



The Impact of Airline Responds to Service Failure towards Customers' Satisfaction and Loyalty in the Airline Industry

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ABSTRACT: This study explores the relationship between airline responses to service failures and customer's satisfaction and loyalty in the airline industry. Using a framework that includes various airline response categories derived from a service blueprint such as overbooking, flight delays, cancellations, lost or damaged luggage, in-flight service issues, customer service failures, and security issues, this study investigates the relationship between these factors and customer satisfaction, as well as the resulting impact on customer loyalty. A qualitative approach has been used alongside by using non-probability sampling that will be use in this study includes snowball sampling and convenience sampling. Upon collected data through survey, the result is then being regressed linearly in SPSS. The analysis of data reveals that effective and timely handling of service failures, as well as considerate handling of complaints, play a significant role in determining customer satisfaction. In addition, customer satisfaction influences customer loyalty positively, highlighting the significance of service recovery in nurturing long-term customer relationships. The findings emphasize the need for airlines to prioritize efficient service recovery processes, such as transparent communication and adequate compensation for service failures. Future research recommendations include investigating the role of technology in service recovery efforts and other service failure scenarios. This study contributes to the existing body of knowledge on service recovery in the airline industry and offers insights for marketing strategies to increase customer satisfaction and loyalty.

KEYWORDS: Airline responses, customer satisfaction, customer loyalty, airline industry, communication, compensation, technology, marketing, service failure.

INTRODUCTION

The airline sector is a vital part of the world economy since it makes both business and leisure travel possible. Airlines must work to deliver a superior customer experience given the growing competition in the sector in order to stay competitive and win over repeat business. Yet, service failures can happen and have a big effect on how satisfied and loyal customers are. This study attempts to investigate how customer satisfaction and loyalty are affected by airline response to service failure in the airline industry.

Service quality development has been considered as a mandatory component in any business field's strategy planning and it is an integral feature of comprehensive quality control management in all companies throughout the world. In fact, the primary notion of overall quality management is largely focused on the application of effective measures that targets to improve consumer satisfaction; such methods may include increasing services, processes, and goods [1]. According to Lovelock and Wright, stated that service failure is a customer perception that one or more aspects of service delivery do not achieve their hopes and expectations. Service failure is defined as a disruption, delay, or bottleneck in service delivery, it can also be interpreted as a service that does not meet customer expectations [2].

Failure of a service is a normal occurrence yet recovering from such failures is one of the most complex and challenging management tasks. There is always a concealed opportunity in a service failure; whether it worsens or serves as an example of recovery rests solely on the management. At various points of the service process, passengers' quality of service expectations may vary. Air travel may be divided into two stages: firstly, is the ground services which leaves a first impression for the customers towards the airline and second is the in-flight services which takes up more time as compared to ground service. Since customers in the markets that is being examine spend most of their time receiving airline service is during their flights, the airline should improve the quality of in-flight services.

In this era of industrialization, air transportation has played a significant role in the economic world and in our daily lives. Given that it is convenient, commonly accessible, and improves efficiency, it is reasonable to claim that it is an indispensable means of transportation. As the emerging star of the tourism sector, there is no doubt that the airline industry faces various unforeseen

circumstances and is constantly competing in a highly competitive environment with so many new airlines entering the market. This study will contribute to the current body of research by analysing the effect of service failure on customer satisfaction and loyalty within the airline industry. The findings of this study will shed light on the effect of service failures on how customer view their satisfaction and their loyalty post service failure. By the end of this study, formulation strategies are expected to be generated to increase customer satisfaction and loyalty in the airline industry through airline responses towards service failure.

BUSINESS ISSUE

In a single trip to the airport, which means being exposed to the airline industry, the chances of facing a service failure are very likely and this service failure may vary according to the situation customers are facing. In this study of service failure, a scenariobased questionnaire will be conducted. Although scenario-based is limited, it should not be neglected by company as it is able to provide insights [3].

