ECC on recovery satisfaction significantly varies across service failure types.

Keywords: Consumer forgiveness, employee emotional competence, casual dining restaurant, emerging market, service failure type

Paper type: Research paper

1. Introduction

Companies use a wide range of strategies for service recovery (Yang and Hu, 2021). However, it is alarming that scholars and practitioners have stringent challenges in service recovery. For instance, the US economy alone is at the risk of losing a staggering 496 billion dollars due to wrong customer recovery strategies (CCMC, 2022). In the same vein, the relative frequency of service failures in emerging markets is higher than in developed markets (Borah *et al*., 2019). Such a situation calls attention to emerging markets like Pakistan. Thus, more research is needed on the determinants of successful service recovery outcomes (Van Vaerenbergh *et al*., 2019). Customer emotions play a big role in service failure and recovery (Smith *et al*., 1999). Negative feelings associated with service failures, such as post-failure irritation, wrath, and embarrassment (Yang and Hu, 2021), may have adverse consequences for service firms (Mattila, 2001). In recent literature, service recovery scholars have emphasised on consumer forgiveness as a coping mechanism that helps consumers relinquish their negative feelings (Lin and Chou, 2022; Muhammad and Gul-E-Rana, 2020).

Service recovery in the hospitality industry is considered one of the most significant concerns since service failures in the industry are unavoidable. Moreover, effective service recovery can result in repeat visits with an improved level of customer satisfaction (Guchait *et al*., 2019). Therefore, service recovery has attracted significant attention from hospitality scholars, and numerous studies have been conducted to assess the efficacy of service recovery strategies (Yoo *et al*., 2006). Since customers' post-service positive emotions increase their satisfaction (Liu *et al*., 2019) thus employee emotional competence (EEC) (i.e., employee's ability to perceive, understand, and regulate customer`s emotions), is gaining considerable attention (Delcourt, *et al*., 2016; Matute *et al*., 2018; Liu, *et al*., 2019; Fernandes *et al*., 2018).

In the service failure context, scholars have linked perceived EEC to positive recovery outcomes such as post-recovery satisfaction, trust, WOM, repurchase intention (Fernandes *et al*., 2018), and perceived interactional and informational fairness (McQuilken *et al*., 2020).

Service failure literature shows that emotional recovery strategies (e.g., apology and explanation) outperform economic strategies for obtaining consumer forgiveness (Van Vaerenbergh *et al*., 2019; Wei *et al*., 2020). Therefore, we can argue that perceived EEC is too crucial to relinquish negative feelings of service failure. However, little is known whether and how in a service failure context consumers' perceived EEC influences consumer forgiveness. Moreover, the underlying mediating role of consumer forgiveness between perceived EEC and consumer response remains under-researched.

According to theory of emotional contagion people "automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally" (Hatfield *et al.*, 1993, p. 153). For instance, during service encounters customers' and employees' emotions mutually influence each other (Liu *et al*., 2019). Based on emotional contagion theory, that is people "catch" others' emotion (Hatfield *et al.*, 1993), we argue that when service failure occurs, emotionally competent employees' positive emotional state is reciprocated by customers with forgiveness. In other words, EEC influence consumer forgiveness. Moreover, the affect infusion theory states that affect leads to judgment (Forgas, 1995), thus consumer's perception of EEC influence their service recovery evaluations too. Furthermore, we argue that consumer forgiveness is an underlying mechanism such that perceived EEC influences customer forgiveness (emotional contagion theory) which affect recovery satisfaction (affect infusion theory).

Since the failure type cause, different losses to the consumer, process failure (e.g., unreasonably slow service) threatens customers' social and self-esteem needs, whereas in event of outcome failure (e.g., an overcooked steak) consumer faces economic losses (Huang *et al*., 2020). Therefore, consumer responses to service recovery efforts are also affected by failure type (Luo and Mattila 2020; Ma *et al*., 2020). For instance, studies have shown that the nature of a service failure influences how customers perceive the warmth of employees (Huang *et al*., 2020) and recovery evaluations (Ma *et al*., 2020). To authors' best knowledge prior research has overlooked the effect of perceived EEC on service recovery outcomes in the face of distinct service failures.

Given the above background, this study aims to contribute to hospitality literature in several ways. First, we examine the effect of perceived EEC on the recovery satisfaction of casual dining restaurant consumers. Second, the study explores the underlying mechanism of consumer forgiveness linking perceived EEC and customer satisfaction in hospitality service failure encounters. Third, the study examines the moderating impact of service failure types in the relationship between perceived EEC on recovery satisfaction. In doing so the study offers several managerial implications. Using emotionally competent frontline employee's managers can obtain consumers' forgiveness, which can in turn elevate consumers' recovery satisfaction. Moreover, in emerging markets, the process failures are less forgiven and reduce recovery satisfaction than outcome failure.

2. Literature review

2.1. Theoretical background and hypotheses development

The current study used the theories of emotional contagion and affect infusion to develop a theoretical framework. Emotional contagion theory suggests that individuals

"automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally" (Hatfield *et al*., 1993, p. 153). Based on this principle, we assume that the emotions of employees can play a significant role in consumer emotional well-being after the events of service failure. Prior research suggests that consumer forgiveness is a fundamental human emotion and a core outcome variable of successful service recovery (Wei *et al*., 2020). Thus, the study considers consumer forgiveness as a mediating variable between EEC and recovery satisfaction. Affect infusion theory posits that the affective state of individuals leads to their judgment (Forgas, 1995). Therefore, considering Delcourt *et al*. (2016), we adopted customer satisfaction as a dependent variable for this study.

2.2. Employee emotional competence and recovery satisfaction

Customers' perception of service employees' performance is a significant predictor of satisfaction (Delcourt *et al*., 2017). Therefore, the success of service companies lies in understanding the expectations of customers from service employees (Huang, 2008). According to Delcourt *et al*. (2016) EEC, (i.e., employees' abilities to identify, interpret, and manage the emotions of their selves and others) is a key consideration in service encounters. For instance, consumers' perception of EEC results in several positive outcomes for service providers, including customers' loyalty to the firm and employees (Matute *et al*., 2018), and customer satisfaction (Delcourt *et al*., 2016). Recent research shows that emotionally competent employees can essentially better address the emotional needs of customers aroused due to service failure (Fernandes *et al*., 2018).

According to affect infusion theory, individuals' affective state influences their judgments (Forgas, 1995). Therefore, the customers' positive affective state induced by

emotionally competent employees leads them to be less critical and more satisfied (Delcourt *et al*., 2012). Drawing upon the above discussion, we have hypothesized that.

H1. There is a positive relationship between perceptions of EEC and recovery satisfaction.

2.3. Employee emotional competence and consumer forgiveness

According to Muhammad and Gul-E-Rana (2020, p.2) "a service failure is said to be forgiven if a customer let go the revengeful destructive behaviour and respond in a constructive way towards the service firm on perceiving recovery efforts". Moreover, in service failure context, forgiveness is regarded as a fundamental human emotion that commonly results in satisfaction and repurchase intention (Wei *et al*., 2020). Forgiveness has emerged through a complex reaction of negative emotions elicited due to service failure followed by positive emotions aroused by service recovery (Ma *et al*, 2020). Service managers endeavor to mitigate negative service experiences by expressing empathy (Xie and Peng, 2009), offering apology (Riek and DeWit, 2018) showing concern, and efforts (Wei *et al*., 2020) to convert negative emotions into positive ones. Thus, acknowledging mistakes, apologizing, and expression of repentance by frontline employees can help to earn consumer forgiveness (Bath and Bawa, 2020). Moreover, expression of emotions by employees are essential for successful realization of emotional recovery strategies (e.g., apology) (Hareli and Eisikovits, 2006).

In other words, emotionally competent employees more efficacious in their interaction with customers (Delcourt *et al*., 2012) and are better in implementing emotional recovery strategies (Delcourt *et al*., 2016). Drawing upon emotional contagion theory (Hatfield *et al*., 1993) we argue that emotionally competent employees induce a positive affective state, which relinquishes negative emotions of consumers through a contagious effect. Based on the above discussion we hypothesize that

H2. There is a positive relationship between perceptions of EEC and consumer forgiveness.

2.4. Consumer forgiveness and recovery satisfaction

Recovery satisfaction is referred to "customers' overall satisfaction with the secondary service (remedial action) of a service provider after a service failure" (Kuo and Wu, 2012, p.129). The purpose of service recovery is to repair mistakes, patronize unhappy consumers and re-establish satisfaction (Ma *et al*., 2020). Maxham and Netemeyer (2002) argue that a consumer who receives proper recovery develops more favorable feelings toward the firm than a customer who has not encountered service failure. Therefore, an appropriate recovery strategy is inevitable for service managers. This research puts particular emphasis on consumer forgiveness that results from the right recovery strategy. Scholars have argued that consumer forgiveness is crucial in the service recovery process as it leads to numerous favorable outcomes for service firms (Harrison Walker. 2019). For instance, several previous studies have documented a significant positive relationship between consumer forgiveness and recovery satisfaction (Ma *et al*., 2020; Muhammad and Gul-E-Rana, 2020). Based on this converging evidence we propose that consumer forgiveness has a significant and positive relationship with recovery satisfaction.

H3. There is a positive relationship between consumer forgiveness and recovery satisfaction.

2.5. Mediating role of consumer forgiveness

Extent research regards consumer forgiveness as an outcome of service recovery (Ma *et al*., 2020; Muhammad and Gul-E-Rana, 2020). Harrison-Walker (2019) claims that the right recovery strategy promotes consumer forgiveness, which mediates the relationship between service recovery strategies and their outcomes. Following the above, consumer forgiveness is considered as a salient mediator of the service recovery process. For example, extant studies

verify that consumer forgiveness underlies perceived recovery justice and relationship satisfaction (Muhammad and Gul-E-Rana, 2020), transparency in service recovery and switchover intention (Honora *et al*., 2022), recovery strategies (e.g., apology, compensation, voice) and positive recovery outcomes (Harrison-Walker, 2019), and recovery strategies (e.g., apology, compensation, combined recovery, no recovery) and recovery satisfaction (Zhong and Hou, 2020). However, to the authors' best knowledge, the mediating effect of consumer forgiveness on perceived EEC and recovery satisfaction is overlooked in the hospitality literature.

