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**Value Co-Creation in the Service Recovery:
An Investigation of the Effects on Consumer
Perceptions and Behavior in the Airline Industry**

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ABSTRACT

Title: Value Co-Creation in the Service Recovery: An Investigation of the Effects on Consumer Perceptions and Behavior

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Although previous research has been highlighting the relevance of co-creation to create products that are closer to what customers want, the co-creation in a service recovery setting has not been investigated that deeply. Especially in a co-creation context, papers often discuss the relevance for new product innovations. However, this has not been evaluated this thoroughly in the service industry. For this reason, the purpose of this thesis is to measure and analyze the impact of co-created service recovery on customer satisfaction and willingness to recommend a company's services as well as loyalty.

To test our hypotheses, we developed an online survey with two different scenarios participants were exposed to. In one scenario, participants were facing a scenario in which the service recovery was not co-created, in the other scenario it was. In total, 148 responses could be collected amongst different demographics and backgrounds.

Our results show that co-created service recovery significantly improves the customer satisfaction, compared to settings where no co-creation is involved. Additionally, our model shows that customer satisfaction is a mediator of the impact of co-created service recovery and consumers' willingness to recommend. Lastly, a moderating effect of brand loyalty between the co-created service recovery and customer satisfaction was evaluated, which could – against our expectations – not be confirmed.

Overall, this paper suggests the consideration of co-creation in the service recovery process, which can help boost elements like customer satisfaction and the willingness to recommend.

Keywords: Co-creation, service recovery, service industry, brand loyalty, airline industry, customer satisfaction

RESUMO

Título: Co-Criação de Valor na Recuperação de Serviços: Uma Investigação dos Efeitos nas Percepções e Comportamentos dos Consumidores

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A pesquisa anterior realçou a importância da co-criação na criação de produtos alinhados com as preferências dos clientes. No entanto, seu papel na recuperação de serviços não foi profundamente investigado, especialmente em contextos de co-criação no setor de serviços. Portanto, este estudo tem como objetivo avaliar o impacto da recuperação de serviços co-criados na satisfação do cliente, na disposição de recomendar os serviços e na lealdade.

Para testar nossas hipóteses, conduzimos uma pesquisa online apresentando dois cenários aos participantes: um com recuperação de serviços co-criados e outro sem. Coletamos 148 respostas de diversas origens demográficas.

Nossos resultados indicam que a recuperação de serviços co-criados aumenta significativamente a satisfação do cliente em comparação com cenários sem co-criação. Além disso, nosso modelo revela que a satisfação do cliente age como mediadora entre a recuperação de serviços co-criados e a disposição dos clientes em recomendarem. Surpreendentemente, nossa análise sobre a lealdade à marca como fator moderador não confirmou as expectativas.

Em resumo, este estudo destaca a importância de considerar a co-criação nos processos de recuperação de serviços, pois pode influenciar positivamente fatores como a satisfação do cliente e a disposição para recomendar, contribuindo para o sucesso global das empresas no setor de serviços.

Palavras-chave: Co-criação, recuperação de serviços, sector dos serviços, lealdade à marca, sector das companhias aéreas, satisfação do cliente

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1. INTRODUCTION

During the covid-19 pandemic, global demand for flights has strongly decreased due to travel restrictions. Whereas the airline industry accounted for about \$838 billion revenue worldwide in 2019, this value decreased to less than 50% of the original amount with about \$382 billion in revenue in 2020. Now that restrictions have been eased, the revenue for 2023 globally is expected to be almost back to the level from before covid. The forecast for 2023 suggests that \$779 USD in revenue will be generated within the industry globally (Statista, 2023). Also, according to the OECD (Organization for Economic Co-operation and Development), the airline industry is highly competitive these days, where the hybridization of business models as well as entries of low-cost carriers and the growth of airline alliances like the Star Alliance or SkyTeam play a key role (OECD, 2014). The global revenue in the industry, together with the highlighted relevance of increased competition show clearly why it is important to keep customers satisfied and happy with a service provided, which takes an important role in influencing the customer satisfaction (Suhartanto, Ariani Nor, 2012).

Many passengers have experience a delay with their flight that was not expected and caused frustration and demotivation (Susskind, 2004). The first thing one does in such a situation is reach out to airline staff. What really matters to passengers is how the airline namely the employees respond to a failure in the most engaging and understandable way to recover the service promised (Van Vaerenbergh, 2012) It is important to understand that correcting the mistake only is not necessarily the approach, because in some cases, a correction is not possible anymore. Just thinking about a flight delay, airlines cannot turn back time or give passengers any time back. For this reason, what becomes crucial for airlines to understand is that co-creating value will bring strong benefits in the case of service failure (Carù, Cova, 2015). It should not involve the airline only in trying to recover the service, but airlines and their staff should actively involve passengers in case of failed services to incorporate all stakeholders directly impacted so the best possible outcome can be evaluated. This is especially important, keeping in mind the fact that the airline industry is now recovering and keeps growing. Many airlines have therefore put efforts into their loyalty approached, introducing loyalty programs that ensure that passengers do not easily move to another airline of the competition by offering certain incentives like miles or points to collect (Vilkaitė-Vaitonė, Palmira Papšienė, 2016).

Also, in the past years, airlines like Ryanair or EasyJet have gained a big market share in the European market, which makes them a very critical competitor for non-low-cost airlines.

Based on the number of passengers carried, Ryanair is European's biggest airline as of 2021 (Statista Research Department, 2023). However, realizing that sometimes even carriers that do not generally attract customers through low prices, sometimes try to undermine low-cost airline prices, highlighting the tough competition in the market (Alderighi et al., 2004). Even though airlines compete sometimes with their prices, there are additional factors that need to be considered. While some people generally go for the cheapest price, others are looking for the experience and want to have a full-service airline to fly with. In this context, the passenger satisfaction is strongly impacted by the staff carrying out the service, as well as the services provided on board (Pereira et al., 2023). Due to the high competition in the airline industry, operating carriers therefore need to focus passengers' experience and satisfaction, trying the best to keep the passengers loyal and willing to recommend the service to others (Siering et al., 2018; Steyn et al., 2011).

Co-creation is a concept often applied in the service industry. Co-creation can be defined as a collaborative innovation or solution to problems or needs that arise. In a company setting, this collaboration generally takes place between the company and its customers to create a new product that best matches customer needs and wishes. (Hartley et al., 2013). It is as "a process of creative problem solving through which relevant and affected actors work across formal institutional boundaries to develop and implement innovative solutions to urgent problems" (Sørensen, Torfing, 2018).

Especially in the context of service recovery, recovering a failed service, has a greater positive effect on satisfaction when co-creation is involved, and customers' inputs are taken into consideration for finding the solution compared to situations where customers are not fully involved (Bagherzadeh et al., 2020). Co-creation was strongly highlighted as a contributor to long-term company success – and since it was suggested to bring success, managers should motivate customers and employees to participate in co-creation (Oertzen et al., 2018).

During times where the contentment of passengers is not only seen as a metric, but also as a mandate. The chapters following will reflect the multifaceted exploration of different concepts that range from the co-creation of value in general to the non-traditional service-dominant logic (Saarijärvi et al., 2013). This way, new contexts for service recovery, namely through co-creation, which is relevant for companies to remain competitive, will be evaluated. Specifically, with this thesis, the research gaps for service-related contexts will be further

closed, since past studies have strongly focused on physical products rather than the service industry. Physical products can be exchanged or improved, but a service that has been provided cannot be just exchanged like physical products. For this reason, the focus of this thesis is the service industry, where co-creation will be used to improve customer satisfaction, the willingness to recommend and brand loyalty. This is very important, because within this study, it is not solely about the service itself, but rather on the service recovery, where the service has already failed before. We want to further investigate through this work, what impact and effect co-creation in the recovery of failed services takes to sustainably influence brand loyalty, customer satisfaction and the willingness to recommend the brand and respectively the service to others. First, a thorough literature review will be provided in order to understand the background of the mechanisms investigated in this thesis, which is then followed by the practical part, where we will focus on the survey conducted for the purpose of this thesis and consequently, discussing the results acquired through it.

2. LITERATURE REVIEW AND CONCEPTUAL BACKGROUND

2.1. Service sector in the economy

Co-creation and therefore also co-destruction can appear in different sectors of the economy. The focus of this research paper however will dig deeper into the service industry. While many scholars define services as activities, deeds, processes, and interactions (Solomon et al., 1985; Vargo, Lusch, 2004), there is different definitions available in the literature.

Most definitions are clear though about the fact that services are considered as a solution to problems consumers are facing (Grönroos, 2000). A critical characteristic of services offered is the intangibility, which clearly differentiates goods and products from services (Bateson, 1979). Due to this fact, services cannot be stored physically, but are rather stored in systems, machines, knowledge, and people (Gummesson, 2000).

Keeping in mind that the service sector does account for the biggest share in terms of world gross domestic product (GDP) as well as employment, it is important to distinguish between the distinct economic sectors, since they do all have different specifications and characteristics (Cuadrado-Roura, 2016). In fact, many countries are still referred to as industrialized countries, even though by far most of the annual GDPs are service-related (Cuadrado-Roura, 2016). Current studies analyzing the share of the economic sectors in the

global gross domestic product also highlight this fact, the service sector accounting for almost 65% of the world GDP (World Bank, 2022).

With the theoretical background on the service industry, the co-creation and consequently the co-destruction model will be applied and further investigated. Past research has strongly investigated co-creation in relation to physical goods. Due to the shift in importance for the global economy towards more service offers, this paper focuses on the value co-creation in the service industry, which supports the shift from a goods-dominant logic to a more service-dominant logic (Lusch, Vargo, 2011), which will be explained in the following.