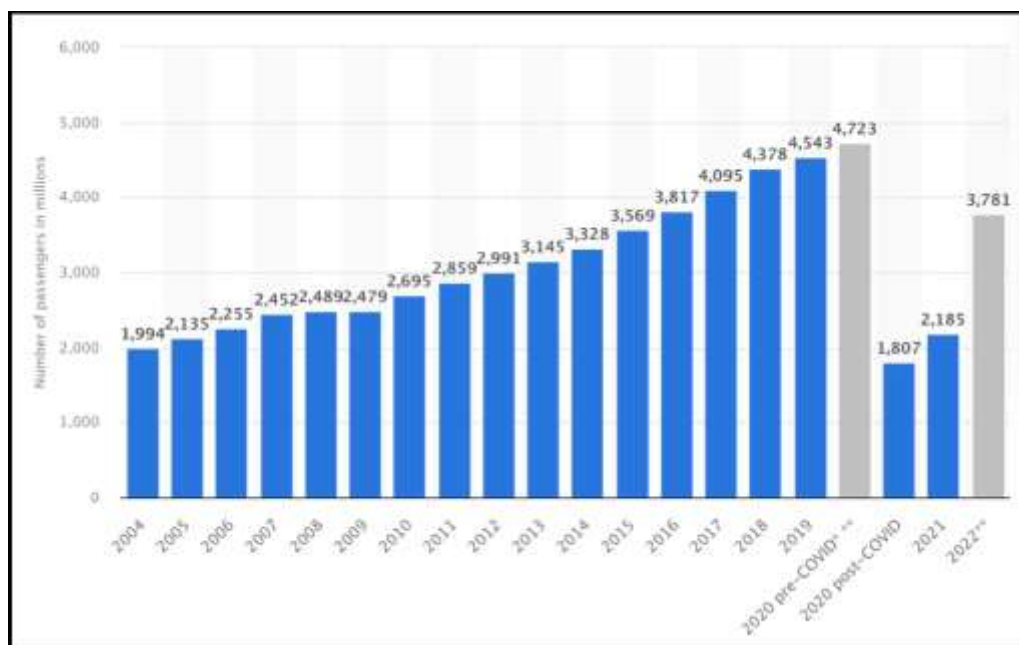


Figure 1. Number of scheduled passengers boarded by the global airline industry from 2004 to 2022 (Source: [4])

The number of scheduled passengers boarded by the global airline industry has been increasing steadily before the global pandemic hit almost all businesses including the airline industry. As having a fast-growing rate during post-COVID, the airline industry is slowly making its way back on track, and hopefully in the next few years it will be better. Therefore, it is important to know the impact on service failure towards customer satisfaction and loyalty as people are starting to travel once again in order to have a stronger and more solid customer base.

In June 2022, the Bureau of Transportation received a total of 5,862 complaints from consumers regarding airline service, which marks a 34.9% increase from the 4,344 complaints received in May 2022, and a staggering 269.6% increase from the 1,586 complaints received in pre-pandemic June 2019. For the first half of 2022, the Department received 28,550 complaints, representing a 27.8% increase from the 22,336 complaints filed during the same period in 2021 and more than the total number of complaints received throughout the entire year of 2019. Among the 5,862 complaints filed in June 2022, 3,382 (57.7%) were against U.S. carriers, 2,020 (34.5%) were against foreign air carriers, and 460 (7.8%) were against travel companies. Flight problems, including cancellations and delays, accounted for the highest category of complaints received in June 2022 [5].

Preliminary research has been conducted in order to have a better understanding of the business issue and to test the relevancy of the research questions that will be portrayed later on in this paper. A total of 10 subjects has been interviewed with at least one year

of being a customer in the airline industry. Subjects rated the satisfaction with services airline provided ranging from not being that good to mediocre satisfied to being quite alright depending on the situation.