Previous studies suggest that a service failure essentially results in anger and disappointment (Luo and Mattila, 2020). Therefore, customers expect effective service recovery (McCollough *et al*., 2000), to let go of negative feelings and respond in a constructive way (Muhammad and Gul-E-Rana, 2020). Emotionally competent employees are good at regulating their own and customers' emotions (Delcourt *et al*., 2016). An employee's positive emotions have a significant effect on customers' positive emotions (Giardini and Frese, 2008; Liu *et al.*, 2019). Emotional contagion theory poses the notion that the emotions of one individual affect another person (Hatfield *et al.*, 1993). Based on the above, we argue that the positive affect induced by employees is likely to result in consumer forgiveness. Accordingly, based on affect infusion theory (Forgas, 1995), a positive affect (i.e., consumer forgiveness) infuses consumer recovery satisfaction. Hence, based on contagion theory and affect infusion theory, we expect that consumer forgiveness mediates the relationship between perceived EEC and recovery satisfaction. Hence, we hypothesize that.

H4. Consumer forgiveness mediates the relationship between perceived EEC and recovery satisfaction.

2.6. Moderating role of failure type (Process vs. outcome failure)

In a restaurant setting service failure refers to host of issues, namely foreign objects in food, improperly cooked food, rude/discourteous behavior by employees, inattentive employees, slow service, disordered delivery of food items (Kim and Jang, 2014), disorderly food delivery is when customer is served later than late-arriving customers (Kim *et al*., 2021). Above mentioned service failures have been further categorized into two broader types called outcome failure and process failure. From customers` point of view when customers do not get what they pay for is outcome failure (e.g., out of the stock menu, overbooking, overcooked food, and a bug in the food). Process failure, on contrary, refers to deficiencies in the delivery of core service (e.g., inattentive, or rude employees and slow services) (Luo and Mattila, 2020). Various empirical studies argue that failure type moderates' customers` evaluation of the service recovery process. Huang *et al*. (2020) demonstrate that hospitality employees need low warmth and high competence to manage outcome failure, while high warmth and low competence are required in process failure. Moreover, employee consciousness has a stronger influence on consumer dissatisfaction with a process failure than outcome failure (Chan *et al*.,2007). Similarly, empathic apology has a stronger effect on recovery satisfaction for process failure than to outcome failure (Roschk and Kaiser, 2012). According to, Borah *et al*. (2020) consumers in emerging markets are more conscious of process failure (vs. outcome failure) and consequently develop higher recovery expectations from process failures. As casual dining restaurants usually serve moderately priced food in a casual atmosphere (Cai and Qu, 2018), previous studies claim that casual dining restaurants may not focus on the personal attention in services that prevails in fine dining restaurants (DiPietro and Partlow, 2014). The context of the present study is casual dining restaurants operating in emerging markets. Considering the

context of the study, we assume that casual dining consumers in emerging markets have more concerns about how they are treated at the restaurant. A process failure may create more negative emotions as compared to outcome failure. Therefore, we expect that the effect of perceived EEC on recovery satisfaction will be weak after a process failure as compared to outcome failure (see Figure 1).

H5: The positive relationship between perceived EEC and recovery satisfaction will be weaker for process failure than for outcome failure.

Figure 1: Theoretical Framework

H4: Mediation effect
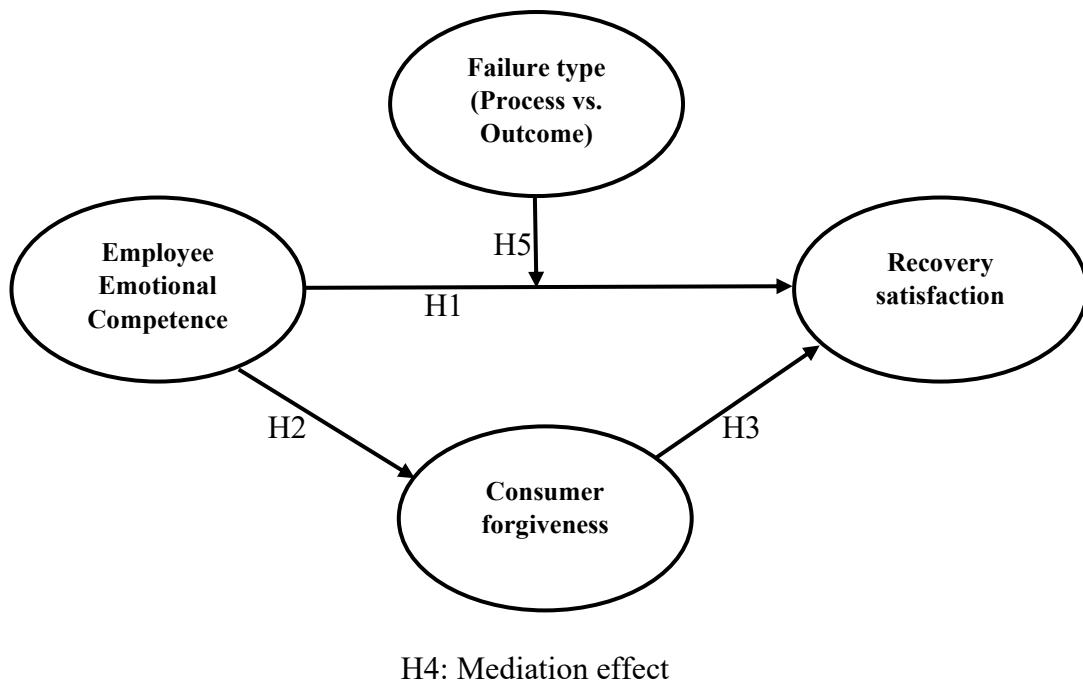
3. Methodology

A critical incident technique (CIT) in conjunction with a self-administered online questionnaire was considered in this study. CIT is a qualitative method used "to gain understanding of the incident from the perspective of the individual, taking into account cognitive, affective, and behavioral elements" (Chell, 1998, p. 56). Consumer memory is critical in hospitality encounters (Wei *et al.*, 2016), therefore CIT is largely used in service

failure and recovery research (Koussaifi *et al.*, 2020). Previous researchers claimed that combining CIT with a structured questionnaire is appropriate to quantitatively examine unfavorable service experiences (e.g., Swanson *et al.*, 2014). Following the above recommendations, we developed our survey as follows. Firstly, we explained to the respondents with concepts of service failure, service recovery, and casual dining restaurants, then asked them to recall and describe their most recent service failure and recovery experience at casual dining restaurants. Subsequently, participants were asked to refer to recalled and described the experience and respond to questions related to variables of this research.

The online survey was administered in a Google form in the English language. Since English is the official language in Pakistan, respondents in previous service research studies reported no concern about language (Muhammad and Gul-E-Rana, 2020). Following previous studies (e.g., Marozzo *et al.*, 2021) the questionnaire was distributed by using the virtual snowball sampling technique, which is a non-probability sampling technique in which research participants recruit other participants. Data collection was carried out between July 2021 and Feb 2022 and a sample of 204 consumers was considered for final analysis. Previous scholars recommended that the sample size for PLS-SEM should be five to ten cases per variable (Hair *et al.*, 2018). Accordingly, our observations per variable are more than 40, which is higher than the minimum threshold (Oliveira *et al.*, 2020). Therefore, the sample size was satisfactory for further analyses.

3.1. Measures

Five, three, and five items were adopted to measure employees' ability to perceive, understand, and regulate customer emotions respectively, adopted from Delcourt *et al.* (2016). For consumer forgiveness, four items scale was adopted from Hur and Jang (2019). A three

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items scale of recovery satisfaction was adopted from Fernandes *et al*. (2018). All variables were measured on a seven-point Likert scale ranging from 1 (strongly agree) to 7 (strongly disagree). Finally, following Swanson *et al*. (2014) study two judges sorted all critical incidents into process failure and outcome failure. If the service provider fails in providing appropriate food (e.g., improperly cooked, overcooked, or burnt food, out of the stock menu, a bug in the food, wrong food) was considered as outcome failure. On the other hand, the service provider`s failure in the delivery process of food (e.g., inattentive, or rude employees, disorderly service, and slow services) was sorted as process failure. (Borah *et al*., 2020; Luo and Mattila, 2020; Smith *et al*., 1999; Warden *et al*., 2008; Yang and Mattila, 2012; Zhu *et al*., 2004). To calculate the level of agreement among judges, we used Perreault and Leigh's (1989) formula, and the inter-rater reliability (Ir) value was 0.96, which was higher than the 0.70 rule of thumb (Rust and Cooil 1994). Eight responses with which the judges disagree were resolved by discussion. Process failures were recorded in 121 critical events (59.31 percent) and outcome failures were documented in 83 critical occurrences (40.68 percent). Following previous studies, this study has ruled out considering several variables as controls. According to Lu *et al*. (2020), there is no significant effect of covariates such as age, gender, and income on service encounter evaluation and its outcomes among casual dining customers. Similarly, a recent study among casual dining customers by Hwang and Shin (2021) reported no significant influence of demographics on employee performance and consumer attitude towards the restaurant. Hence, this study did not introduce demographics as control variables in the statistical analysis.

4. Results

Table 1 shows the demographic characteristics of respondents. 60.8% of respondents were males, 55.4% of respondents had an age between 25 and 39 years, 40.7% of respondents

had a master's degree, 37.2% of respondents had a per month income between 40000 and 99999 PKR, and 45.1% of respondents have dined out frequency from one to two time per month.

We tested common method bias by using Harman's single-factor method. This research reported no common method bias. Our theoretical framework includes a higher-order construct of perceived EEC, mediating variable of consumer forgiveness, and multi-group moderating variable of service failure type. Therefore, we used PLS-SEM as an evaluation model as it is considered more appropriate for formative constructs, small sample sizes (Ramayah *et al*., 2018) and complex models including moderations (Hair *et al*., 2014).

4.1. Measurement model

Confirmatory factor analysis (CFA) was conducted to measure the validity of the constructs and to measure the psychometric properties (convergent and discriminant), the average variance extracted (AVE) and composite reliability (CR) of all constructs (Hair *et al*., 2014). Due to low CR value one item from recovery satisfaction scale was deleted. After re-assessment, the minimum threshold of all values was meet, as values of CR and Cronbach α were greater than 0.70 for all constructs. Moreover, value for the AVE for all variables was more than 0.50 (Hair *et al*., 2014). Thus, the convergent validity is acceptable (see Table 2). Table 3 shows that discriminant validity was acceptable too as all Heterotrait-monotrait ratio (HTMT) values are less than 0.90 (Henseler *et al*., 2015).