Value overall can be described as a benefit that is realized from the integration and involvement of resources through different activities and interactions with several parties in the customer's service network (McColl-Kennedy et al., 2012). Especially during situations, where a negative outcome is being offered, it is important and highly relevant for a company to perform a value formation, taking the outcome as a source of improvement (Dolan et al., 2019).

2.2. Service-dominant logic (SDL)

For a better understanding, the ideas of co-creation, respectively co-destruction, are put into relation with the service industry that was previously described. This knowledge leads to the service-dominant logic (SDL), which stands for the acknowledgement that the service and its respective value is experienced by the customers themselves but created by a range of different stakeholders (Echeverri, Skålen, 2011; Holbrook, 2006; Vargo, Lusch, 2004). The service-dominant logic can be represented as a vibrant, evolving collective value creation narrative through the integration of resources as well as the transformation of service. This logic has been built by a high number of scholars from several different disciplines and subdisciplines (Vargo, Lusch, 2017). Within this, it has been highlighted how the dynamic resources that are related to each other and influence knowledge as well as skills, do indeed have higher relevance than tangible resources (Vargo, Lusch, 2008). Consumers become co-creators, innovators and determine the creation of value, which has become the new reality (McColl-Kennedy et al., 2012; Vargo, Lusch, 2008). This move from traditional value creation models towards the service-dominant logic can also be understood as an effect of events like web 4.0 that elevated the consumer role, fading the boundaries of businesses (Achrol, Kotler, 2012).

Considered as resource integrators are all social as well as economic actors (Vargo, Lusch, 2008), which include all parties that are engaged in the economic exchange. The different groups have the common purpose of creating value, respectively co-creating value (Vargo, Lusch, 2011). Consequently, it implicates that value is considered as interactively co-created by operant resources or several ones in a collaboration setting, whereas it is realized in use (Echeverri, Skålen, 2011). This way, it becomes clear that the value of a product or a service is not embedded within the product or service itself but is rather collaboratively produced through the interactions between the different actors, just like customers or organizations (Echeverri, Skålen, 2011; Vargo, Lusch, 2008). This leads to the fact that value can't be analyzed solely by investigating how value is produced, but moving beyond individual intentions of the involved parties is required. A focus on the interactions between the different actors that in the end are the value formators is therefore required (Dolan et al., 2019)

Innovations do generally no longer just derive from companies' internal knowledge, but instead they rather evolve from common actions of a several actors that can range from suppliers and partners over to customers or even inventors that work independently. It can be described as a network-centric focus (Chesbrough, 2003; Nambisan, Sawhney, 2007), which will in the end lead to the best possible product or service for the customer on the market. Furthermore, a shift from features and attributes of a product or service only over to the value or experience that has been co-created with several different actors could be analyzed. This leads to a more value- and/or experience-based focus (Prahalad, Ramaswamy, 2004; Vargo and Lusch, 2004). Therefore, the service-dominant logic does not really focus on the output of a product in a physical form that is in the end offered and exchanged. What is at the core of the logic is the underlying processes of serving (Lusch, Nambisan, 2015).

2.3. The co-creation of value

Extant literature focuses on the significant advantages of co-created products and services that will be better appreciated and considered by a company's consumers on the market (Heidenreich et al., 2015). While there are different fields in which co-creation can boost a company's performance, successfully co-created products or services can lead to an increased purchase intention, higher willingness to pay (WTP) for a specific product or also a consumer's openness to recommend the brand or the service to others (Schreier et al., 2012). Co-creation has been suggested as a major source for a firm's competitive advantage, which should be a company's goal for long-term success (Mahr et. al., 2013).

Through this approach, the risk associated with collaboratively created products or services can be reduced and therefore be a bigger source of value for the company's consumers as well as the company itself (Cook 2008; Hoyer et al. 2010). It has the potential to reduce the company's cost for R&D, an increased relevance for the product or service provided as well as access to new markets (Weber, 2011; Fuchs and Schreier, 2011; Chesbrough and Schwartz, 2007) and improved time to market (Hoyer et al. 2010). When the co-created product or service will in the end yield a benefit that is stronger than the invested effort, customers will be satisfied (Xie et al. 2008). With a co-created product or service, competitiveness of a firm can be boosted by offering the consumers products or services that are superior to what the competition offers (Braun et al., 2017), and simultaneously boost customer satisfaction (Chan et al. 2010).

For this reason, the importance of co-creation in the recent years has become more prevalent for many companies, even for ones that followed the traditionally innovation model, which focused more on company's internal knowledge rather than involving actively the consumers. Thus, the consumer can contribute at the same level as companies to what consumers want to see on the market as the company offer matching closely expectations to better satisfy customers' needs (Füller, 2010). This said, companies get into dialogue with consumers, and therefore the consumers and users of the product or service can participate in the conversation and influence or even lead the direction of new product innovations offered by a company (Van Belleghem, 2010). Consequently, customers do not only function as a source of information, common in the traditional innovation model, but have a more active role in the innovation process. Active involvement allows customers to participate as co-developers and also jointly solve problems with employees of the company to generate new product or service solutions that will match consumers' needs and wishes more effectively (Fang, 2008; Nambisan, 2002). Actions, that were in the past out of the consumers' reach, are evolving into interactions and collaborations, in which companies examine the consumers' desires to offer the right product or service (Gebauer et al., 2010).

The model of co-creation can potentially incorporate many activities, such as contributing with new ideas for a product or service or the consecutive improvement, the evaluation of design ideas and the associated alternatives as well as supporting with the focus of the campaign to launch the product or service (Mandolfo et. al., 2020). Supported by the new means of communication like social media, users can easily create and share content (Bettiga et. al., 2013; Liljedal, Dahlen, 2015) and thus, also enhance the push of co-creation initiatives

by companies and dynamically come up with ideas and become part of the new product offering (O'Hern et. al., 2010).

Ideas and innovations are not solely developed by the companies anymore and consumers often can design and create a product they wish for, since the knowledge can come from anywhere and anyone. Even though many companies nowadays to follow the path of developing products and service in collaboration with their consumers, the innovation and ideation process can in fact be more complicated and challenging than it looks at first (King and Lakhani, 2013).

2.4. Service Failure and Recovery

To improve products and services, it is reasonable that not every single of them can be a success. For this reason, it is important to learn from past failures and mistakes (Dong et al., 2007). Companies consequently need to ensure that the right actions are being taken in response to a service failure. This refers to the activities and efforts a company is undertaking to rectify, amend and restore the sacrifices the customer had to make after the failure. Two dimensions can be analyzed, where one is about the outcome, so focusing on what is done in terms of the tangible compensation, as well as the process, which is evolving around how things are done in terms of the interaction. Both dimensions have a significant impact on what the customer perceives about the company (Grönroos, 1988). A similar approach is the differentiation between mental and physical service recovery, while the mental perspective is mostly about explanations and apologies and the physical one about the actual compensation, which can be service-related or also monetary (Miller et al., 2000).

The goal of the service recovery is the transformation of a dissatisfied customer into a satisfied one (Andreassen, 2001). In this context, companies should not work passively to recover the failed service but should proactively do so. Handling the complaints only will therefore not be satisfactory, but companies need to ensure there will be customer-oriented and adequate solutions (Cambra-Fierro et al., 2011). The service provider is therefore in charge to take an instant measure to be in control of the situation and suggest the customer an appropriate solution, when the service has an error or something happens that was not expected (Budianto, 2019).

2.5. Customer Satisfaction

As mentioned previously, not every product or service can be a success at first (Dong et al., 2007). For this reason, the service recovery is a very important measure for companies to regain the customers attention and turn the individual customer from a dissatisfied consumer into a satisfied one (Andreassen, 2001). Therefore, a product or service that matches the expectations a customer has, will enhance the satisfaction with the brand, product or service and consequently also lead to a higher profitability (Anderson et al., 1994). Successful businesses need to have the customer satisfaction on top of their minds, because it defines the overall evaluation of the product or service, based on the total consumption and purchase experience over time (Fornell et al., 1996). This is where the collaboration between customer and company becomes highly important again. When the two parties can collaborate during the time the service is being provided, the customers' and others' satisfaction and service quality perceptions will be boosted (Kelley et al., 1990, 1992; Martin, Pranter, 1989).

Speaking in terms of business strategy, customer satisfaction is a very crucial component. It can be understood as a barometer that will predict a customers' future behavior (Hill et al., 2007). Nevertheless, it is also very dynamic. Following the approach of being customer-centric and actively listening to what the consumer expects and wants can help companies enhance customer satisfaction while keeping customers close. Reversely, if competing companies try to increase customer satisfaction, the customers might consequently be lost to the competition. However, customer satisfaction can evolve over some time and can be influenced by different factors, like product or service usage or for instance when the service experience is one that is enduring over a longer period (Lovelock, Wright, 2007).

Therefore, products and services that match closely what a customer needs will increase the customer satisfaction (Henard, Szymanski, 2001). Scholars have thus in the past unanimously agreed on the relevance and importance of customer-related outcomes (Griffin, Page, 1996). For this reason, more and more firms rely on the active involvement of the customers in the value creation process, respectively co-creation process, to further boost the customer satisfaction (Gligor, Maloni, 2021). Consequently, several past studies suggest that companies' co-creation activities potentially have a positive impact on the satisfaction of the customers (Chan et al., 2010; Santos-Vijande et al., 2016). Nonetheless, when value is not co-created, but rather co-destructed, customers feel dissatisfied with the service or product provided, because the expectations haven't been met and became inflated (Heidenreich et al.,

2015). Customers will therefore reversely not be satisfied with the decision toward the product or service they have previously made (Tsiros, Mittal, 2000).