When being asked on their knowledge on airline industry service failure, 100% have answered flight delay and some have added with flight cancellation, baggage lost and unfriendly air crew. Once clarified the seven category of airline industry service failure that will be used in this study, turns out that most of them had encountered more than one service failure other than flight delays.

Testing the subjects on how it affects their satisfaction towards the airline industry, majority have answered that it will have a negative impact as it affects their upcoming schedule. With this being said, most of them would rather opt for other airline and will not stick to the one that gave them a bad experience. Henceforth, a question on what the airline has to do or other words what responses airline should provide in order for them to stay loyal. Almost all of them have answered with having a discounted fare for their upcoming trip and the promise to see improvement among the staff in the near future.

CONCEPTUAL FRAMEWORK

A conceptual framework is a theoretical structure or outline that provides a basis for comprehending and analysing any particular occurrence or research problem. It is comprised of the research's guiding principles, factors, relationships, and hypotheses. The framework facilitates the design of the research study, the identification of knowledge gaps and the establishment of relationships between various concepts and variables. In general, a conceptual framework provides a diagram of concepts that assists the research process and contributes to the growth of knowledge in a particular field or area of study.

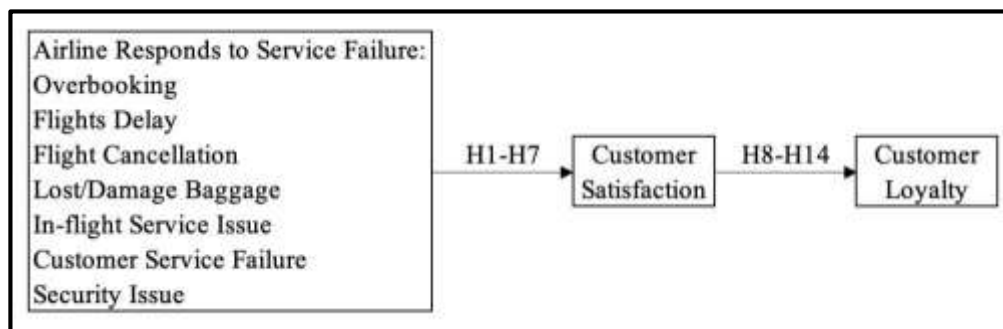


Figure 2. Conceptual Framework

(Source: Conceptual Framework developed by Author, 2023 modified from Nibkin & Hyun 2019)

The conceptual framework developed by the author concentrates on the impact of airline responds to service failures on customer satisfaction and loyalty in the airline industry. The framework indicates that airline responses to service failures such as overbooking, flight delays, cancellations, lost or damaged baggage, in-flight service issues, customer service failures, and security issues have a direct impact on customer satisfaction. In turn, consumer satisfaction influences customer loyalty. The conceptual framework suggests that effective and timely responses to these service failures can result in increased customer satisfaction, thereby boosting customer loyalty. This framework offers a structured method for comprehending the relationship between airline responds towards various service failures and their effect on customer satisfaction and eventually will have an impact towards customer loyalty in the airline industry.

HYPOTHESIS

The hypotheses that will be used in this study are being mentioned as follow:

- H1: There is a significant correlation between airline responds towards *overbooking and* customer satisfaction
- H2: There is a significant correlation between airline responds towards *flight delay and* customer satisfaction
- H3: There is a significant correlation between airline responds towards *flight cancellation and* customer satisfaction
- H4: There is a significant correlation between airline responds towards *lost/damaged baggage and* customer satisfaction
- H5: There is a significant correlation between airline responds towards *in-flight service issue and* customer satisfaction
- H6: There is a significant correlation between airline responds towards *customer service failure and* customer satisfaction