Table 1. Demographics

Demographic characteristics	Frequency	Percent	Cumulative percent
Gender			
Females	80	39.2	100
Males	124	60.8	60.8
Age			
18-24 years	68	33.3	33.3
25-39 years	113	55.4	88.7
40-64 years	23	11.3	100
Education			
High school	15	7.4	7.4
Intermediate	19	9.3	16.7
Bachelor	19	9.3	26
Masters	83	40.7	66.7
MS/M.Phil	55	27	93.7
PhD	13	6.3	100
Income (PKR per month)			
0-19999	72	35.3	35.3
20000-39999	27	13.2	48.5
40000-59999	36	17.6	66.1
60000-99999	40	19.6	85.7
100000-149000	16	7.8	93.5
150000 or above	13	6.5	100
Dine out frequency/month			
Less than once	69	33.8	33.8
1-2 times	92	45.1	78.9
More than 3 times	43	21.1	100

Table 2. Results of measurement model

Constructs	Indicator	Outer loading	Cronbach`s Alpha	rho_A	Composite Reliability (CR)	Average Variance Extracted (AVE)
Perceiving customer emotions	PCE1	0.68	0.90	0.90	0.90	0.64
	PCE2	0.81				
	PCE3	0.96				
	PCE4	0.73				
	PCE5	0.78				
Understanding customer emotions	UCE1	0.66	0.87	0.89	0.86	0.68
	UCE2	0.79				
	UCE3	0.98				
Regulating customer emotions	RCE1	0.65	0.89	0.90	0.90	0.63
	RCE2	0.82				
	RCE3	0.85				
	RCE4	0.86				
	RCE5	0.80				
Consumer forgiveness	CF1	0.82	0.88	0.88	0.88	0.66
	CF2	0.82				
	CF3	0.81				
	CF4	0.79				
Recovery satisfaction	RS1	0.90	0.88	0.88	0.88	0.79
	RS2	0.87				

Table No 3. Discriminant validity of measure model Heterotrait-monotrait Ratio (HTMT) of correlations

Constructs	CF	PCE	RCE	SAT	UCE
CF					
PCE	0.42				
RCE	0.72	0.58			
SAT	0.76	0.48	0.83		
UCE	0.34	0.79	0.52	0.44	

4.2. Higher-order model of EEC

As can be seen in Figure 2, higher-order model of perceived EEC showed all three dimensions are statistically significant at $p < 0.01$ (Perceiving customers emotions: β 0.44, Understanding customers emotions: β 0.23 and Regulating customers emotions: β 0.56). According to Hair *et al*. (2014) the minimum threshold value for variance inflation factors (VIF) is 0.5. Our analysis shows that VIF values ranged between 1.5 and 2.99, thus there is no multicollinearity issue.
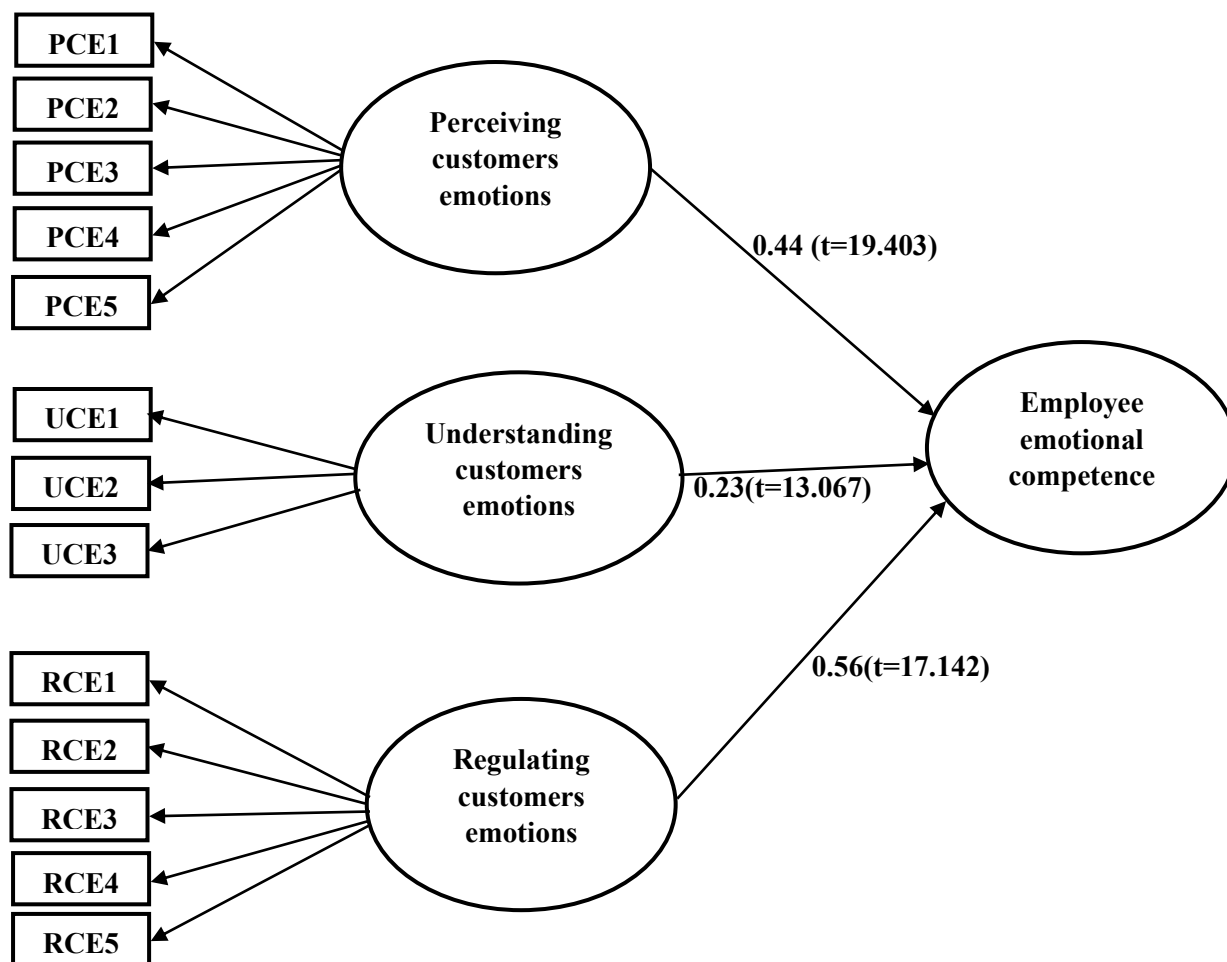
Figure 2 PLS results for a higher-order model of perceived EEC

4.3. Structural model

We assess the structural model by evaluating the beta, t-values, effect sizes f^2, predictive relevance Q^2, and coefficient of determination (R^2) (Hair *et al*., 2014). Impact of perceived EEC on recovery satisfaction (H1) was supported $\beta = 0.53$, $p = 0.000$. The effect of perceived EEC on consumer forgiveness (H2) was supported $\beta = 0.64$, $p = 0.000$. The effect of consumer forgiveness on recovery satisfaction (H3) was supported $\beta = 0.33$, $p = 0.000$ (see Table 4). We employed Preacher and Hayes (2008) approach with subsamples 5000 bootstrapping procedure to evaluate t-values and confidence intervals for mediating

hypothesis. Table 5 shows that H4 was supported as confidence intervals have no zero (Preacher and Hayes, 2008). Finally, a Multi-group analysis was performed to assess differences between failure types (Henseler *et al*., 2009). We found that process failure (β: 0.42) value is lower than outcome failure (β: 0.69) value and the difference (β: 0.27) is statistically significant (*p-value* of the multi-group analysis = 0.015). Thus, H5 is supported as effect of perceived EEC on recovery satisfaction was significantly weaker for process failure as compared to outcome failure.

Table 4. Results of structural model analysis (Hypothesis testing)

Hypotheses	Relationships	β	t-values	P values	f^2	R^2	Q^2	Decision
H1	EEC→SAT	0.53	8.76	0.000	0.44	0.62	0.54	Supported
H2	EEC→CF	0.64	12.75	0.000	0.69	0.41	0.29	Supported
H3	CF→SAT	0.33	4.99	0.000	0.17	0.62	0.54	Supported

Table 5. Mediation analysis

Hypotheses	Relationships	β	t-value	P value	CI. 95		Decision
					2.50%	97.50%	
H4	EEC→CF→SAT	0.21	4.6	0.000	0.125	0.305	Supported

Table 6. Multi-group PLS analysis testing differences between failure types

Hypotheses	Relationships	β (process failure)	β (outcome failure)	β differences	*p*-value
H5	EEC→SAT	0.42	0.69	0.27	0.015

5. Discussion

The objectives of the study were to examine the mediating effect of consumer forgiveness and moderating role of failure type between perceived EEC and recovery satisfaction. Emotional contagion theory was articulated that consumers perceiving high emotional competence in service employees tend to forgive service providers. Accordingly, findings support our theorizing that perceived EEC enhances consumer forgiveness by addressing the negative feelings resulting from service failure. These results support the suggestion that the critical role of service employees is to address the emotional needs of consumers (Matute *et al*., 2018) and that perceived EEC is a much-needed skill (Mattila and Enz, 2002). Results further demonstrate a direct effect of perceived EEC on recovery satisfaction. These findings are congruent with previous research that emotional service recoveries drive customer satisfaction (We *et al*., 2020; Fernandes *et al*., 2018).

Harrison-Walker (2019) suggests that service recovery aims to improve customer satisfaction with the service provider. Moreover, understanding the mechanism by which service recovery generates positive outcomes helps the service providers exploit the resources appropriately. Subsequently, their analysis revealed forgiveness as the missing link between recovery strategies and desired recovery outcomes. Besides, several research scholars have

noted consumer forgiveness as an underlying mechanism in service recovery processes (Muhammad and Gul-E-Rana, 2020; Honora *et al*., 2022; Ma, *et al*., 2020). Similarly, building upon emotional contagion and affect infusion theories we proposed an underlying mediating role of consumer forgiveness in relationship between perceived EEC and recovery satisfaction. The findings show that the direct effect of perceived EEC on recovery satisfaction and the indirect effect via customer forgiveness were significant. This suggests that obtaining customer forgiveness paves the way for perceived EEC to exert its influence on recovery satisfaction. As a result, the current study's findings are consistent with previous research.