Second, customers' cooperation during the service encounter contributes to their own and others' satisfaction and service quality perceptions (Kelley et al., 1990, 1992; Martin and Pranter, 1989). Finally, customers are a vital source of information about service delivery and innovation (Plymire, 1991; Schneider and Bowen, 1995).

Based on previous literature on value creation in context of the service industry, it is crucial to consider the utilitarian value that can be derived from the co-creation of a service recovery. This enhances a customer's repurchase intention for instance as well, which is one of the several positive aspects that comes along with the co-created service recovery (Park, Ha, 2016). The co-creation of a service recovery is therefore defined as a collaborative creation of the service recovery through different kinds of interactions between a company and a customer. The goal is to find a solution for a failed service that best satisfies the customer's needs (Prahalad, Ramaswamy, 2004).

Based on the previous discussion we posit that:

H1: Companies that use co-creation for service recovery will display higher customer satisfaction than companies that use internal resources only for service recovery.

2.6. Willingness to recommend (WTR)

For a company to be known around different segments and groups of people, it is important to satisfy customers wishes and needs for a service. The literature suggests that customer satisfaction as well as loyalty for a brand and service build the required foundation for a customer lifetime value that keeps the business successful. As a very important customer behavior trait, the willingness to recommend and therefore spread the positive word of mouth about a provided service is crucial to create value for consumers. This group of people will account for a boost in profits, which should be cultivated and clearly identified by companies (Heskett, 2002). The customers and therefore users of a service can become the advocates for a brand, which can either be in a positive or a negative way (Bansal, Voyer, 2000). Especially in the context of this work, it must be clarified that products that focus on an experience and therefore on a service, the word of mouth is usually higher, which makes it important for companies to consider a service customers willingness to recommend (Ennew et al., 2000).

With this knowledge in mind, the second and third hypotheses for the purpose of this paper can be defined as follows:

H2: The customer satisfaction with the service recovery mediates the effect of co-created service recovery on customer's willingness to recommend the service.

2.7. Customer Loyalty

The loyalty to a brand is an important intangible asset to have for a firm because loyalty differentiates the company from others and represents one source of competitive advantage (Cossío-Silva et al., 2015). In general, a loyal customer can be described as one that has a commitment to purchase a product or service again as well as promoting the purchase to others and keep a positive attitude toward the brand (Kandampully, Suhartanto, 2000).

The literature differentiates between two different types of loyalty (Bandyopadhyay, Martell 2007). One of them is the behavioral loyalty, which stands for the way a consumer behaves and interacts with the brand. A loyalty indicator for this type would be the repurchase of a selected product or service. The other type is the attitudinal, which represents the different underlying emotions that comprise the loyalty. In this context, the customer does not necessarily need to repurchase, but for example the willingness to recommend the service or product to others (Kursunluoglu, 2011).

Solely by constantly meeting and sometimes even exceeding customers' expectations over a period, customer loyalty can be achieved (Teich, 1997). Customer loyalty is also one major goal for companies, because it is estimated that attracting new customers is about 5 times more cost-intensive than ensuring a current customer of the company satisfied and happy (Kotler et al., 1999). Loyalty can take positive, but also negative dimensions. A loyal customer might not necessarily be satisfied with a product or service, reversely it means that a satisfied customer is not necessarily a loyal one. Even though the two constructs are closely related, it is important to not generalize it (Zeithaml et al., 1996). Due to money constraints or high switching costs, it is possible that a customer stays loyal to a product or service, even though it can't fully satisfy the consumer anymore (Bitner, 1990; Ennew, Binks, 1996). However, to better understand the relation between customer satisfaction and loyalty, it can be said that satisfaction is crucial, but potentially not sufficient to evaluate the loyalty, because customer

satisfaction can exist without loyalty, but it is very much more difficult to understand loyalty without satisfaction outside of the previously mentioned example of money constraints or switching costs. Finally, companies should ensure to satisfy customers with the right products and services so they can be loyal as well, which will have the potential to establish a long-lasting and profitable company-customer relationship (Arokiasamy, 2013).

In general, it can be said that loyal customers are more likely to forgive companies a service failure and co-creation efforts, because they identify more strongly with the company. This is important to consider for companies because this way, they can further strengthen customers brand identification. Thus, in case a service fails, loyal customers will experience higher satisfaction levels than non-loyal customers (Kau, Loh, 2006). Previous research has also suggested that loyalty and in this context also the forgiveness for service failures is higher, when there is a strong relationship between the service provider and the customer (Yagil, Luria, 2016). Admirers of brands often even believe that they have a better understanding and knowledge of the brand than the company itself (Muñiz, O'Guinn, 2001). With this, it becomes clear that loyal customers have a strong emotional connection to a brand in some cases and will therefore be more likely to forgive a failure, and be the ones with higher satisfaction in case of service failures (Malaviya, 2000).

With the knowledge on the customer loyalty, we now suggest the following hypothesis:

H3: Customer loyalty (positively) moderates the effect of (co-created) service recovery mode on the customer satisfaction.

3. CONCEPTUAL MODEL

To summarize the previous literature review and highlighting the conceptual model on what will be investigated, the following model can be drawn:

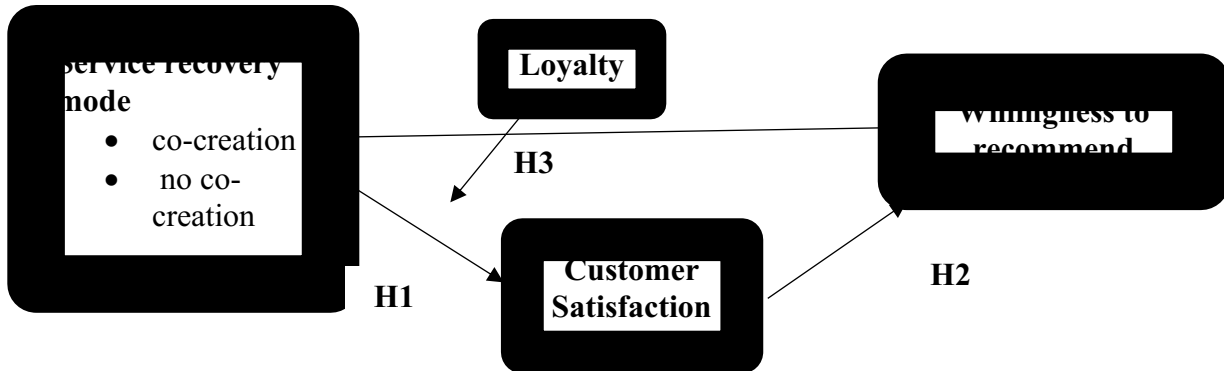


Figure 1: Conceptual Model

The aim of this thesis is to assess whether the presumed hypotheses are confirmed in the context of the service recovery mode, which can be either co-created or non-co-created. With hypothesis 1, it will be assessed, if companies that use co-creation in their service recovery will display higher customer satisfaction than companies that only focus on internal resources. We will therefore test, if a co-created service recovery will be beneficial for customer satisfaction or if this is not even relevant. Secondly, it is suggested that the satisfaction with a provided service through a service recovery during a flight mediates the effect of co-created service recovery on passengers' willingness to recommend, which was identified as a crucial aspect of a companies' long-term success. Finally, we will analyze H3, which suggests that the brand loyalty moderates the effect of the service recovery mode on passengers' satisfaction with the service.

4. METHODOLOGY AND RESEARCH FRAMEWORK

4.1. Research Method

The study employed in this thesis was characterized with an experimental research design. Through this approach, the cause-and-effect relationship between the independent variable and the dependent variable could ensure the evaluation of the previously suggested hypotheses. Since experimental research studies are commonly used in social science contexts, this method has been used. The aim of the study conducted was to evaluate the relevance of co-creation in a service recovery context, meaning that co-creation was suggested to be helpful when it comes to collaboratively developed solutions for problems and service failures.

With the study, the effects of a specific service recovery mode were tested in relation to the customer satisfaction, to loyalty and finally, the willingness to recommend the service that was provided to the customer.

The data was collected through an online survey with support of the tool Qualtrics. To collect responses to the survey in a fast way, the online survey can be seen as the right tool. Also, since it was intended to not only limit the survey to a specific group of people (nationality or geographic location) since airlines are operating on a global level, but the survey could also easily be spread to different kinds of people. The study that has been conducted to analyze the impact of co-created service recovery was of quantitative nature. An online survey has been sent out to random participants to get a broader understanding of the relevance of co-creation. In total, 216 responses were collected, even though not all of them can be considered as valid due to incompleteness. With a screening question in the beginning, participants were asked if they had taken a flight within the last 24 months to check the participants eligibility of the participation. For the ones that did not take a flight recently, the survey automatically ended. All other participants were facing service involvement questions to understand the current flight behavior. Afterwards, all participants were asked to choose a meal that they go for when pre-selecting this service. Following this selection, the participants were randomly assigned to a scenario. In both cases, the preselected meal was not available during the flight. However, in one scenario, the customer was provided with compensation from the airline without having a discussion and negotiation with the airline staff. This scenario is considered the one with no co-creation involved in the service recovery. In the second scenario, the participants directly discussed and evaluated the situation with the airline staff in order to find the best solution that works for both parties. Even though the compensation in both scenarios was the same, the first scenario did not involve the participant in finding a solution, but the second scenario fully included the customer in the decision by taking both the airline and customer input into consideration. To evaluate the impact of both scenarios on satisfaction and the willingness to recommend the service and brand, 4 blocks of questions were asked, which included the general service experience, loyalty, the service recovery perception and finally the willingness to recommend the service and brand. The survey was concluded with demographic questions about age, gender, nationality, and income.