- H7: There is a significant correlation between airline responds towards *security issue* and customer satisfaction
- H8: Customer satisfaction in *overbooking* has a significant correlation towards customer loyalty
- H9: Customer satisfaction in *flight delay* has a significant correlation towards customer loyalty
- H10: Customer satisfaction in *flight cancellation* has a significant correlation towards customer loyalty
- H11: Customer satisfaction in *lost or damage baggage* has a significant correlation towards customer loyalty
- H12: Customer satisfaction in *in-flight service failure* has a significant correlation towards customer loyalty
- H13: Customer satisfaction in *customer service failure* has a significant correlation towards customer loyalty
- H14: Customer satisfaction in airline responds towards *security issue* has a significant correlation with customer loyalty

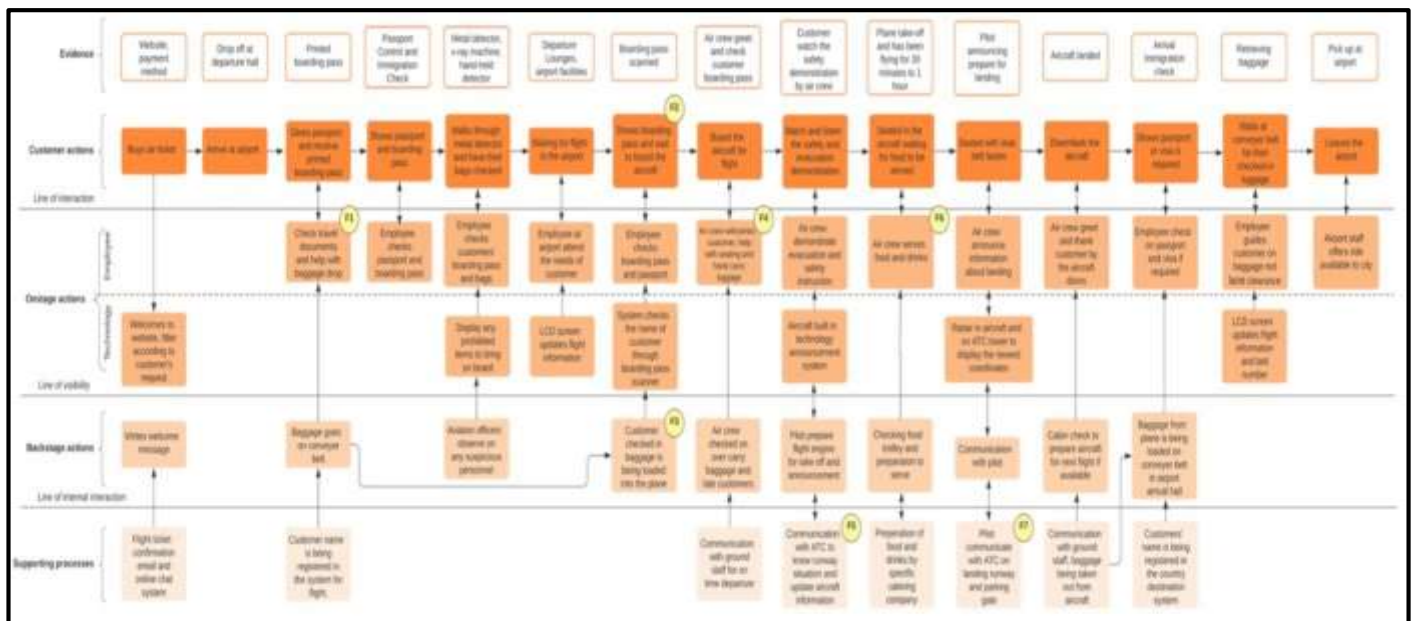


Figure 3. Airline Industry Service Blueprint

(Source: Authors' Processed Data)

SERVICE BLUEPRINT

Shostack designed the service blueprint to illustrate service processes [6]. It is a map or flowchart describing all of the essential steps and activities involved in the service delivery process [6], [7]. The service blueprint also includes the environmental factors, as well as the connections between service delivery actions, delay times, and potential service failure points [6], [8]. The service blueprint is divided, from the customer's perspective, by the line of visibility into the front office and back office. Customers can observe the service company's facilities, equipment, service personnel, and other customers in the visible areas of the front office. The back office consists of areas that consumers are unable to observe, such as internal design, management personnel, and systems that assist in operating components [7], [9]. Customer actions take place above the line of interaction, where consumers interact first-hand with the product or service provider [10].