Ma *et al*. (2020) claimed that forgiveness plays a mediating role between recovery and satisfaction. In addition, failure type plays a significant role in this relationship. Our study provides similar findings in this regard. For example, as failure types represent different types of losses to consumers (Luo and Mattila 2020; Ma *et al*., 2020), in the event of a process failure, customers' social and self-esteem needs are threatened however outcome failure causes economic losses (Huang *et al*., 2020). To this end, findings revealed that the relationship between perceived EEC and recovery satisfaction was weaker for process failure as compared to outcome failure. Such findings support the assumption that consumers in emerging markets are more conscious of process failure than outcome failure (Borah *et al*., 2020).

5.1. Theoretical and managerial implications

The contribution of this research is three-fold. The first research provides empirical evidence that perceived EEC as a way of obtaining customer forgiveness. These results can be explained with help of the tenet that emotional contagion theory which postulates an emotional convergence among people (Hatfield *et al*., 1993). As emotionally competent employees, in event of service failure, not only regulate and maintain their own emotions (Giardini and Frese,

2008) but also their competence in understating the customer's emotional state (Delcourt *et al*., 2016) prompts customer forgiveness. In doing so we extend the emotional contagion theory in service recovery encounters by demonstrating that emotionally competent employees may invoke customer forgiveness.

Second, this research contributes to service recovery literature by considering consumer forgiveness as an underlying mechanism of perceived EEC and recovery satisfaction. Third, by focusing on the two failure types namely process failure (e.g., unreasonably slow service) and outcome failure (e.g., an overcooked steak), this research reveals the moderation effect of failure type in the relationship between EEC and recovery satisfaction.

This study supports the previous research efforts that provide insights to the managers on the significance of emotionally competent employees (Liu *et al*., 2019). Like previous studies (e.g., Delcourt *et al*., 2016), this study also suggests that EEC should be a crucial element in the recruitment process and that organizational-wide training programs for improving employee emotional competence skills are warned. Because customer forgiveness is a key variable that decreases customers, negative service evaluations and promotes the positive ones (Muhammad and Gul-E-Rana, 2019; Ma *et al*., 2020; Honora *et al*., 2022). Therefore, managers must ensure that employees understand completely the vital role of consumer forgiveness in gaining recovery satisfaction.

Moreover, while addressing customer recovery satisfaction managers must differentiate among that service failure types. Specifically, in the context of casual dining restaurants in the emerging market, perceived EEC results in greater recovery satisfaction for outcome failure (vs. process failure). Therefore, managers should be more focused on service design that minimizes process failures. Also, consistent with Borah *et al*. (2020) suggestions this study

highlights a need that employees should have rigorous training on the differentiation of service failure types and respective recovery strategies.

The present study also provides some additional insights for casual dining managers on food safety and food allergies. For example, service failure often happens due to food safety problems (Harris *et al*., 2021). Also, consumers' perceptions of food safety are key to service recovery (Bouranta *et al*., 2018). Among casual dining consumers, clean and protective clothing, employees' clean fingernails, and having gloves while handling food are key aspects of food safety (Liu and Lee, 2018). The implication is that emotionally competent employees complying with high food safety standards can better address consumers' concerns about food safety and thus improve service recovery outcomes. Similarly, food allergies also result in service failure (Wang *et al*., 2022). Thus, there is a great need for restaurant employees to have essential knowledge and training on food allergies (Lee and Sozen, 2016). Therefore, we suggest that employees with emotional competence along with handy knowledge of food allergies can help in addressing or even preventing service failure due to food allergies. To sum up, the present study suggests that casual dining managers should develop employees' both emotional competence and technical skills (e.g., food safety and allergies).

6. Limitations and future research

This study acknowledges several limitations. This study considered casual dining restaurant consumers in a developing country in Asia (e.g., Pakistan) with limited generalizability of results. Since consumer forgiveness is a universal phenomenon that prevails in fine dining consumers, and fast-food consumers, future studies may broaden the scope of this research in examining this model among other categories of consumers in developed countries. A limited sample may also limit the generalizability of research. Thus, future

research should broaden the sample to expand the generalizability of the findings. To further validate our study future research may introduce some control variables such as service failure severity and demographic variable (Fernandes *et al.*, 2018). Following previous studies, this study has ruled out the scenario-based experiment approach, as it is very hard to imagine oneself in a situation where one has not experienced employee emotions. However, the findings of this study can be further validated by video-based experiment studies (e.g., Delcourt *et al.*, 2017) where the respondent can be shown videos of various service failures that are handled with varying levels of EEC. Besides, field experiments present a great opportunity to study actual consumer behavior in face of EEC (Matute *et al.*, 2018). Moreover, perceived EEC may result in different customer experiences for different services such as personal services (e.g., hairdressing) and impersonal services (e.g., lawn mowing). Thus, perceived EEC may have different consequences on recovery satisfaction across process failure (vs. outcome failure). Hence, we recommend future researchers examine the moderating role of failure type across service industries.

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Appendix 1

Constructs	Indicators	Questions
Perceiving customer emotions (Delcourt *et al*., 2016)	PCE1	The employee of this restaurant was capable of recognizing that I was upset.
	PCE2	The employee of this restaurant was capable of perceiving how I was feeling.
	PCE3	The employee of this restaurant was capable of identifying the emotional state I was in.
	PCE4	The employee of this restaurant was aware of my emotional state.
	PCE5	The employee of this restaurant interpreted my emotions.
Understanding customer emotions (Delcourt *et al*., 2016)	UCE1	The employee of this restaurant understood the reasons why I was upset.
	UCE2	The employee of this restaurant understood the reasons for my feelings.
	UCE3	The employee of this restaurant understood why I was bothered.
Regulating customer emotions (Delcourt *et al*., 2016)	RCE1	The employee of this restaurant had a very positive influence on me.
	RCE2	The employee of this restaurant did everything to make me feel well.

	RCE3	The employee of this restaurant behaved tactfully to make me feel better.
	RCE4	The employee of this restaurant positively influenced the way I was feeling.
	RCE5	By his behavior, the employee of this restaurant calmed me down.
Consumer forgiveness (Hur and Jang, 2019)	CF1	I forgive the restaurant for the incident.
	CF2	Even though the incident annoyed me, I have good will for the restaurant.
	CF3	Despite the incident, I want to have a positive relationship with the restaurant.
	CF4	Although the incident aggravated me, I am putting the negative feeling aside so I can continue to patronize the restaurant.
Recovery Satisfaction (Fernandes *et al.*, 2018)	RS1	The firm provided a satisfactory resolution for my problem.
	RS2	Regarding this particular problem, I'm satisfied with the firm.

Part. 3

Service recovery efforts' influence on consumers' desire to reciprocate and forgiveness: The mediating role of perceived justice

Rana Muhammad Umar

Department of Economics and Statistics, University of Udine, Italy,

Abstract

Purpose – This paper investigated the impact of firms' service recovery efforts on consumers' desire to reciprocate and forgiveness in the hospitality industry of Pakistan. Additionally, this study examined the mediating role of perceived justice between service recovery efforts and their outcomes.

Design/Methodology/Approach - Using snowball sampling technique, an online survey was administered, and 259 responses were collected from casual-dining restaurant customers. A partial least squares structural equation modeling (PLS-SEM) and multivariate analysis of covariance (MANCOVA) were used to examine the hypotheses.

Findings – The results indicate that perceived justice significantly mediates the effect of service recovery efforts on the consumers' desire to reciprocate and forgiveness. Moreover, high (vs. low) service recovery efforts lead to high consumer forgiveness.

Practical Implications - The study provides insights for managers on how optimal recovery efforts predict consumers` positive responses and minimize the effect of service failure in South Asian consumers.

Originality/value – This research is among the early endeavors to examine consumers' desire to reciprocate in service recovery context. Also, this is the first study to validate the impact of service recovery efforts on consumers' desire to reciprocate and consumer forgiveness in a South Asian country.

Keywords: Desire to reciprocate, perceived justice, consumer forgiveness, service recovery efforts, casual-dining restaurants

Paper Type: Research paper

1. Introduction

Due to human involvement in services, it is difficult to avoid errors in service delivery process (Wen and Chi, 2012). Therefore, service providers remain highly concerned about the negative effects of service failures. Converging evidence shows that devoting appropriate recovery efforts can mitigate the negative effect of service failures (Jeong and Lee, 2017; Muhammad and Gul-E-Rana, 2019; Riaz and Khan, 2016). Service recovery efforts refer to the perceived energy and resources dedicated by service employees (Mostafa *et al.,* 2014) and organizations (De Matos *et al.*, 2007). Since the service recovery efforts are aimed to achieve customers' positive evaluation of service recovery, previous studies provide mixed findings on the effectiveness of service recovery efforts (Harun *et al.*, 2018). Also, studies show that a large sum of consumers remains dissatisfied with service recovery (Ma and Zhong, 2021). To this end, it is crucial to examine how service recovery efforts can be better evaluated by consumers.

Prior research suggests that consumers assign different meanings to different recovery efforts, which reflect in their responses (less vs. more favorable) toward service providers (Roschk and Gelbrich, 2017). Therefore, consumer reciprocity is getting the increased attention of service researchers. Consumers` desire to reciprocate is an affective motivational state (Do and Seo, 2016), which refers to "a desire to do (something) in an effort to reward an organization for something they have done" (Langan, 2014, p.35). In addition, in service failure and recovery context, consumer forgiveness is considered a fundamental human emotion (Wei *et al.*, 2020) that emerges from service recovery efforts (Muhammad and Gul-E-Rana, 2020). Thus, this study assumes that consumers' desire to reciprocate and forgiveness are potentially favorable outcomes of service recovery. For instance, appropriate investment in failure handling can trigger feelings of reciprocity (Fierro *et al.*, 2014), which promotes future patronage (Dutta *et al.*, 2019). Similarly, consumer forgiveness promotes an enhanced brand attitude, purchase intention, satisfaction (Tathagata and Amar, 2018) cognitive loyalty, affective loyalty, conative loyalty (Ghosh, 2017), and recovery satisfaction (Ma *et al.*, 2020), etc.