A between-subject design (source of service recovery: co-creation vs. no co-creation) was followed, so it could be analyzed how much respondents in the sample would vary over

the course of the survey participation (Field, 2013). In total, 216 people have participated in the main study, most participants indicated to be between the age range 25-34 (43.1% of total participants, whereas 30.6% did not specify their age and 15.7% mentioned to be between 18-24). Interestingly, most participants were female with a frequency of 104 vs. 42 responses from male people. For the remaining respondents, no gender was reported. In almost 45% of the cases, participants of the survey indicated to be German, which was most participants. Overall, the participants nationalities were diverse with almost 30 nationalities participating. However, after German participants, the next biggest group were people from the USA with 7 responses reported, accounting for 3.2% of the total participants.

Since service failures, especially after the service was supposed to be co-created (in the context of this thesis by pre-selecting a meal before taking a flight) do not occur on a regular basis, it is sometimes hard to identify these scenarios in real-life situations. Also, when the right monitoring tools are not available, companies cannot properly take track of what impact a service failure in specific situations has on customer satisfaction, brand loyalty or the willingness to recommend the service in the future. For this reason, an experimental study has been conducted, where participants were randomly assigned to one of two scenarios, where they were requested to use their imagination and then indicate their satisfaction, loyalty, and willingness to recommend. With the two scenarios provided, it was tested whether co-creation in the service recovery process is relevant and resulting in the same outcomes as if when there is no co-creation involved.

4.2. Sampling

Participants were randomly assigned to one scenario, which was either a co-created or a non-co-created service recovery. The system being in use for the survey did the randomization automatically. Since the screening question was eliminating participants from the survey that did not take a flight within the last 24 months, the sample group did not have to be exclusively selected. The survey could be sent out to everyone in the surroundings in order to get a representative result. Also, since flying has become more relevant again after the covid-19 pandemic, during which the willingness to fly was strongly below the level of before covid-19 (Michelmann et al., 2023), the screening question about the last 24 months was considered as relevant enough to be able to imagine the scenarios given.

4.3. Research Instruments

After an introduction to the survey, describing the main purpose of the research and the confirmation that all data will be handled confidentially and anonymously, participants of the survey were checked for their eligibility to further participate in the survey with a multiple-choice question on whether they have taken a flight in the last 24 months. Afterwards, questions on the previous flight behavior and service involvement were being asked with the help of a 7-point-likert scale. A question on the pre-selection of an onboard meal was asked to make the participant directly feel involved with the scenarios that were coming up after. The participants could choose between a standard, dietary or vegetarian/vegan or wholefood meal. They were then randomly assigned to a co-creation and a non-co-creation scenario for the service recovery, since in both scenarios the service delivery with the pre-selected meal failed. In both cases, most of the text was the same. Just in the second part, there are differences in how the service recovery and the respective compensation in that specific case was being offered, which can be seen in the table below.

Scenario 1 (Non-co-created service recovery)	Scenario 2 (Co-created service recovery)
<p>During the onboard service, the airline delivers the meal with drinks.</p> <p>Unfortunately, you must realize that the delivered meal does not match with what you have pre-selected before your flight.</p> <p>The flight attendants are sorry for the incident and apologize. They serve you a different meal that is available on board.</p> <p>Due to your special diet and/or your preferences though, you can only eat parts of it.</p> <p>However, the flight attendants can see in their system that you successfully pre-selected the special meal, but it wasn't boarded onto the plane for some unknown reason.</p> <p>Thus, the airline crew offers you a bottle of champagne from the business class as compensation.</p> <p>Once more, the staff apologizes for the inconvenience.</p>	<p>During the onboard service, the airline delivers the meal with drinks.</p> <p>Unfortunately, you must realize that the delivered meal does not match with what you have pre-selected before your flight.</p> <p>The flight attendants are sorry for the incident and apologize. They serve you a different meal that is available on board.</p> <p>Due to your special diet and/or your preferences though, you can only eat parts of it.</p> <p>However, the flight attendants can see in their system that you successfully pre-selected the special meal, but it wasn't boarded onto the plane for some unknown reason.</p> <p><i>On board, the airline crew finished serving the food to all the other passengers and came back to you. They were friendly and trying to accommodate your wishes, because they were sincerely sorry for the inconvenience. This being said, you discussed the situation with the airline staff for a couple of minutes.</i></p> <p><i>Both the airline and you were trying to find a solution that works for both parties and you felt understood, because you openly talked about it.</i></p>

	<p><i>After evaluating the situation and thinking about a compensation, you agreed on one solution that you came up with together with the airline staff. Since you love champagne, the airline crew offered you a nice bottle of champagne.</i></p> <p><i>Once more, the staff apologizes for the inconvenience.</i></p>
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Table 1: Scenarios on Service Recovery Mode

Afterwards, several questions on the service experience and the perceived personalization of the service itself, as well as loyalty, the service recovery impression, the overall satisfaction, and the willingness to recommend the service to others were being asked. All items in these categories were questioned on a 7-point likert scale. Lastly, to better understand the sampling group, questions on demographics about the age range, gender, nationality and the annual income were being used.

4.4. Stimuli Development

To compare the two groups mentioned before, respectively the ones that were confronted with a co-creation scenario versus those confronted with a non-co-creation scenario, participants were randomly assigned to either one of the two stimuli. The development of these stimuli combined the existing literature on co-creation with research that has previously been done in the field of service recovery, co-creation and especially service failure in the airline industry. Through the two scenarios, it was mainly intended to understand whether co-creation influences brand loyalty, customer satisfaction and ultimately, the willingness to recommend the airline or the service. Previous research has strongly suggested that service recovery can positively transform a dissatisfied customer into a satisfied one (Andreassen, 2001) through mental and physical service recovery (Miller et al., 2000). To the study conducted, a physical service recovery has been provided to customers (respectively the participants of the survey) with a bottle of champagne, which was either a co-created outcome or a non-co-created one.

4.5. Measures

Several measures have been taken to evaluate the effect of a co-created versus a non-co-created service recovery on customer satisfaction, brand loyalty and the willingness to recommend the service provided. The two different scenarios (either co-creation or no-creation)

were randomly assigned to participants. However, all participants were then exposed to the same questions on customer satisfaction, brand loyalty and the willingness to recommend. All variables and the respective items included for each variable were measured on a 7-point likert scale (indicating the levels of agreement from Strongly Disagree – Disagree – Somewhat Disagree – Neither Agree Nor Disagree – Somewhat Agree – Agree – Strongly Agree).

The *customer satisfaction* was measured with the help of four different items, which are indicated in the following:

1. *I was satisfied with my most recent experience with the airline.*
2. *I feel pleased with what the airline has done in the scenario.*
3. *The service provided met my needs very well.*
4. *I had a more positive image for the airline after solving my issue.*

Participants had to indicate their level of agreement with the statements they were exposed to on a 7-point likert scale. Question 1 was extracted from an earlier study on post consumption effects in the service industry (Matilla, 2003). Questions 2 and 3 originated from an earlier study on service processes and measurements for product and service satisfaction (Hui et al., 2007). Lastly, question 4 was based on a paper focusing on the effects of service recovery (Park, 2016).

Next, the *willingness to recommend* the service was measured through the following two items:

- *I would recommend the airline to my friends for travel purposes.*
- *If my friends are intending to fly somewhere, I would tell them to book with this airline.*

The items for the variable willingness to recommend (WTR) were both extracted from a previous, longitudinal study of complaining customers' evaluations of several different service failures (Maxham et al., 2002).

Lastly, the variable *brand loyalty* was measured with the help of the items below:

1. *I would always continue to choose the airline before others.*
2. *I would consider myself a loyal customer to the airline.*
3. *The next time I need to air travel, I would fly with this airline.*

Item 1 originated from a study from the year 2004 that measured the levels of loyalty and the pivotal role of trust (Harris, Goode, 2004). A multi-setting comparison of service evaluation settings study built the base for item 2 (Brady et al., 2005). The last item of the brand loyalty variable was derived from a customer demotion study, where the objective was to analyze the jeopardizing effect on loyalty (Wagner et al., 2009).

5. ANALYSIS AND RESULTS

5.1. Reliability Analysis

In the survey conducted, several questions were asked that can be grouped together into the categories service experience, loyalty, service recovery experience, satisfaction and the willingness to recommend. A reliability analysis has been run, which was based on question constructs from previous literature. Since mostly all constructs, but especially the ones essential for the purpose of this paper, were achieving the critical value of $\alpha > 0.8$, the means for each scale were calculated. The variables loyalty ($\alpha = 0.920$), satisfaction ($\alpha = 0.841$) as the WTR ($\alpha = 0.889$) achieved the defined value of $\alpha > 0.8$.

Variable	Original number of items	Cronbach's alpha	Items eliminated	New Cronbach's alpha	Final number items
Service Experience	4	0.426	2	0.711	2
Loyalty	3	0.920	0	0.920	3
Service Recovery	4	0.464	2	0.619	2
Satisfaction	4	0.861	2	0.841	2
Willingness to recommend	2	0.889	0	0.889	2

Table 2: Reliability Analysis

Afterwards, an inter-item-correlation has been conducted for the remaining constructs loyalty, satisfaction and the WTR. For the three categories, a minimum inter-item-correlation of 0.735 could be achieved, which shows the defined threshold of inter-item-correlation > 0.7 was reached in these cases. The individual results are highlighted in the tables below.