Various service sectors have conducted research utilising the service blueprint methodology (e.g., [9]). The service blueprint enables the service provider to prevent severe service failures, thereby contributing to both the reduction of customer dissatisfaction and the enhancement of customer satisfaction [10].

The above figure shows the service blueprint generated by the author. F1 to F7 indicating the touchpoint of service failure that are bound to happen during a single trip in the airport. A deeper understanding on the failure point will be elaborated on Table 1, which includes time of occurrence, types of service failure and ways to minimizing the occurrences.



Table 1. The Explanation on Service Blueprint

Service Failure	Time of Occurrence	Type of Service Failure	Minimizing the Occurrence
F1	Airline staff checks travel documents and help with baggage drop	Overbooking/ Customer Service Failure	To reduce long queue, airlines should occupy more check-in counters. Besides, overbooking could occur too, and airlines should make sure that seats are sold accordingly.
F2	Customer shows boarding pass and wait to board the aircraft	Flight Delays/ Flight Cancellations/ Customer Service Failure	To reduce the frustration of customer facing flight delay, airline should offer a clear explanation on the flight delays so customer will feel more at ease.
F3	Customer checked luggage is being loaded into the plane	Lost or Damaged Luggage	To avoid the possibility of longer loading time, airline should deploy more manpower in loading baggage into the plane this is to avoid lost or damaged luggage too.
F4	Air crew welcomes customer, help with seating and hand carry luggage	In-flight Service Issues/ Customer Service Failure	To avoid overloaded overhead cabin, airline staff must be strict with the rules on only 7kg hand carry is allowed as the overhead compartments have to be equally shared among customers.
F5	Communication with ATC to know runway situation and update aircraft information	Security Issues	During take-off, human error among pilot and ATC should be minimize as much as possible by making sure both pilot and ATC are in fit to work condition.
F6	Air crew serves food and drinks	In-flight Service Failure	To avoid food and drinks order mistake, air crew should pre-check the list before take-off to ensure the availability of food. Besides, to avoid in-flight entertainment issues, it is important to have the system service on time according to the airline company's SOP. Restroom in the aircraft has to maintain its cleanliness at all times, air crew needs to check on the cleanliness of the restroom to ensure the comfort of other customers in the aircraft, remembering the aircraft is an airtight container flying in mid-air.
F7	Pilots communicate with ATC on landing runway and parking gate	Security Issues/ Flight Delays	During landing, human error among pilot and ATC should be minimize as much as possible by making sure both pilot and ATC are in fit to work condition. In landing usually loiter (flying over small region consistently) is avoided as much as possible.

(Source: Authors' Processed Data)

DATA COLLECTION METHOD

The choice of method is a quantitative approach, in other saying, questionnaire is being distributed to collect responses. It is used to answer the research questions regarding the relationship between airline responds to service failure and customer satisfaction followed by customer loyalty.

Quantitative research is a part of the paradigm of positivism because it employs a highly precise, logical mathematical approach to accumulating and observing numerical data [11]. A quantitative method employs numerous statistical analyses to analyse the data. The methods are well-structured and frequently seek to draw conclusions regarding hypotheses [12]. The objective is to quantify data by employing positivism-based methodologies. This research examines certain hypotheses by examining statistical correlations; therefore, why, and how are not the subject of this investigation. Consequently, a survey is a practical method of study. Passengers who had at least once encountered a service failure in the airline industry provided the data. Only those who positively answered the screening question were able to confirm their eligibility for the survey by responding to the subsequent questions. The study was directed at people who had recently travelled by air and at respondents between the ages of 18 and 60 who are still physically capable to travel.