In addition, Borah *et al.*, (2019) claimed that most of the research on service recovery is carried out in developed markets, while little is known about whether the findings are replicable in developing countries with different cultures. The south Asian market has a rich culture and history, and research scholars are interested to examine how companies can win over consumers' minds and hearts (Dewasiri *et al.*, 2021). Despite a recognized potential of consumers' desire to reciprocate, consumer forgiveness, and the unique characteristics of South Asian consumers, to the best of the author`s knowledge previous research provides us with a

limited understanding of how service recovery efforts influence consumers' desire to reciprocate and consumer forgiveness in South Asian markets.

Since firms dedicate resources to recovering service failures, resource exchange theory suggests that individuals prefer to exchange the resources which are proximal in terms of concreteness and particularism (Foa and Foa, 1974). Moreover, it is recommended that consumers evaluate service recovery efforts on the framework provided by justice theory (Kwon and Jang, 2012; Smith *et al.*, 1999). Therefore, this study draws upon resource exchange theory and justice theory and assumes that consumers' desire to reciprocate and consumer forgiveness are the means by which consumers express their affectionate regard to service providers who try to restore their comfort after a service failure (Foa and Foa, 1974).

Thus, the main purpose of this study is to investigate the effect of service recovery efforts on consumers` desire to reciprocate and consumer forgiveness through a mediating role of perceived justice in the hospitality industry of Pakistan. Pakistan is a developing country with a consumer base of approximately 200 million, where the food industry is the second largest industry, and food-related outlets and restaurants warrant great importance (Burhan *et al*., 2021). The restaurant sector in Pakistan is a rapidly growing sector (Satti, *et al*., 2022). The business environment in the restaurant sector remains competitive since local restaurant chains try to compete with foreign restaurant chains by offering good food at reasonable prices (Asadullah *et al*., 2020). Hospitality literature classifies restaurants into various categories, such as fine dining, casual dining, fast food, etc. Each type of restaurant contains different service norms in terms of food, service, price, and atmosphere (Lee *et al*., 2020). The present study focuses on casual dining restaurants because casual dining restaurants in Pakistan provide a variety of quality food at moderate prices and are commonly visited by the general population

such as businessmen, public servants, housewives, teachers, students, etc (Kamran and Attiq, 2011).

Subsequently, this study contributes to the hospitality literature in several ways. First, this study examines the relationship of service recovery efforts with consumers' desire to reciprocate and consumer forgiveness. Second, this study empirically examines perceived justice as an underlying mechanism to understand how service recovery efforts influence consumers' desire to reciprocate and consumer forgiveness. Third, this study extends the application of justice theory and resource exchange theory in the hospitality industry in developing markets in south Asia by suggesting a fair and proximal exchange of resources leads to successful service recovery. In addition, this study also has a strong contextual significance. Previous researchers claimed that the volume of service failures in developing markets is higher than in developed markets, while much of the literature is based on developed countries (Borah *et al.*, 2019). Additionally, it is noted that emotional regulations and forgiveness are shaped by culture (Ho and Fung, 2011) and activation of the desire to reciprocate also depends on the context (Hydock *et al.*, 2020). The findings of this study will provide important guidelines to hospitality managers who aim to deliver effective service recovery. Using appropriate recovery efforts, hospitality managers can earn consumers' perceptions of justice, which result in a desire to reciprocate and forgiveness. The paper is further organized in the following manner. First, we begin with a literature review and hypotheses development. This is followed by the research method and subsequent data analysis, testing hypotheses, and reporting results. At the end of the study, we discuss research findings, theoretical and practical implications, limitations, and future research directions.

2. Literature review

2.1. Theoretical background and hypotheses development

Resource exchange theory posits that consumers prefer to exchange similar resources (Foa and Foa, 1974; Smith *et al.*, 1999). Service failure and service recovery encounters are a form of exchange in which consumers experience economic losses (time and money) or social losses, and service firms offer either economic resources (money, goods, and time) or social resources (apologies, etc.) (Chuang *et al.*, 2012). A similarity between the resources lost by the consumer and the resources received from the service provider results in effective service recovery (Roschk and Gelbrich, 2014).

Several previous studies asserted that economic or monetary compensation (e.g., money, discount, and goods) and psychological compensation (e.g., an apology) are key recovery strategies (Ma and Zhong, 2021). Using an appropriate recovery strategy leads to positive recovery outcomes like consumer forgiveness (Wei *et al.*, 2020). According to previous research, "service recovery efforts" are a firm's initial response to a service failure. Thus, we adopted recovery efforts as an independent variable. Similarly, drawing on prior suggestions on consumer resource exchange (Harrison-Walker, 2019) and resource exchange theory, we used consumer forgiveness and desire to reciprocate as dependent variables.

Smith *et al.* (1999) suggest using the principles of exchange and equity theories to evaluate recovery attributes. Since our experimental design is transaction-specific rather than relationship-specific, we used justice theory as a theoretical lens to investigate the underlying mediating mechanism (Kwon and Jang, 2012). Several scholars have emphasized the contribution of perceived justice to in-service failure and service recovery encounters in emerging markets (Barakat *et al.*, 2015; Matikiti *et al.*, 2019; Muhammad and Gul-E-Rana,

2019). Accordingly, an underlying mediation of perceived recovery justice is considered in this study.

2.2. Recovery efforts and perceived justice

Service failures result in consumer losses of resources (e.g., time and money) and subsequently, recovery efforts mitigate those losses by providing money, goods, and social resources (e.g., apology) (Chuang *et al*., 2012). Customers scrutinize the service provider's recovery efforts in terms of honesty, trustworthiness, and responsibility (La and Choi, 2019). Perceived justice in service recovery provides the customers with a strong feeling that resources are fairly exchanged (Mathew *et al*., 2020). Therefore, perceived justice is considered a significant indicator of successful service recovery (Smith *et al*., 1999). Consequently, service recovery scholars put an increased emphasis on perceived justice as an evaluative mechanism for service failure and recovery encounters (Ma and Zhong, 2021; Matikiti *et al*., 2019; Muhammad and Gul-E-Rana, 2019).

Perceived justice is defined as "the customer's expectation of receiving justice through the service recovery process measured using fairness, speed of resolution, and genuineness of effort" (Mathew *et al.*, 2020, p.1961). Sparks and Fredline (2007) claimed that service recovery efforts have many kinds, ranging from an explanation of the failure to reimbursing money. Many scholars argued that firms' recovery efforts result in positive perceptions of justice. For example, Liu *et al*., (2019) claimed that the recovery efforts (e.g., compensation and prompt response) are manifestations of perceived justice. In other words, justice perceptions reflect consumers' assessment of service recovery efforts (Ampong *et al*., 2020; Nuansi and Ngamcharoenmongkol, 2021; Rifi and Mostafa, 2021). Subsequently, the literature suggests that recovery efforts should be designed in a way that they should evoke perceived fairness in

consumers (Tahir, 2021). In addition, justice theory suggests that service recovery efforts are examined based on perceived justice in service recovery (McColl-Kennedy and Sparks, 2003). Drawing upon the above discussion it can be argued that service recovery efforts are positively associated with perceived justice. The present study focuses on the perceived justice construct where service failure has occurred followed by a consumer complaint and an ensuing response from the service provider. Hence, we have hypothesized the following relationship.

H1. Service recovery efforts have positive relationship with perceived justice.

2.3. Recovery efforts and desire to reciprocate

Consumers` desire to reciprocate refers to "a desire to do (something) in an effort to reward an organization for something they have done" (Langan, 2014, p.35). Previous research found that remarkably satisfactory services result in favorable reciprocal actions from consumers (Boateng *et al.*, 2018). For example, consumers express positive views about firms to reciprocate the benefits they receive from them (Berger, 2014). Moreover, consumers' desire to reciprocate inspires their long-term commitment to firms (Jin and Merkebu, 2015). Therefore, the role of consumers' desire to reciprocate is crucial to study in service recovery research. Previous literature suggests that consumers demonstrate a desire to reciprocate in return to different benefits received from firms (Palmatier *et al.*, 2009). However, to the best of the author`s knowledge, the link between service recovery efforts and consumers' desire to reciprocate is rarely established in the literature.

The resource exchange theory primarily organizes the six types of resources e.g., love (an expression of affectionate regard, warmth, or comfort), status, information, money, goods, and services into two broader categories, concreteness (the degree of tangibility) and particularism (who delivers them). The theory contends that the resources proximal to one

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another with respect to concreteness and particularism are more likely to be exchanged (Foa and Foa, 1974). Building on the theory we argue that consumers' desire to reciprocate is a means by which they express their affectionate regards to service providers for their recovery efforts. Hence, we assumed that firms' service recovery efforts have a positive relationship with consumers' desire to reciprocate.

In addition, companies at large prefer to deliver high recovery efforts after service failures. However, some companies are noted to deliver only mediocre recovery efforts (Cai and Qu, 2017). Such differences in service recovery efforts may lead to variation in consumer behavior. For instance, high recovery efforts bring positive (Maxham III, 2001), while inappropriate service recovery efforts bring a negative impact on the evaluation of service recovery (Michel and Meuter, 2008). Drawing an inference from previous literature, the present study categorized recovery efforts into high versus low recovery efforts. High recovery efforts included short waiting time, employee empowerment, monetary compensation, explanation, and sincere apology (Cai and Qu, 2017). While low recovery efforts involved long waiting times, a simple apology, and no monetary compensation (Cai and Qu, 2017). Consequently, it can be expected that the excessive resources allocated to high (vs. low) recovery efforts will result in a higher desire to reciprocate. Hence, we hypothesized the following relationships.

H2a. Service recovery efforts have positive relationship with desire to reciprocate.

H2b. High recovery efforts (vs. low recovery efforts) lead to high desire to reciprocate.