Inter-Item-Correlation LOYALTY	1: I would always continue to choose the airline before others.	2: I would consider myself a loyal customer to the airline.	3: The next time I need to air travel, I would fly with this airline.
Item 1	1,000	,850	,739
Item 2	,850	1,000	,798
Item 3	,739	,798	1,000

Table 3: Inter-Item-Correlation Loyalty

Inter-Item-Correlation SATISFACTION	1: I feel pleased with what the airline has done in the scenario.	The service provided met my needs very well.
Item 1	1,000	,735
Item 2	,735	1,000

Table 4: Inter-Item-Correlation Satisfaction

Inter-Item-Correlation WTR	1: I would recommend the airline to my friends for travel purposes.	2: If my friends are intending to fly somewhere, I would tell them to book with this airline.
Item 1	1,000	,800
Item 2	,800	1,000

Table 5: Inter-Item-Correlation Willingness to Recommend

This way, the different variables that were identified above were computed as new variables, respectively in this case loyalty, satisfaction, and willingness to recommend. Since the evaluation was based on a 7-point likert scale, the minimum value to indicate (1) stands for the agreement level “Strongly Disagree”, whereas a 7 stands for “Strongly Agree”. The final descriptive statistics are reported as follows:

	N	Minimum	Maximum	Mean	SD
Loyalty	154	1,00	7,00	4,5887	1,35911
Satisfaction	148	1,50	7,00	4,7331	1,30464
WTR	149	1,00	7,00	4,8691	1,20724
Valid N	148				

Table 6: Descriptive Statistics for Variables

5.2. Manipulation check

All participants were exposed to either one of the scenarios in the survey, which was either a co-created service recovery or a company-based, non-co-created service recovery. After the exposure, a manipulation check was performed, which was relevant to see whether participants could clearly understand the scenario. This has been done through a question on the participants opinion on whether the passenger only (= 0), the airline only (= 1) or the passenger in collaboration with the airline (= 2) was involved in recovering the service and the provision of the compensation that was described before. With the help of a One-Way ANOVA, these results have been measured and analyzed.

The descriptive statistics first show that in total 160 exposures were reported, whereas 79 people were exposed to the no co-creation scenario and 81 participants to the co-created service recovery scenario. The means highlight that in average, the co-creation scenario had a higher mean ($M_{NoCC} = 1.20$; $M_{CC} = 1.84$). The confidence intervals provide the range within which we can be 95% confident that the population mean falls. For the no co-creation scenario, the interval ranges from LLCI = 1.09 to ULCI = 1.31, whereas the interval for the co-creation scenario ranges from LLCI = 1.74 to ULCI = 1.94. The Min and Max values indicate the response options for the participants in who was involved in the service recovery, where 0 stood for “Only me as a passenger”, 1 for “The airline only” and 2 for “Both me and the airline”. Summed up, the co-created service recovery has a higher mean value compared to the other group.

With the One-Way ANOVA, the variation in the dependent variable that can be attributed to the differences between the groups (either no co-creation or co-creation) was measured with the Between Groups Sum of Squares, which was 16.227. The degrees of freedom $df = 1$ show the number of groups being compared minus 1. The mean square $MS = 16.227$ is calculated by dividing the mean square by the $df = 1$, which in this case is equal to the sum of squares. With a high value for $F = 71.871$, it is suggested that there are significant differences between the groups in terms of impact on the dependent variable, which was the manipulation check question. Lastly, the very low p-value ($p < .001$) indicates that the differences between the groups are statistically significant, which means that the manipulation check was successful and the two scenarios were understood correctly.

Scenario	N	Mean	95% LLCI	95% ULCI	Min	Max
No co-creation	79	1,20	1,09	1,31	0	2
Co-Creation	81	1,84	1,74	1,94	0	2
Total	160	1,53	1,44	1,61	0	2

Table 7: Descriptives for Manipulation Check

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16,227	1	16,227	71,871	<,001

Table 8: One-Way ANOVA Manipulation Check

5.3. Results

Hypothesis 1

In the first hypothesis, it was proposed that *H1: Companies that use co-creation for service recovery will display higher customer satisfaction than companies that use internal resources only for service recovery.*

To test this hypothesis, a comparison of means using the One-Way ANOVA was performed. Customer Satisfaction was defined as the “Dependent Variable” in SPSS, whereas the service recovery type (co-creation or no co-creation) was placed in the “Factor” field. With support of the Descriptive statistics, we can determine the mean level of customer satisfaction in the two service recovery types. In case of the service recovery that was not co-created, $N = 75$ responses could be collected with a mean of customer satisfaction of $M_{\text{Satisfaction0}} = 4.3133$, whereas for the co-created scenario, $N = 73$ responses were provided with a $M_{\text{Satisfaction1}} = 5.1644$.

SATISFACTION	N	Mean	Std. Deviation
no co-creation	75	4,3133	1,33501
co-creation	73	5,1644	1,12748
Total	148	4,7331	1,30464

Table 7: Descriptive Analysis of Customer Satisfaction

Running the One-Way ANOVA analysis, we statistically examine if there are significant differences in the means between the two service recovery modes.

ANOVA					
Satisfaction	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	26,794	1	26,794	17,510	<,001
Within Groups	223,414	146	1,530		
Total	250,208	147			

Table 9: ANOVA for Customer Satisfaction

Between Groups offers insights in the variation between the different groups of the variable Satisfaction, which are the two scenarios the participants were exposed to. The total sum of squares was 26.794 due to the differences between groups. The degrees of freedom are indicated as $df = 1$ since these are calculated 2 (scenarios) $- 1 = 1$. The Mean Square is calculated by dividing the sum of squares ($SS = 26.794$) by the $df = 1$, which results in the same value. The

F-value ($F(147,1) = 17.510$) measures, if there are significant differences between the group means, whereas a larger value for F stands for a greater difference between the different groups. Lastly, the level of significance was measured with $p < 0.001$, which means the differences between groups are statistically significant.

Within Groups on the other hand shows the variability of satisfaction scores within each of the scenarios themselves. The sum of squares was at 223.414 due to the differences within the groups. The degrees of freedom were measured with $df = 145$. It represents the total number of observations minus the number of groups, which means $df = 147 - 2 = 145$. The mean square was calculated just like above, resulting in a value of 1,530.

To sum this up, the One-Way ANOVA suggests that there are statistically significant differences in customer satisfaction scores between the co-created and the non-co-created service recovery, which is highlighted by the $p < 0,001$, indicating that these results are not due to random chance. For this reason, we can state that hypothesis 1, suggesting that companies using co-creation for service recovery will display higher customer satisfaction than companies using only their own input and resources for the service recovery, is confirmed. With this, H1 is confirmed.

Hypothesis 2:

H2: The customer satisfaction with the service recovery mediates the effect of co-created service recovery on customer's willingness to recommend the service.

To test the mediation of customer satisfaction, Andrew F. Hayes (Hayes, n. d.) model 4 in "PROCESS" was being used and run. This way, the mediation of customer satisfaction on the link between a co-created service recovery and the willingness to recommend the service and brand can be analyzed.

To best test this, the mediation study was conducted with the willingness to recommend variable as the Y = dependent variable (also outcome variable), the customer satisfaction variable as the mediator (M1) and the service recovery mode variable as the independent (predictor) variable.

The model 4 of Andrew F. Hayes “PROCESS” includes the variables willingness to recommend, the service recovery mode and the customer satisfaction. The sample size is N = 148.

Variable	Coefficient	p-value	Results
Satisfaction			
• Model R-sq			0.1071
• Constant	4.3133	<0.001	
• SR mode	0.8511	<0.001	
WTR			
• Model R-sq			0.3253
• Constant	2.4041	<0.001	
• SR mode	-0.3640	0.0385	
• Satisfaction	0.5586	<0.001	
Indirect Effect (through satisfaction)	Effect = .4754 BootSE = ,1318 BootLLCI = ,2385 BootULCI = ,7587		Mediator

Table 10: Satisfaction as mediator through Hayes “PROCESS”

The model R² is indicated with 0.1071 for the variable satisfaction, suggesting that 10.71% of the variance in satisfaction is explained by the predictor variable, which is the service recovery mode. The $\text{coeff}_{\text{constant}} = 4.3133$ and is highly significant with a measured $p < 0.001$. Also, the service recovery mode $\text{coeff}_{\text{SRMode}} = 0.8511$ and was found to be highly significant.

For the willingness to recommend, the R² indicates that 32.53% of the total variance in willingness to recommend can be explained by the service recovery mode. The coefficients for the constant term, the service recovery mode and the satisfaction were all measured to be significant.

Interestingly, the total effect of the service recovery mode on the willingness to recommend is indicated with -0.3640, which shows a negative relationship between the service recovery mode and the willingness to recommend. More specifically, this means that when people are not satisfied with the presence of co-creation, it seems to worsen the impact on their willingness to recommend. The p-value of this effect is measured with 0.0385, indicating that the total effect is statistically significant, showing that the service recovery mode has a significant direct effect on the willingness to recommend,

Finally, the indirect effect of the service recovery mode on the willingness to recommend through the mediator satisfaction was measured. An indirect effect of service recovery mode on the willingness to recommend was estimated to be .4754, which suggests that a one-unit change in the service recovery mode leads to a .4754-unit change in the willingness to recommend through the effect on satisfaction. This indirect effect is statistically significant, because the confidence interval (BootLLCI = ,2385 and BootULCI = ,7587) does not include zero.

With these results given, we have evidence of mediation, which indicates that satisfaction plays a significant role in explaining how the service recovery mode affects the willingness to recommend. This confirms H2, showing that customer satisfaction plays a mediating role in explaining the relationship of the service recovery mode and the willingness to recommend the brand.

Hypothesis 3:

H3: Customer loyalty (positively) moderates the effect of (co-created) service recovery mode on the customer satisfaction.