A. Sampling Method

As this study focuses on having a correlation between customer satisfaction and customer loyalty it will be using a non-probability sampling. Non-probability sampling is usually used for studies that are frequently concentrated on small samples and are meant to explore a real-world occurrence rather than draw conclusions about the general population based on statistics [13].

And the two specific type of non-probability sampling that will be use in this study includes snowball sampling and convenience sampling. In order to apply snowball sampling, all participants are asked to spread out information about the survey if they know of any other individuals who have encountered a service failure in the airline industry. Because it is less expensive and more convenient than other sample techniques, convenience sampling is frequently preferred by students [14]. In convenience sampling, participants are often chosen because they are readily available [15].

Two specific type of sampling technique is being used as each technique has weaknesses. Mainly, snowball sampling is practically time consuming whereas convenience sampling is selection bias, has unrepresentative sample and it is not advised for descriptive or casual research. Therefore, choosing two technique is to minimize the weakness and increase strengths from sampling. Snowball sampling is able to estimate rare characteristics while convenience sampling is the least expensive, least time-consuming and the most convenient sampling technique.

DATA ANALYSIS METHOD

In this study linear regression analysis will be used to analyse the association between the listed factors. Sir Francis Galton first proposed the idea of linear regression in 1894. Linear regression is a statistical test used to define and quantify the relationship between the variables under analysis [16]. The linear regression analysis utilizes the mathematical formula $y = mx + c$, which depicts the line of best fit for the relationship between the dependent variable y and the independent variable x . The regression coefficient, or r^2 , indicates the amount of variation in y caused by x [17].

Linear regression is being used as it helps the most in analysing strength between the dependent variable and independent variable. Besides it is able to help in analysing the extent of change in how one “unit” of independent variable would affect the dependent variable [16]. Before processing with linear regression, assumption has to be met in order for the result to be valid and in this case, the values of independent variable “ x ” will be determined by the author and the variables that undergo testing should be normally distributed.

ANALYSIS

The analysis section will provide a clear understanding from the findings in the survey from demographics and travel experience to the airline services ranked and reliability test followed by the linear regression. A total of 274 questionnaires were distributed, the remaining 220 were used for analysis after removing 54 responds from those who had never experienced a flight service failure.

A. Demographics and Travel Experience

In this segment the demographics and travel experience of respondents are being presented, Table 2 below shows the summary of it and will be elaborated further.

Table 2. Demographics and Travel Experiences

Section	Choice	Frequency	Percent (%)
Gender	Male	87	39.5
	Female	133	60.5
Age Group	<20	3	1.4
	20-29	171	77.7
	30-39	10	4.5
	40-49	11	5
	50-59	21	9.5
	60>	4	1.8



Employment Status	Employed, working full-time	111	50.5
	Employed, working part-time	41	18.6
	Not employed, looking for work	33	15.0
	Not employed, NOT looking for work	28	12.7
	Retired	6	2.7
	Disabled, not able to work	1	0.5
Country of Residence	Indonesia	90	40.9
	Malaysia	75	34.1
	Singapore	19	8.6
	Mongolia	8	3.6
	China	7	3.2
	Australia	3	1.4
	United Kingdom	3	1.4
	Taiwan	2	0.9
	Philippines	2	0.9
	Canada	2	0.9
	Others	8	4.3
Travel Frequency	Less than once a year	43	19.5
	1-2 times a year	94	42.7
	3-5 times a year	49	22.3
	More than 5 times a year	34	15.5

(Source: Authors' Processed Data)

The table shows the demographic and travel experiences of the subjects. The collected sample consists of 220 individuals, with a slightly higher percentage in female (60.5%) as compared to male (39.5%) respondents. The age distribution shows that the majority of respondents fall within the 20-29 age group (77.7%), followed by 50-59 (9.5%) and 40-49 (5%) age groups. In terms of employment status, 50.5% of the participants are employed full-time, while 18.6% work part-time. Among the surveyed individuals, more than 40% of the respondents resides in Indonesia (40.9%), 34.1% in Malaysia, and 8.6% in Singapore, with the remaining percentages of respondents spreading across other countries. The travel experiences of the collected sample are largely consisting with individuals reported travelling 1-2 times a year (42.7%), followed by 3-5 times a year (22.3%) and less than once a year (19.5%). Demographics and travel experiences are collected to further assist and support this study.