2.4. Recovery efforts and consumer forgiveness

Consumer forgiveness is a complex process that involves cognitive and emotional evaluation of service recovery (Tsarenko and Tojib, 2011). Many studies have focused on

consumer forgiveness as a psychological mechanism to let go of the effect of service failure (Casidy and Shin, 2015; Hur and Jang, 2019; Ma *et al.*, 2020; Wei *et al.*, 2020). Muhammad and Gul-E-Rana (2020, p. 2) claim that "a service failure is said to be forgiven if a customer let go the revengeful destructive behavior and respond in a constructive way towards the service firm on perceiving recovery efforts". Though consumer motivation leads to the forgiveness of omission and errors that cause service failure, also the forgiveness of bigger failure indeed requires corrective efforts by service providers (Yagil and Lauria, 2016). Therefore, several scholars argued that service recovery efforts have a positive influence on consumer forgiveness (Babin *et al.*, 2021; Latif and Uslu, 2019; Shuqair *et al.*, 2021; Tsarenko and Tojib, 2011; Xie and Peng, 2009). Previous studies have shown that recovery efforts such as compensation, apology (Shin *et al.*, 2018), prompt response etc. (Liu *et al.*, 2019) result in consumer forgiveness. Following previous studies (e.g., Cai and Qu, 2018; De Matos *et al.*, 2007; Mostafa *et al.*, 2014) this study aims to extend the knowledge by examining the underlying mediator in firms' service recovery efforts and consumer forgiveness and how varying levels of recovery efforts lead to consumer forgiveness.

As service failure wastes away consumers' resources like time, money, and/or emotions, while firm recovery efforts make up for the shortfall of resources. According to resource exchange theory, a social resource (consumer forgiveness) can be earned by offering a social resource like an apology in the form of service recovery (Harrison-Walker, 2019). Cai and Qu (2018) have emphasized that offering only an apology is regarded as low recovery effort whereas the recovery efforts are regarded as high if service providers offer a sincere apology within a short waiting time, provide an explanation, and use concrete resources.

Drawing upon these explanations it can be expected that high recovery efforts will result in higher consumer forgiveness. We hereby hypothesize the following relationships.

H3a. Service recovery efforts have positive relationship with consumer forgiveness.

H3b. High recovery efforts (vs. low recovery efforts) lead to high customer forgiveness.

2.5. Perceived justice and desire to reciprocate

In recent literature, perceived justice has emerged as a salient mediator between firms' service recovery efforts and their outcomes (Mody *et al*., 2020). For instance, a congruency between recovery type and consumer status leads to favorable consumer responses, and perceived fairness underlies this relationship (Lu et al., 2021). Similarly, perceived justice performs a mediating role in the relationship between apology (by CEO vs employees) and consumer forgiveness (Hill and Boyd, 2015). Resource exchange theory suggests that the similar and equitable resources offered by service providers have significant implications for service recovery (Borah et al, 2019). According to social exchange notions, individuals try to restore equity in exchanges (Regan 1971). Hence, it can be argued that the social resources offered can earn social resources (Harrison-Walker, 2019) and justice perceptions of individuals lead them to a desire to reciprocate (Erdogan, 2002; Gouldner, 1960). In the context of this study, when employee efforts focus on justice in recovery, the consumers try to sustain the justice by a desire to reciprocate. Recently, Umashankar *et al*., (2016) noted that if service recovery efforts meet or exceed consumers' expectations, they feel justice and subsequent satisfaction. Customer satisfaction further leads to feelings of gratitude and reciprocity. Given the above theoretical background, we expect that the recovery efforts from the service organization lead to consumers' desire to reciprocate through an underlying mediating mechanism of perceived justice. Therefore, we have hypothesized the following relationships.

H4a. Perceive justice has positive relationship with consumers' desire to reciprocate.

H4b. Perceived justice mediates the relationship between service recovery efforts and desire to reciprocate.

2.6. Perceived justice and consumer forgiveness

Davidow (2003) claimed that consumers carefully evaluate the resources provided in service recovery and their perceptions of sincere apology, communication and resources are paramount to consumer forgiveness. Extant research studies found that perceived recovery justice has a positive effect on consumer forgiveness (Babin *et al*., 2021; Latif and Uslu, 2019; Tsarenko and Tojib, 2011; Wei *et al*., 2020). Perceived recovery justice helps individuals forgive service providers by substituting undesirable emotions with positive ones (Tsarenko *et al.*, 2018). In other words, when resources consumed in recovery are valuable enough, including the desired product, compensation (economic resources) and prompt response, explanation of the problem, and apology (socio-economic resources), consumers perceive higher justice in recovery (Smith *et al*., 1999), and subsequently, forgive the transgressor firm (Babin *et al*., 2021). Based on the above it can be argued that consumers' perceived justice underlies the relationship between service recovery efforts and consumer forgiveness. Thus, we hypothesized the following relationships.

H5a. Perceived justice has positive relationship with consumer forgiveness.

H5b. Perceived justice mediates the relationship between service recovery efforts and consumer forgiveness.

Figure 1: Theoretical framework
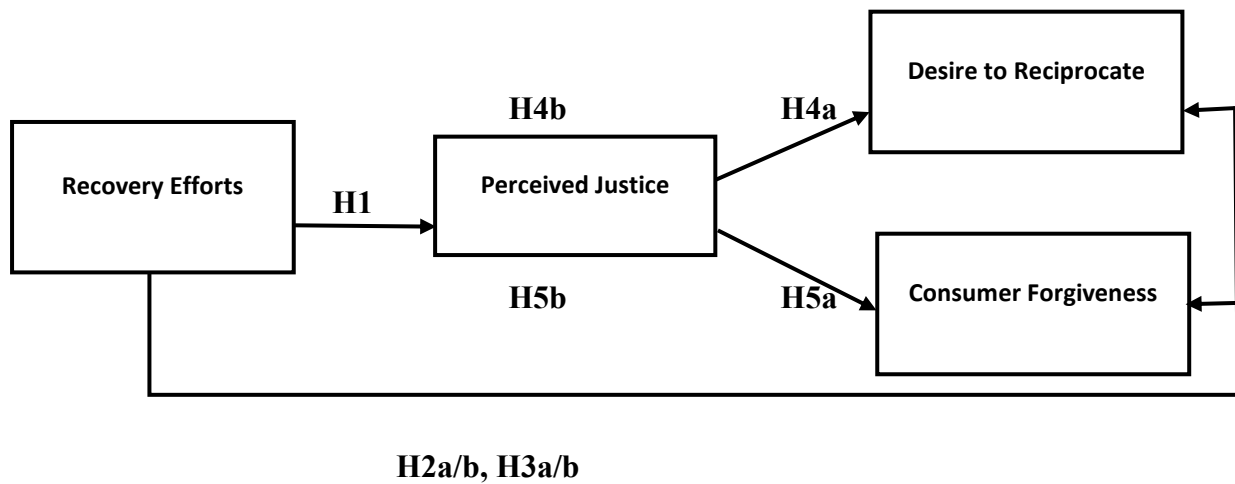
H2b: High recovery efforts (vs. low recovery efforts) -> high desire to reciprocate

H3b: High recovery efforts (vs. low recovery efforts) -> high consumer forgiveness

3. Methodology

Dewasiri *et al*. (2018) suggest that a causal and comparative research question/objective needs quantitative inquiry. Given a variety of recovery efforts involved in restaurant service failures, such as several employee service behaviors and compensations (Leong and Kim, 2002) and the treatment of service recovery efforts in previous research (Cai and Qu, 2018), we considered a single factor between-subjects design with two conditions of service recovery efforts: high vs. low, in conjunction with self-administered online survey. Figure 1 presents the theoretical framework of the study. Between-subject experimental design is considered effective when scholars intend to compare different interventions to find out which intervention is more effective (Abrahamse, 2016). Given these characteristics, between-subject experiment is largely used in service recovery studies, where scholars use different treatments to recover one service failure and examine which treatment is more effective (Cai and Qu, 2018).

Dewasiri *et al*. (2018) suggest a mixed method approach when a study incorporates treatments or interventions in research design; it helps to ensure the integrity of treatments. Hence, we considered a mixed method research design with a concurrent embedded strategy. We collected survey data to address the primary objective, in conjunction with additional information on the resources involved in recovery efforts, to examine how resources embedded in high (vs. low) recovery efforts influence consumer responses (Dewasiri *et al*., 2018). Accordingly, we designed our survey in the following manner. A hypothetical scenario was designed that illustrates one service failure but different recovery efforts. For instance, participants were asked to imagine that they visited a casual dining restaurant (a restaurant that serves moderately priced food in a casual atmosphere) to celebrate a special event with their family members. After waiting about 15 minutes, a hostess seated their group. Shortly after, a waiter took the order. They ordered a medium-cooked steak but were served an "overcooked" steak. They informed the waiter about the problem.

Thereafter, the respondents in high recovery efforts condition read the following scenario: *"The waiter took a good look at the steak and said that he/she could take care of the problem. The waiter took the dish back immediately. In 2-3 minutes, the manager approached you. He/she already knew the problem so you did not need to explain the situation again. The steak was served again. This time it was "medium" cooked. The waiter sincerely apologized and 20% discount on the item was offered. The manager provided an explanation for the problem and asked if there was anything else that he/she could do to serve you better"* (Cai and Qu, 2017, p. 344).

On the contrary, the participants in the low recovery efforts condition read the following scenario: *"The waiter responded very matter of fact and asked you to confirm that you ordered*

a "medium" steak. Then the server said that he/she could not do anything about the problem and would have a manager to resolve it. In about 10 minutes, the manager approached and asked you what the problem was. You explained the situation again. The manager took the dish back. The steak was served again. This time it is "medium" cooked. The waiter simply apologized" (Cai and Qu, 2017, p. 345)*.* After reading the scenario respondents were asked to mention their level of desire to reciprocate, forgiveness, justice perceptions and employees' recovery efforts.