With the last hypothesis, we assess whether customer loyalty moderates the effect of the service recovery mode on the customer satisfaction. For this purpose, a moderation model was carried out, using the “PROCESS” version 4.0 Macro by Andrew F. Hayes as previously introduced.

The interaction between the service recovery mode and loyalty was reported with a coefficient_{int1} = 0.0291, which represents the change in the predicted satisfaction for a change of one unit in the interaction term. In this context, we can suggest that the interaction between the service recovery mode and loyalty is not significant, highlighted with the value of $p = 0.8311$.

The proportion of variance in satisfaction that was explained by the model was represented by the $R^2 = 0.2746$, meaning that 27.46% of the variance in satisfaction is accounted for by the predictor variables service recovery mode, loyalty, and the respective interaction. The coefficient_{constant} = 2.5904, indicating the estimated mean level of satisfaction when all predictors are at zero, which was marked to be statistically significant ($p = 0.000$). In case of a

one change in the service recovery mode, satisfaction is predicted to change by 0.7081, keeping all other variables constant. In the case given, this is not statistically significant ($p = .2781$), meaning that the service recovery mode (co-creation or not) alone does not significantly predict satisfaction. For loyalty, the coefficient_{Loyalty} = 0.3767 represents the predicted satisfaction in case loyalty changes by one unit, also keeping the other variables constant. In this case, a statistical significance ($p = 0.0002$) could be measured, meaning that loyalty is a significant predictor of satisfaction.

	Coefficient	SE	t	p
Constant	2.5904	0.4648	5.5736	0.000
SR Mode	0.7081	0.6504	1.0886	0.2781
Loyalty	0.3767	0.0976	3.8604	0.0002
Int_1	0.0291	0.1360	0.2137	0.8311
Dependent variable: Customer satisfaction	Model Interaction	$R^2 = 0.2746$ $R^2_{\text{change}} = 0.0002$	$F_{(3, 144)} = 18.17$ $F_{(1, 144)} = 0.0457$	$p = 0.001$ $p = 0.8311$

Table 11: Loyalty as moderator

To sum this model up, the interaction between the service recovery mode and customer loyalty was measured to be not statistically significant, suggesting that loyalty does not moderate the relationship between the service recovery mode and customer satisfaction, meaning that H3 could not be confirmed with the underlying data and is rejected.

6.DISCUSSION AND IMPLICATIONS

6.1. Discussion

The study examined the impact of the service recovery mode, which could either be co-created or solely based on internal company resources on customer satisfaction, brand loyalty and the willingness to recommend the service and brand. More specifically, the purpose of this thesis was the test on what implications the service recovery mode has on customer satisfaction (H1), if customer satisfaction mediates the relationship between the service recovery mode and the willingness to recommend (H2) and if brand loyalty can be identified as a moderator for the relationship between the service recovery mode and the customer satisfaction (H3). The conceptual model and the defined, respective hypotheses were based on the airline industry as a carrier and therefore service provider. Especially, since the airline industry has been strongly impacted by the covid-19 pandemic and we are getting back more and more to a state from before that time (Statista, 2023), it is important to examine the services provided by full-service airlines (e. g. Lufthansa, KLM, TAP Air Portugal) and analyze, what impact they have on

passengers' perceptions and the linked behavior. (Graham et al., 1983). This should be on top of managers' minds because the perception and the behavior that comes from a provided service will, as previously highlighted, lead to higher profitability of a company (Andersson et al., 1994), which is a company's goal and necessity to survive in the highly competitive airline carrier market. The competitiveness in this market should not be under evaluated by companies, because also during covid-19, some people have understood that the airline market could be a tough, but also very beneficial market for them. Except for the years 2020-2021, where covid was still restricting the air travel industry, there are more airlines starting their business than airlines that shut down every year. In Europe only for instance, 20 new airlines were introduced to the market, whereas only 7 were closing their business operations (Statista Research Department, 2023). This shows a growth of 13 airlines in the industry that make the competition even tougher, highlighting once more that the provision of an exceptional service experience is highly important to stand out and ensuring passengers' will build a preference when it comes to their air travel carrier choice (Baker, 2013).

For this paper, an online survey has been conducted that was supposed to examine the defined hypotheses. With hypothesis 1, the intention was to investigate whether the service recovery mode brings along significant improvements in customer satisfaction compared to service recoveries, where there is no co-creation involved. This relationship could be confirmed through the study conducted, showing that the service recovery mode plays an important role when it comes to customer satisfaction. Since previous literature suggested that satisfaction with a brand and its service will lead to higher profitability, especially in a highly competitive market (Anderson et al., 1994), this is a very important finding to adapt services accordingly. Also, in combination with hypothesis 2, satisfaction was suggested to take a mediating role on the relationship of co-created service recovery on the passengers' willingness to recommend the service and the brand. Interestingly, the direct effect indicated that if customers are unhappy with the service recovery mode, respectively the presence of co-creation, it seems to worsen the impact on the willingness to recommend the brand. However, since recommending customers that spread a positive word of mouth are considered as the ones that account for a boost in profits, because they also convince others to use the service, these should be cultivated and retained in the best possible way (Heskett, 2002). This hypothesis was confirmed through the conducted survey as well. Lastly, with H3, it was suggested that brand loyalty moderates the effect of the service recovery mode on the customer satisfaction. In this context,

unfortunately no significance could be measured, meaning that the hypothesis is rejected and not confirmed like H1 and H2.

In conclusion, the findings gained through this work indicate that co-creation might function as a promising approach not only when it comes to physical products, but also when it comes to services and respectively in this context, the service recovery. This is very interesting to understand, because it highlights that a failed service does not necessarily mean a full failure, it should rather be seen as an opportunity, because with the help of co-creation, it can have a positive impact on the customer perceptions of the brand and its services as well as the behaviors that come along with this. This way, we can see that co-creation is an opportunity that can help in several dimensions, where traditionally it was always linked to new products only, but also brings its significant benefits for the service sector and the service recovery processes.

6.2. Theoretical implications

While it was suggested by the literature already that the service recovery aims at transforming a dissatisfied customer into a satisfied one (Andreassen, 2001), companies need to ensure that solutions are provided customer-centrally as well as adequate from a customer perspective (Cambra-Fierro et al., 2011). In the context of this paper, it was highlighted that a co-created service recovery can help a company enhance the satisfaction with the service as well as the willingness to recommend.

In regard to the negative coefficient for the scenarios in the willingness to recommend model, it became clear that the scenario had a statistically significant effect on the willingness to recommend, which shows that these cases do not only affect the customer satisfaction, but also impact a passenger's intention to advocate for the service provided. It therefore shows the relevant interconnectedness of satisfaction and recommendation behaviors. Furthermore, the satisfaction as a mediator in the service evaluation process can be underscored. Also, to enhance customer satisfaction and increase the likelihood of having passengers interact in positive word-of-mouth suggestions, researchers can use the gained insights in order to tailor the service experiences. Lastly, by using the mediation analysis in combination with the bootstrapping to explore the indirect effects, the importance of advanced statistical techniques can potentially help to identify procedures and mechanisms that drive the customer behavior.

6.3. Managerial implications

The results from the study conducted should be taken into consideration by companies that want to take advantage of the positive effects co-creation can provide a firm with. Through the findings, several suggestions and recommendations can be made. Since it was clearly stated that the scenario had a significant impact on both customer satisfaction as well as the willingness to recommend, firms should always think about the different approaches on how to deal with problems and service failures. A well-defined process on how to solve problematic situations or service failures can be crucial for the company's success and impact customer interactions and affect perceptions and behaviors.

Increasing customer satisfaction will directly lead to higher levels of willingness to recommend the company and the service provided. It should therefore be a main priority for companies to go the extra mile and improve the high levels of satisfaction in order to have a positive advocacy. In this context, tailoring different interventions and strategies based on scenarios that are likely to happen can be developed, meaning that a company should be prepared for explicit cases where the service itself might fail and already establish processes that guide employees in how to best accommodate the passenger wishes and deal with the situation. Where low customer satisfaction and willingness to recommend is present, it is necessary to address the pain points that are responsible for the dissatisfaction, whereas in the reverse, in scenarios with higher satisfaction, leveraging them can bring additional advocacy for the company. However, these important aspects need to be continuously monitored across different scenarios and respectively service failures in order to keep improving the service quality. This is possible through a regular feedback loop, just like surveys that are sent out to either all customers after a flight or the ones that experienced a service failure. This sustainably helps to find areas of improvement. Corrective actions need to be taken then in cases where there is a significant case in the customer satisfaction. Also relating to this, companies need to ensure that training programs for those specific cases and scenarios are being offered, which is an essential part of the encompassing of how to handle these different situations effectively. Lastly, the feedback from the service recovery cases need to be seen as an opportunity for firms to continuously improve services and adapt strategies accordingly, because passenger needs and wishes might change over time, which makes it necessary to keep an eye on the topic not only occasionally, but on a regular basis. This will be a very important aspect of a company's long-term success and growth of the service organization.

7. LIMITATIONS AND FUTURE RESEARCH

Even though this dissertation's result gives helpful insights to improve a company's service landscape, especially in the context of service recovery, it still needs to be seen with some limitations. At first, it must be kept in mind that the validity of the data was based on the effectiveness of the manipulation check that has been added to the two scenarios. Some participants have failed the manipulation check and answered for example that only they as passengers were involved in the service recovery, even though it was fully co-created. The significance of the obtained results should therefore not be seen without any restrictions, because it means that some participants did not correctly understand and therefore interpret the scenarios provided. For future research in this field, it is important to educate the participants of the survey more about the importance of focusing clearly on the scenarios, so the survey is taken seriously or clarifying in an additional way the different scenarios by providing more information.