B. Airline Service Failure

The next section in the questionnaire focuses on gathering information about the types of airline service failures on that respondents have experienced. The airline service failures being categorized and finalized is based on the service blueprint that has been mentioned earlier on in this study. The table presents the frequencies and percentages of the 7 types of airline service failure.

Table 3. Frequency on Airline Service Failure

Service Failure	Frequency	Percent (%)
Overbooking	12	5.5
Flight Delay	207	94.1
Flight Cancellation	78	35.5
Lost or Damaged Luggage	67	30.5
In-flight Service Issue	45	20.5
Customer Service Failure	102	46.4
Security Issue	23	10.5

(Source: Authors' Processed Data)



From Table 3, among the airline service failures, flight delay emerges as the most commonly service failure that respondents have encounter, accounting for a substantial 94.1% which is a total of 207 out of 220 respondents have experienced flight delay at least once. This was followed by another significant area of concern would be the customer service failures, a total of 46.4% of the respondents reported they have encountered it in the airline industry. Third highest reported service failure would be flight cancellation with 35.5% of the respondents reported that they have experienced it. The encountering of lost or damaged luggage was reported by 30.5% of the participants, while in-flight service failure issues were experienced by 20.5% of the respondents. Security issues were relatively less frequent among the respondents with 10.5% of them experiencing it. Lastly, overbooking was reported by 5.5% of the participants.

These findings have shown that the highest concurrency of airline service failure would be flight delay. The next section of this study would be running test to analyse data that has been collected using a questionnaire to delve into their perceptions and evaluations of these service failures, aiming to gain more insights into the impact on customer satisfaction and loyalty.

Service failure on security issue and overbooking will not be run on SPSS due to the number of respondents have experienced the mention service failure is lower than 30 which will affect the accuracy of the data being run. As forth, the hypothesis mentioned earlier on in this study (H1, H7, H8, H14) will not be mentioned in this paper and continue with the remaining 10 hypotheses (H2H6 and H9-H13).

C. Encountering Service Failure

In this section, respondents are asked on how often they encountered the above listed service failure, using the 5 Likert-scale ranging from very seldom (1) to very often (5). Table 4 shows the summarized data collected from the survey.

Table 4. How Often Respondent Encounter Service Failure

Airline Service Failure	N	Mean	Std. Dev.	Min.	Max.
Flight delay	207	2.67	1.119	1	5
Flight cancellation	78	1.56	0.847	1	4
Lost or damaged luggage	67	1.75	0.959	1	5
In-flight service issue	45	2.56	1.119	1	5
Customer service failure	102	2.60	1.046	1	5

(Source: Authors' Processed Data)

From the total of 207 respondents who have encountered flight delay, the mean value of how often they encountered it has a value of 2.67 which is also the highest among the other service failure. The second highest on frequency will be customer service failure with a mean value of 2.60 followed by in-flight service issue with a value of 2.56. The bottom two least encountered service failure will be lost or damaged luggage (mean=1.75) and flight cancellation (mean=1.56).