Following previous studies google forms was considered to administer the online survey in English language (e.g., Saima and Khan, 2020) among casual dining consumers in Pakistan. English is the official language in Pakistan, also in previous studies, respondents have not reported any concerns (Sarwar *et al*., 2021). A snowball sampling technique was employed, firstly we contacted a few participants at convenience and randomly assign them with questionnaire then the selected participants recruited further participants (Nayal and Pandey, 2022). Previous literature suggests that snowball sampling reduces experimenter selection bias (Jackson *et al*., 1996). Moreover, it helps in identifying the consumers who often visit a specific type of restaurant (Vo-Thanh *et al*., 2022). This study is based on experimentation that focuses on internal validity rather than external validity (Mattila *et al*., 2021). Thus, following extant experimental research in the hospitality industry, this study also used snowball sampling (Taşçıoğlu and Yener, 2021; Yang *et al*, 2022). Subsequently, a total of 259 usable responses were included in the final analysis. Among 259 responses, 120 responses were based on high level of service recovery efforts while 139 responses were based on low level of service recovery efforts. Prior researchers recommend that the sample size for PLS-SEM should be five to 10 cases per variable (Hair *et al*., 2018). Accordingly, our observations per variable

were more than 60. Similarly, Mattila *et al*. (2021) recommended recruiting more than 30 participants per treatment in the experimental designs in an online setting. The observations per treatment for the present study were more than 110, which is sufficiently higher than the minimum threshold. Therefore, the sample size was considered satisfactory for further analysis.

3.1. Measurements

We measured perceived justice with nine items adopted from (Cai and Qu, 2017), desire to reciprocate with three items adopted from (Hydock *et al*., 2020), and consumer forgiveness with four items adopted from (Hur and Jang, 2019), and employee recovery efforts with three items were adopted from (Mohr and Bitner, 1995). All the constructs were measured on a seven-point Likert scale. The realism of the scenario was measured with two items adopted from (Basso and Pizzutti, 2016) on a bipolar scale from 1 = not at all to 7 = completely. Demographic characteristics of respondents were collected at the end of the survey.

Table 1. Demographic measures

Variables		Distribution	Percentage
Gender			
	Male	161	62.2
	Female	98	37.8
Age			
	18-24	93	35.9
	25-39	137	52.9
	40-64	28	10.8
	65-Above	1	4

Education

	High school	7	2.7
	Intermediate	30	11.6
	Bachelors	33	12.7
	Masters	107	41.3
	MS/M.Phil	77	29.7
	PhD	5	1.9

Income (PKR)

	20,000	85	32.8
	20,000-39999	50	19.3
	40,000-59999	57	22.0
	60,000-99999	44	17.0
	100,000-149,000	15	5.8
	150000 or above	8	3.1

Casual dining
frequency

	Less than once per month	86	33.2
	1–2 times per month	120	46.3
	More than three times per month	53	20.5

4. Results

First, the realism of the scenario was assessed by considering the t-test. Participants rated the scenarios as realistic with the following values (M = 5.08). Table 1 shows the demographic information of the respondents. Accordingly, 62.2% of respondents were male and 52.9% were between the age of 25 to 39. 41.3% of respondents had a master's degree, 74.1% had a monthly income of 59,999 PKR or below, and 46% of respondents dine out one to two times per month.

We considered Harman's single-factor test to check common method bias (Podsakoff and Organ, 1986), this research study has reported no common method bias. Since our theoretical framework includes two outcome variables of consumers' desire to reciprocate and consumer forgiveness, one mediating variable of perceived justice, and one independent variable of recovery efforts, we used PLS-SEM as an evaluation model which is appropriate for the evaluation of complex models (Hair *et al*., 2014).

4.1. Measurement model

Measurement model assessed the reliability and validity (Hair *et al*., 2014). Composite reliability was considered to estimate the reliability. Loading of one item (EF2) of recovery efforts and one item (PJ3) of perceived justice was remarkably below than threshold value (0.70). Therefore, we deleted two items and re-assessed the measurement model. After re-assessment, minimum values of composite reliability were increased to greater than the threshold value of 0.70 (Hair *et al*., 2014).

Convergent validity was assessed through average variance extracted (AVE). A minimum threshold value for AVE is 0.50 as shown in Table 2. Our study has demonstrated higher AVE than the minimum threshold of 0.50. Loading of a few items (=0.68, 0.69) was a

bit lower than the threshold of 0.70. Since these values are close to threshold value and AVE is greater than 0.50, these values were retained instead of deleting (Sarwar and Muhammad, 2019).

We used heterotrait-monotrait ratio (HTMT) as a criterion to assess discriminant validity (Henseler *et al*., 2015). Though researchers used previously the Fernier- locker criterion for the assessment of discriminant validity, HTMT criterion is more rigorous to assess discriminant validity (Henseler *et al*., 2015; Muhammad and Gul-E-Rana, 2019). Hence this study considered HTMT criterion for discriminant validity. The results show that all values were below 0.90; hence discriminant validity is acceptable (for details see Table. 3).

Table No 2. Results of measurement model

Constructs	Indicators	Factor Loading	Cronbach`s Alpha	rho_A	Composite Reliability (CR)	Average Variance Extracted (AVE)
Perceived justice	PJ1	0.67	0.89	0.89	.89	0.51
	PJ2	0.63				
	PJ4	0.70				
	PJ5	0.79				
	PJ6	0.69				
	PJ7	0.80				
	PJ8	0.71				

	PJ9	0.70				
Desire to reciprocate	DR1	0.74	0.78	0.79	0.78	0.54
	DR2	0.80				
	DR3	0.65				
Consumer forgiveness	CF1	0.65	0.86	0.87	0.86	0.61
	CF2	0.81				
	CF3	0.86				
	CF4	0.82				
Service recovery efforts	EF1	0.92	0.82	0.84	0.83	0.71
	EF3	0.75				

Source: authors' compilation.

Table No 3 Discriminant validity of measure model Heterotrait-monotrait Ratio (HTMT) of correlations

Constructs	PJ	CF	DR	EF
PJ				
CF	0.79			
DR	0.74	0.56		
EF	0.74	0.76	0.56	

4.2. Structural model

We evaluated the structural model by assessing t-value, effect size f^2, predictive relevance Q^2, and coefficient of determination R^2 (Hair *et al*., 2014). A bootstrapping procedure with 5000 replications was employed to assess t-values (Hair *et al*., 2014; Muhammad and Gul-E-Rana, 2019). The effect of service recovery efforts on perceived justice (H1) was supported ($\beta = 0.73$, $p = 0.000$). Effect of recovery efforts on desire to reciprocate (H2a) was not supported ($\beta = 0.033$, $p = 0.73$). Effect of recovery efforts on consumer forgiveness (H3a) was supported ($\beta = 0.37$, $p = 0.014$). Effect of perceived justice on desire to reciprocate (H4a) was supported ($\beta = 0.71$, $p = 0.000$). Effect of perceived justice on consumer forgiveness (H5a) was supported ($\beta = 0.51$, $p = 0.000$) (for details see Table. 4).

For mediating hypotheses, we employed Preacher and Hayes (2008) approach to assess t-values and confidence intervals with sub samples 5000 bootstrapping procedure for mediating hypotheses. Table 5 shows that H4b and H5b were supported as confidence intervals have no zero (Preacher and Hayes, 2008).

Table 4. Results of structural model analysis (Hypothesis testing).

Hypotheses	Relationships	β	t-values	P values	f^2	R^2	Q^2	Decision
H1	EF→PJ	0.73	13.109	0.000	0.69	0.41	0.23	Supported
H2a	EF→DR	0.033	0.328	0.743	0.009	0.39	0.26	Not Supported
H3a	EF→CF	0.37	2.453	0.014	0.15	0.55	0.38	Supported
H4a	PJ→DR	0.71	7.048	0.000	0.30	0.39	0.26	Supported
H5a	PJ→CF	0.51	3.503	0.000	0.31	0.55	0.38	Supported

Table 5. Mediation analysis.

Hypotheses	Relationships	β	t-value	P values	CI. 95 2.50%	97.50%	Decision
H4b	EF→PJ→DR	0.525	6.27	0.000	0.376	0.708	Supported
H5b	EF→PJ→CF	0.38	3.036	0.002	0.19	0.671	Supported

4.3. Multivariate analysis of covariance (MANCOVA)

To examine hypotheses H2b and H3b, we considered a multivariate analysis of covariance (MANCOVA) with recovery efforts groups as fixed factors, and age, gender, education, and income as covariates. First, we run a preliminary MANCOVA to assess homogeneity of variance-covariance matrix (Box`s Test of Equality of Covariance Matrices, Box's M) and homogeneity of regression (interaction between fixed factors and covariates).

Preliminary MANCOVA revealed that Box`s Test of Equality of Covariance Matrices (Box's M) was insignificant. Furthermore, we considered Tabachnick *et al.*, (2007) criterion to assess the significance (p = .01) for homogeneity of regression. Accordingly, the interactional effects between factors and covariates were also found insignificant, suggesting that the assumptions underpinning the MANCOVA are met.

Since Box's test was insignificant, we used Wilk`s $\lambda$ as multivariate test statistics. Accordingly, the results of one-way MANCOVA demonstrate that group variable of recovery efforts (Wilk`s λ = .971, $F_{(1,251)}$ = 3.772, p < .05, partial η^2 = .029) presents an insignificant effect on desire to reciprocate (F = 0.83, p > .05, η^2 = .003, observed power = 0.14). Providing that the two groups demonstrated no significant difference in their desire to reciprocate with high recovery efforts (M = 5.1) vs. low recovery efforts (M = 5.0). Hence H2b was not supported. However, group variable of recovery efforts presents a significant effect on consumer forgiveness (F = 7.47, p < .05, η^2 = .029, observed power = 0.77). This means the consumers are more forgiving toward high recovery efforts (M = 5.4) as compared to low recovery efforts (M = 4.9). Therefore, H3b was supported. Since both means values are above four, both groups show agreement to forgive service provider with a minor but significant difference (for details see Table 6 & Figure. 2).

Table No 6. Results of between-subject effects for H2b and H3b.

Source	Dependent Variables	Type III Sum of Squares	df	F	P values	Partial η^2	Decision
Recovery efforts: high vs low	DR	1.201	1	0.838	0.361	0.003	Not Supported
	CF	14.780	1	7.472	0.007	0.029	Supported

Note(s): H2b: High recovery efforts (vs. low recovery efforts) -> high desire to reciprocate (Not Supported).
H3b: High recovery efforts (vs. low recovery efforts) -> high consumer forgiveness (Supported).