The sample size of the study provided was 148, which could result in significant results. However, to generalize the findings of this research, the study could have been made available to a larger number of participants or also in a different context. Even though the study included participants from almost 30 nationalities, which is highly relevant in an airline setting, most participants (42.6%) were German nationals. Keeping in mind the fact that airlines usually operate across national borders, future research could focus on a broader range of nationalities included, where the share of each nationality is more balanced, because every culture might perceive situations and scenarios differently and therefore have other specific needs and wishes. Additionally, over 40% of the participants indicated being aged between 25 and 34. This demographic aspect might also differ throughout airlines, whereas low-cost airlines are rather used by younger people that try to manage their budget and premium airlines rather by people that potentially travel for work. In a airline specific setting, it would be interesting to analyze first the average age distribution of an airlines' passengers and then trying in a best possible way to balance the responses like this. Age could be used as a moderating variable as well in the future. This way, the external validity of the study is limited.

The findings of this study were of quantitative nature. For a deeper understanding of participants' and respectively airline passengers' perceptions and experiences related to different scenarios that include a co-creation setting, the data could be complemented by additional qualitative research. Lastly, the study was being conducted based on a scenario that participants might potentially not have experienced first-hand, which required imagination. For

this reason, the results need to be seen with some limitations in this context as well. Future research could also focus on actual airline passengers that have experienced a service failure, trying to base the research more on a real-life happening than a scenario, which could be challenging, but provide very helpful and relevant insights for an airline that constantly wants to improve the services, not only on a short-term base, but on a sustainable, long-term one, so customers can be retained and positive customer experiences generated.

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Appendices

Appendix 1: Survey

Co-destruction in the service industry

Start of Block: 1. Introduction

Information Dear participant, Thank you in advance for participating in this survey on **service co-creation in the airline industry**. This study is being conducted as part of my master's thesis for the **International Master of Science (MSc) in Management** with specialization in Marketing at **CATÓLICA-LISBON School of Business and Economics**. The survey will take **approximately 5 minutes** to complete and is completely anonymous. There are no right or wrong answers. Your responses will be kept confidential and will only be used for research purposes. Please don't hesitate to reach out to me via s-slanz@ucp.pt, if you have any questions. Thank you very much for your participation! Simon Lanz

End of Block: 1. Introduction

Start of Block: 2. Screening

Q1 Have you taken a flight in the previous 24 months?

Yes

No

Skip To: End of Survey If Have you taken a flight in the previous 24 months? = No

End of Block: 2. Screening

Start of Block: 3. Service Involvement

Q36 Please indicate your level of agreement with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I consider myself a frequent air traveller.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my daily life, flying is very important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually put effort into customizing my flight experience (e.g. online check-in, seat selection)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: 3. Service Involvement

Start of Block: 4. Meal selection

Q8 Please read the following scenario and imagine experiencing the situation first-hand.
You are flying with your preferred airline as your carrier to your selected long-haul destination. Some days before the scheduled departure, the airline sends you an e-mail, inviting you to pre-order your preferred meal free of charge. You can choose between the standard meal, dietary meals, vegetarian and wholefood meals as well as meals for certain religions with the following explanations:

- Standard meal (usually choice

between pasta and chicken - no further details) Dietary meal (gluten-free, low cholesterol, low-sodium and/or lactose-free) Vegetarian or wholefood meals (vegan, vegetarian, Asian-vegetarian) Meals for religious groups (Kosher, Muslim or Hindu)

Q9 What meal option would you choose?

- Standard meal
- Dietary meal
- Vegetarian/vegan or wholefood meal
- Meal for religious groups

End of Block: 4. Meal selection

Start of Block: 5.1. Service failure / no co-creation

Q12 - No co-creation During the onboard service, the airline delivers the meal with drinks.

 Unfortunately, you must realize that the delivered meal does not match with what you have pre-selected before your flight.

 The flight attendants are sorry for the incident and apologize. They serve you a different meal that is available on board. Due to your special diet and/or your preferences though, you can only eat parts of it.

 However, the flight attendants can see in their system that you successfully pre-selected the special meal, but it wasn't boarded onto the plane for some unknown reason.

 Thus, the airline crew offers you a bottle of champagne from the business class as compensation.

 Once more, the staff apologizes for the inconvenience.

End of Block: 5.1. Service failure / no co-creation

Start of Block: 5.2 Service failure / co-creation

Q13 - Co-creation During the onboard service, the airline delivers the meal with drinks.

 Unfortunately, you must realize that the delivered meal does not match with what you have pre-selected before your flight.

 The flight attendants are sorry for the incident and apologize. They serve you a different meal that is available on board. Due to your special diet and/or your preferences though, you can only eat parts of it.

 However, the flight attendants can see in their system that you successfully pre-selected the special meal, but it wasn't boarded onto the plane for some unknown reason.

 On board, the airline crew finished serving the food to all the other passengers and came back to you. They were friendly and trying to accommodate your wishes, because they were sincerely sorry for the inconvenience. This being said, you discussed the situation with the airline staff for a couple of minutes. Both the airline and you were trying to find a solution

that works for both parties and you felt understood, because you openly talked about it.

 After evaluating the situation and thinking about a compensation, you agreed
on one solution that you came up with together with the airline
staff. Since you love champagne, the airline crew offered you a nice bottle
of champagne.
 <div>Once more, the staff apologizes for the
inconvenience.</div> <div> </div>

End of Block: 5.2 Service failure / co-creation

Start of Block: Manipulation Check

Q34 In your specific case, who would you say was involved in the final decision of solving the problem and the corresponding compensation?

- The airline only
- Me as a passenger only
- Both the airline and me as a passenger

End of Block: Manipulation Check

Start of Block: 5.3 Agreement

Q28 Please indicate your agreement with the following statements about the service experience.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
My service was personalized in some way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The compensation provided is probably the same for everyone with a similar problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The airline was willing to find the best available solution for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
With the solution provided for my problem, I will definitely keep flying with the airline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Loyalty Please indicate your agreement with the following statements about your loyalty to the airline in the scenario.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I would always continue to choose the airline before others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider myself a loyal customer to the airline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The next time I need to air travel, I would fly with this airline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

 Page Break _____

Service recovery Please indicate your agreement with the following statements about the airlines' competence to solve the problem.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I expect the airline to try to make up for the wrong meal being served.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The airline employees don't hesitate to take care of any problems that arise during your flight.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my opinion, the airline provided a satisfactory resolution to my problem on this particular occasion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The airline should provide me with tangible compensation in case of complaint (coupon or souvenir).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

 Page Break

Satisfaction Please indicate your agreement with the following statements about your satisfaction with the experience.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I was satisfied with my most recent experience with the airline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel pleased with what the airline has done in the scenario.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service provided met my needs very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had a more positive image for the airline after solving my issue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

WTR Finally, please indicate your agreement with the following statements about your willingness to recommend the airline.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I would recommend the airline to my friends for travel purposes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If my friends are intending to fly somewhere, I would tell them to book with this airline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: 5.3 Agreement

Start of Block: 7. Demographics

Q9 What is your age?

- Under 18
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 or older

Q10 What gender do you identify with?

- Male
 - Female
 - Non-binary / third gender
 - Prefer not to say
-

Q21 What is your nationality?

▼ German ... Other (please specify)

Q11 What is your average annual income before tax?

- 0€ - 10,000€
- 10,001€ - 25,000€
- 25,001€ - 50,000€
- 50,001€ - 75,000€
- 75,001€ - 100,000€
- Above 100,000€

End of Block: 7. Demographics

Appendix 2: Scales from Literature

Please indicate your agreement with the following statements about the **service experience**. (7-point likert scale)

<ul style="list-style-type: none">• My service was personalized in some way.• I have put effort into adapting my service to meet my needs (e.g. pre-ordering, online check-in).	Burnham, Thomas A., Judy K. Frels, and Vijay Mahajan (2003), "Consumer Switching Costs: A Topology, Antecedents and
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<ul style="list-style-type: none"> • The quality of service varies a lot between different airlines in this industry. • I could be using a competing airline and not notice much difference. • Different airlines in this industry offer very different programs/features. 	<p>Consequences,” JAMS, 31 (2), 109-126.</p>
<ul style="list-style-type: none"> • Being a customer of this airline makes my travel more convenient and easier. 	<p>Wagner, Tillmann, Thorsten Hennig-Thurau, and Thomas Rudolph (2009), “Does Customer Demotion Jeopardize Loyalty?” Journal of Marketing, 73 (3), 69-85.</p>

Please indicate your agreement with the following statements about your **loyalty to your preferred airline**.

<ul style="list-style-type: none"> • I would always continue to choose the airline before others. 	<p>Harris, Lloyd C and Mark M.H. Goode (2004), “The Four Levels of Loyalty and the Pivotal Role of Trust: A Study of Online Service Dynamics,” JR, 80 (2), 139-158.</p>
<ul style="list-style-type: none"> • I would consider myself a loyal customer to the airline. 	<p>Brady, Michael K., Gary A. Knight, J. Joseph Cronin Jr., G. Tomas, M. Hult, and Bruce D. Keillor (2005), “Removing the Contextual Lens: A Multinational, Multi-Setting Comparison of Service Evaluation Methods,” JA, 81 (3), 215-230.</p> <p>Zeithaml, Valerie A., Leonard L. Berry, and A. Parasuraman (1996), “The Behavioral Consequences of Service Quality,” JM, 60 (April), 31-46.</p> <p>The composite reliabilities in Study 1 by Brady et al. (2005) ranged from .84 (Netherlands) to .95 (USA). Study 2 was just in the U.S. and the reliability was .93.</p>
<ul style="list-style-type: none"> • The airline is my first option when it comes to air travel. • The next time I need to air travel, I would fly with this airline. 	<p>Wagner, Tillmann, Thorsten Hennig-Thurau, and Thomas Rudolph (2009), “Does Customer Demotion Jeopardize Loyalty?” Journal of Marketing, 73 (3), 69-85.</p> <p>The construct reliabilities for the scale were reported by Wagner,</p>

	Hennig-Thurau, and Rudolph (2009) as .97 in Study 1 and .95 in Study 3.
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Please indicate your agreement with the following statements about **the airlines' competence to solve the problem**.