Figure 2. Multivariate analysis of covariance
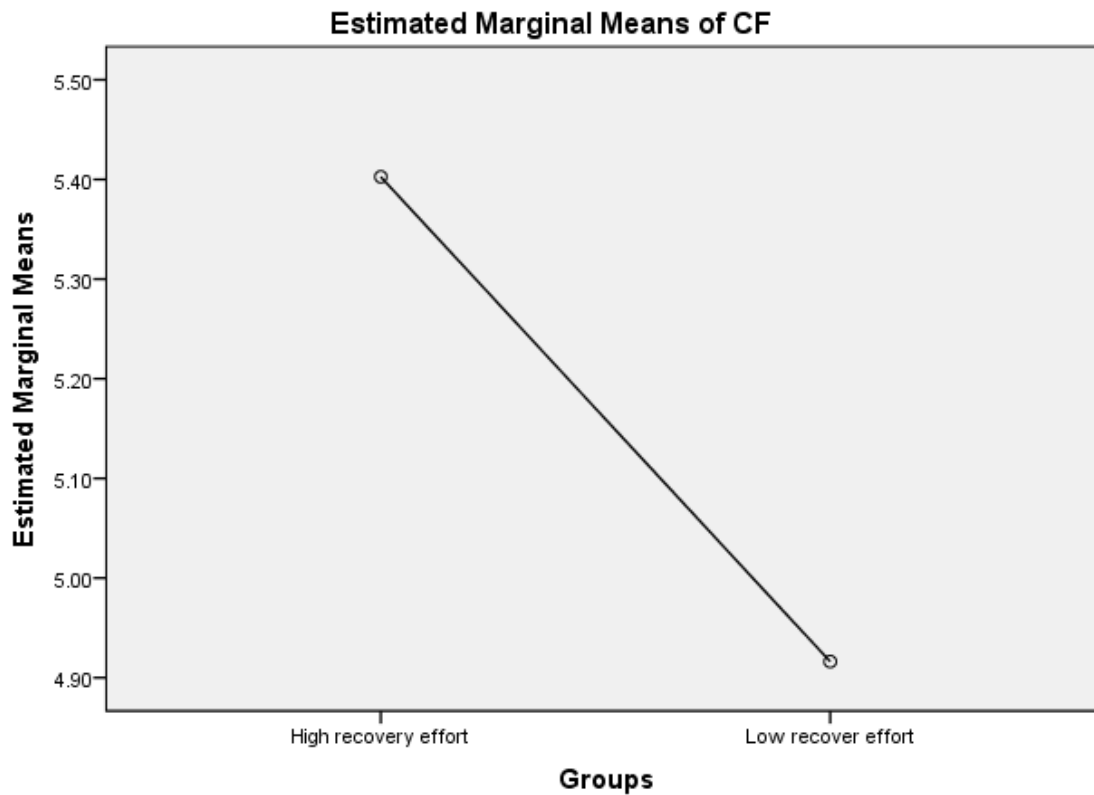
Covariates appearing in the model are evaluated at the following values: Gender = 1.3784, Age = 1.7568, Education = 3.8958, Income = 2.5290

5. Discussion

The main purpose of this study was to examine the influence of service recovery efforts on consumers' desire to reciprocate and consumer forgiveness through an underlying mechanism of perceived justice. The study demonstrates several interesting findings. Firstly, this study revealed that service recovery efforts influence consumers' perceptions of recovery justice. Which supports the idea that consumers evaluate recovery efforts on perceived justice (Smith *et al.*, 1999). In addition, the study found that the direct relationship between service recovery efforts and consumers' desire to reciprocate was insignificant. Subsequently, high vs. low recovery efforts did not create significant variation in consumers' desire to reciprocate as well. However, perceived justice was found as a significant mediator between recovery efforts and consumers' desire to reciprocate. Such findings are aligned with the previous literature; for example, Smith *et al*. (1999) argue that complaining customers are more emotionally involved in and observe the company response than they would be during a routine service encounter. As a result, customers may become more aware of the actions taken in their favor during service recovery and be more likely to respond with appreciation and reciprocal behavior. This finding demonstrates that service recovery efforts facilitate the rational scheme in consumers' minds, which results in the desire to reciprocate. Therefore, our findings complement the previous literature that perceived justice is a salient cognitive mediator of the service recovery process (Mody *et al.*, 2020; Umashankar *et al.*, 2016).

The findings further demonstrate that recovery efforts have a significant direct influence on consumer forgiveness, as well as an indirect influence through perceived justice. Moreover, high (vs. low) recovery efforts lead to high consumer forgiveness. These findings are aligned with the predictions of previous researchers, e.g., service recovery increases the

level of consumer forgiveness, and perceived justice underlies the relationship between service recovery and consumer forgiveness (Latif and Uslu, 2019; Muhammad and Gul-E-Rana, 2020). For instance, Latif and Uslu (2009) suggest that a recovery effort is important to remedy a service failure. Prior research on service recovery has primarily used perceived justice to examine the underlying recovery mechanism of service recovery (Smith *et al*.,1999). Thus, the results of the present study align with the existing literature on service failure and recovery. In addition, these findings are also congruent with our theorizing that high (vs. low) recovery efforts produce high forgiveness. However, a small difference in the forgiveness towards high vs. low recovery efforts indicates that consumer forgiveness is largely predicted by social resources e.g., apology (Harrison-Walker, 2019), additional resources might generate additional outcomes for service providers rather than consumer forgiveness. The result that perceived recovery justice significantly predicts consumer forgiveness also validates the previous empirical work (Babin *et al*., 2021; Latif and Uslu, 2019; Wei *et al*., 2020). The present research study differs from the previous studies by providing the following contributions in theory and practice.

5.1. Theoretical and practical implications

Borah *et al*., (2019) emphasized that the service recovery strategies in emerging markets should be re-examined due to different cultural and structural realities. They claimed that emerging markets have scarce universalistic resources (money) and abundant particularistic resources (politeness). Previous research studies show that consumers' desire to reciprocate is a significant outcome of social exchanges (Sungu *et al*., 2019). Accordingly, to the best researcher's knowledge, the present study is a pioneer attempt to examine consumers' desire to reciprocate as an outcome of service recovery. The study found an insignificant

variation in consumers' desire to reciprocate for low vs. high recovery efforts, which denotes consumers' desire to reciprocate even for a simple apology. Previous research shows that high vs. low recovery efforts including compensation, apology (Shin *et al*., 2018), and prompt response (Liu, *et al*., 2019), may have a differential effect on consumer forgiveness. The present study revealed that high (vs. low) recovery efforts result in high consumer forgiveness. Hence present study contributes to hospitality literature that, first, in emerging and collectivistic economies like Pakistan a particularistic resource like an apology or courtesy is considered a large part of service recovery. Second, the study empirically examined the under-researched relationship of service recovery efforts with consumers' desire to reciprocate and consumer forgiveness through perceived recovery justice in the South Asia economy of Pakistan.

Finally, another salient contribution of our study is that it explains how resource exchange principles help us understand the influence of service recovery efforts on consumer evaluation and recovery outcomes in a South Asian country. For instance, service scholars associate psychological compensation with resource exchange theory based on "love" and "status". They claimed that psychological compensation comes from an apology, which demonstrates an affectionate concern for the customers and restores their self-esteem. Therefore, according to resource exchange principles, love and status are two fundamental resources that consumers exchange with service providers (Roschk and Gelbrich, 2014). Due to the high weight of love and status, apology becomes a large part of service recovery. Accordingly, Pakistani consumers give priority to particularistic resources.

In terms of practice, this study enhanced our understanding of the relationship between service recovery and its results (Yani-de-Soriano *et al*., 2018). Our findings on consumers'

desire to reciprocate suggest that managers should be cautious about fairness in recovery. Hospitality managers should channelize their efforts to create justice perceptions rather than a direct desire to reciprocate. Sometimes good behaviors of frontline employees` may provoke a negative emotion like indebtedness, instead of eliciting gratitude and subsequent desire to reciprocate (Bock *et al*., 2016). While focusing on justice perceptions can eventually result in consumers' desire to reciprocate.

To earn consumer forgiveness, managers should focus on recovery strategies that largely include particularistic resources. Such strategies also help managers promote perceived justice in service recovery. Although monetary efforts can play a significant role in recovery satisfaction, precise human efforts are crucial for service recovery management through consumer forgiveness. Therefore, managers should train their frontline employees in prosocial behavior, including sincere apologies and helping consumers in the transformation of negative emotions into positive ones (Tsarenko and Tojib, 2011). This would be likely to stimulate the perceptions of justice and forgiveness without incurring very high recovery costs.

6. Limitations and future research directions

Our study has certain limitations, firstly we considered a scenario-based online experiment. Although we adopted the scenarios from previous literature and realism was also found good, however, discrepancies between actual experiences and hypothetical scenarios may exist. Future studies could enrich the results by performing the experiment in a real setting. Secondly, our sample size was relatively small. The generalizability of the research can be increased with a large sample. Thirdly the study was conducted in casual dining restaurants in Pakistan. Hence generalizability is possible in casual dining restaurants in similar cultures. Future researchers can test the model in other countries before implementation.

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Appendix 1

Constructs	Indicators	Questions
Perceived justice (Cai and Qu, 2018)	PJ1	Compared to what I expected, what the restaurant provided was good.
	PJ2	Taking everything into consideration, what the restaurant provided was quite fair.
	PJ4	My complaint was handled in a very timely manner
	PJ5	The procedure by the waiter and manager for handling my complaint was simple.
	PJ6	The waiter and manager made an effort to adjust the procedure of handling my complaint according to my needs.
	PJ7	The waiter and manager were courteous to me.
	PJ8	The waiter and manager put the proper effort into resolving my problem.
	PJ9	The waiter and manager's communication with me was appropriate.
Desire to reciprocate. (Hydock *et al*., 2020)	DR1	I feel like I owe the restaurant some favor(s)
	DR2	I am happy to comply with request(s) from the restaurant.
	DR3	I feel like I should reciprocate for what the restaurant has done for me.
	CF1	I forgive the restaurant for the incident.

Consumer forgiveness (Hur and Jang, 2019)	CF2	Even though the incident annoyed me, I have good will for the restaurant.
	CF3	Despite the incident, I want to have a positive relationship with the restaurant.
	CF4	Although the incident aggravated me, I am putting the negative feeling aside so I can continue to patronize the restaurant.
Service recovery efforts (Mohr and Bitner, 1995)	EF1	The waiter and manager put in a lot of energy in solving the failure.
	EF3	The waiter and manager put a lot of effort in solving the failure.