<ul style="list-style-type: none"> I expect the airline to try to make up for the wrong meal being served. 	<p>Hess, Jr., Ronald L, Shankar Ganesan, and Noreen M. Klein (2003), "Service Failure and Recovery: the Impact of Relationship Factors on Customer Satisfaction," JAMS, 31 (2), 127-145.</p> <p>The scale had an alpha of .65 (Hess, Ganesan, and Klein 2003).</p>
<ul style="list-style-type: none"> The carrier goes out of the way to solve customer problems. The airline employees don't hesitate to take care of any problems that arise during your flight. 	<p>Sirdeshmukh, Deepak, Jagdip Singh, and Barry Sabol (2002), "Consumer Trust, Value, and Loyalty in Relational Exchanges," JM, 66 (January), 15-37.</p>
<ul style="list-style-type: none"> In my opinion, the airline provided a satisfactory resolution to my problem on this particular occasion. 	<p>Maxham III, James G. and Richard G. Netemeyer (2002a), "Modeling Customer Perceptions of Complaint Handling Over Time: The Effect of Perceived Justice on Satisfaction and Intent," JR, 78 (4), 239-252.</p> <p>Maxham III, James G. and Richard G. Netemeyer (2002b), "A Longitudinal Study of Complaining Customers' Evaluations of Multiple Service Failures and Recovery Efforts," JM, 66 (October), 57-71.</p> <p>Maxham III, James G. and Richard G. Netemeyer (2003), "Firms Reap What They Sow: the Effects of Shared Values and Perceived Organizational Justice on Customers' Evaluations of Complaint Handling," JM, 67 (January), 46-62.</p> <p>Alphas of .92 and .91 were reported for the version of the scale used by Maxham and Netemeyer (2002a) with bank customers (Study 1) and new home buyers (Study 2), respectively. An alpha of .83 was</p>

	found for the version used with customers of an electronics dealer in the study by Maxham and Netemeyer (2003).
<ul style="list-style-type: none"> The airline should provide me with tangible compensation in case of complaint (coupon or souvenir). 	Park, J. J., & Park, J. W. (2016). Investigating the effects of service recovery quality elements on passengers' behavioral intention. <i>Journal of Air Transport Management</i> , 53, 235-241.

Please indicate your agreement with the following statements about **your satisfaction with the experience**.

<ul style="list-style-type: none"> I was satisfied with my most recent experience with the airline. 	Matilla, Anna S. (2003), "The Impact of Cognitive Inertia on Postconsumption Evaluation Processes," <i>JAMS</i> , 31 (3), 287-299.
<ul style="list-style-type: none"> I feel pleased with what the airline has done in the scenario. The service provided met my needs very well. 	<p>Hui, Michael K. (2007), Personal Correspondence.</p> <p>Hui, Michael K., Xiande Zhao, Xiucheng Fan, and Kevin Au (2004), "When Does the Service Process Matter? A Test of Two Competing Theories," <i>JCR</i>, 31 (September), 465-475.</p> <p>Westbrook, Robert A. (1980), "A Rating Scale for Measuring Product/Service Satisfaction," <i>JM</i>, 44 (Fall), 68-72.</p> <p>Alphas of .96 (Experiment 1) and .92 (Experiment 2) were reported for the scale (Hui et al. 2004).</p>
<ul style="list-style-type: none"> I had a more positive image for the airline after solving my issue. 	Park, J. J., & Park, J. W. (2016). Investigating the effects of service recovery quality elements on passengers' behavioral intention. <i>Journal of Air Transport Management</i> , 53, 235-241.

Finally, please indicate your agreement with the following statements about **your willingness to recommend the airline**.

<ul style="list-style-type: none"> I would recommend the airline to my friends for travel purposes. 	Arnold, Mark J. and Kristy E. Reynolds (2009), "Affect and Retail
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<ul style="list-style-type: none"> If my friends are intending to fly somewhere, I would tell them to book with this airline. 	<p>Shopping Behavior: Understanding the Role of Mood Regulation and Regulatory Focus," <i>Journal of Retailing</i>, 85 (3), 308-320.</p> <p>Maxham III, James G. and Richard G. Netemeyer (2002a), "Modeling Customer Perceptions of Complaint Handling Over Time: The Effect of Perceived Justice on Satisfaction and Intent," <i>Journal of Retailing</i>, 78 (4), 239-252.</p> <p>Maxham III, James G. and Richard G. Netemeyer (2002b), "A Longitudinal Study of Complaining Customers' Evaluations of Multiple Service Failures and Recovery Efforts," <i>Journal of Marketing</i>, 66 (October), 57-71.</p> <p>Maxham III, James G. and Richard G. Netemeyer (2003), "Firms Reap What They Sow: the Effects of Shared Values and Perceived Organizational Justice on Customers' Evaluations of Complaint Handling," <i>Journal of Marketing</i>, 67 (January), 46-62.</p> <p>Walsh, Gianfranco and Sharon E. Beatty (2007), "Customer-Based Corporate Reputation of a Service Firm: Scale Development and Validation," <i>Journal of the Academy of Marketing Science</i>, 35 (1), 127-143.</p> <p>Alphas of .92 and .90 were reported for the version of the scale used by Maxham and Netemeyer (2002a) with bank customers (Study 1) and new home buyers (Study 2), respectively. An alpha of .93 was found for the version used with customers of an electronics dealer in the study by Maxham and Netemeyer (2003).</p>
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Appendix 3: SPSS Process Makro

Model 4: Y (WTR); X (Scenario); M (Satisfaction)

Sample Size: 148

OUTCOME VARIABLE: Satisfaction

Model Summary

R	R-sq	MSE	F	df1	df2	P
,2856	,0816	1,2518	12,9653	1,0000	146,0000	,0004

Model

	coeff	se	t	p	LLCI	ULCI
constant	4,4267	,1292	34,2637	,0000	4,1713	4,6820
Scenario	,6624	,1840	3,6007	,0004	,2988	1,0259

OUTCOME VARIABLE: WTR

Model Summary

R	R-sq	MSE	F	df1	df2	P
,6694	,4481	,8209	58,8614	2,0000	145,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1,6020	,3146	5,0925	,0000	,9803	2,2238
Scenario	-,3692	,1554	-2,3751	,0189	-,6764	-,0620
Satisfaction	,7254	,0670	10,8242	,0000	,5930	,8579

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-,3692	,1554	-2,3751	,0189	-,6764	-,0620

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
Satisfaction	,4805	,1406	,2122	,7649

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

Appendix 4: Demographics of study

AGE	Frequency	Percent	Valid Percent	Cumulative Percent
N/A	66	30,6	30,6	30,6
18-24	34	15,7	15,7	46,3
25-34	93	43,1	43,1	89,4
35-44	17	7,9	7,9	97,2
45-54	4	1,9	1,9	99,1
55-64	2	0,9	0,9	100,0
TOTAL	216	100,0	100,0	

GENDER	Frequency	Percent	Valid Percent	Cumulative Percent
N/A	66	30,6	30,6	30,6
Male	42	19,4	19,4	50,0
Female	104	48,1	48,1	98,1
Prefer not to say	4	1,9	1,9	100,0
TOTAL	216	100,0	100,0	

NATIONALITY	Frequency	Percent	Valid Percent	Cumulative Percent
N/A	67	31,0	31,0	31,0
American	7	3,2	3,2	34,3
Australian	1	0,5	0,5	34,7
Austrian	3	1,4	1,4	36,1
Brazilian	6	2,8	2,8	38,9
British	1	0,5	0,5	39,4
Canadian	4	1,9	1,9	41,2
Chilean	2	0,9	0,9	42,1
Colombian	1	0,5	0,5	42,6
Dutch	3	1,4	1,4	44,0
Egyptian	1	0,5	0,5	44,4
Finnish	1	0,5	0,5	44,9
French	2	0,9	0,9	45,8
German	92	42,6	42,6	88,4
Hungarian	1	0,5	0,5	89,9
Indian	1	0,5	0,5	89,4
Italian	2	0,9	0,9	90,3
Mexican	5	2,3	2,3	92,6
Mozambican	1	0,5	0,5	93,1
Portuguese	3	1,4	1,4	94,4
Russian	2	0,9	0,9	95,4
South African	1	0,5	0,5	95,8
Spanish	2	0,9	0,9	96,8
Swedish	2	0,9	0,9	97,7
Swiss	1	0,5	0,5	98,1

Taiwanese	1	0,5	0,5	98,6
Tunisian	1	0,5	0,5	99,1
Turkish	1	0,5	0,5	99,5
Vietnamese	1	0,5	0,5	100,0
TOTAL	216	100,0	100,0	

INCOME	Frequency	Percent	Valid Percent	Cumulative Percent
N/A	69	31,9	31,9	31,9
0€ - 10,000€	28	13,0	13,0	44,9
10,001€ - 25,000€	25	11,6	11,6	56,5
25,001€ - 50,000€	34	15,7	15,7	72,2
50,001€ - 75,000€	38	17,6	17,6	89,8
75,001€ - 100,000€	13	6,0	6,0	95,8
Above 100,000€	9	4,2	4,2	100,0
TOTAL	216	100,0	100,0	