D. Reliability Test

The validity of the scales cannot exist without reliability [18]. Therefore, a Cronbach's Alpha (α) reliability analysis is carried out in this study. An estimation of internal consistency is Cronbach's alpha [18], [19]. Cronbach's Alpha is a great indicator for determining whether a group of items consistently measures the same characteristic [18]. A Cronbach's Alpha value of less than .6 is regarded as poor, .7 is acceptable and .8 is good [20]. There are three general assumptions in reliability analysis. Errors should be uncorrelated, according to the first assumption [21]. In other terms, an error affecting variable A cannot affect variable B. Given that this study is founded on the participants' personal experiences on flight service failure, it is assumed that there are no errors in the participants' responses, thereby having no effect on the variables. The next assumption is that coding run for this study should be uniform across all data variables. For the final assumption is that all observations must be independent of one another [22].

As previously mentioned, a Cronbach's Alpha value larger than 0.6 indicate the variables to be consistent or reliable, the following result has been generated using SPSS for each service failure.



Table 5. Cronbach’s Alpha Value and Reliability

Service Failure	Variable	Cronbach’s Alpha	Reliability
Flight Delay	Airline Responds	0.648	Reliable
	Customer Satisfaction		
	Customer Loyalty		
Flight Cancellations	Airline Responds	0.725	Reliable
	Customer Satisfaction		
	Customer Loyalty		
Lost or Damaged Luggage	Airline Responds	0.760	Reliable
	Customer Satisfaction		
	Customer Loyalty		
In-flight Service Issue	Airline Responds	0.735	Reliable
	Customer Satisfaction		
	Customer Loyalty		
Customer Service Failure	Airline Responds	0.674	Reliable
	Customer Satisfaction		
	Customer Loyalty		

(Source: Authors’ Processed Data)

As shown in Appendix 1, the entire set has an alpha of 0.943, which is outstanding on the scale. The table above shown that the variable used in this study is reliable as all of them shows a Cronbach’s Alpha larger than 0.6. All of them satisfy the acceptable criteria for reliability analysis, thereby enhancing the data's reliability. As reliability is being checked, this suggest that hypothesis testing may proceed.

E. Assumptions on Variables

Before running a linear regression in this study, a few assumptions have to be met. The first one will be an independent observation, this assumption is met as each cases distributed using the questionnaire is representing a separate person, therefore it is assumed that all the data will be run is an independent observation. The following assumptions include normality test, homoscedasticity test and linearity test, which will be elaborated individually in the next section.

The residuals from the regression should adhere to a normal distribution in order to draw reliable conclusions from it. The error between the observed and predicted values of the dependent variable, make up the residuals. If the residuals are normally distributed, this phenomenon is able to be observed through a normal Predicted Probability (P-P) plot, it is a graphical tool to assist in determining how close two data sets (observed and predicted) coincide.

Homoscedasticity is an assumption that is necessary in generic linear models to assure the precision of standard errors [23]. By comparing the observed value of the dependent variable with its predicted value, the homoscedasticity test determines whether the variance of the residuals is constant and independent of the other residuals. The scatterplot of the residuals will appear look like a shotgun blast of randomly scattered data if it is homoscedastic.

Upon running the dependent variables and independent variables, it is clearly observed that all the independent variable and dependent variable obeys the rules for linear regression in the assumptions (see Appendix 2 and 3) which is able to bring the analysis further towards the linearity test.

If the predictor variables in a regression model are linearly related to the outcome variable, then the model is said to be linear. The linearity test is met if the residuals follow a normal distribution and homoscedastic. From the data analyse through SPSS has shown that all the variables met the requirement of normality and homoscedasticity which means that are all linear, this allows the model for this study to undergo standardized regression to prove the hypotheses mentioned earlier on in the previous chapter.



RESULTS AND DISCUSSION

The table provides the mean, standard deviation, maximum and minimum values for the variable being include in the questionnaire. This section consists of 3 questions, using the 5 Likert-scale ranging from very seldom (1) to very often (5) for the first question, extremely dissatisfied (1) to extremely satisfied (5) for the second question and extremely unlikely (1) to extremely likely (5) for the third question.

Table 6. Mean, Standard Deviation, Maximum and Minimum Values of Variable

Airline Service Failure	Variables	Mean	Std. Dev.	Min.	Max.
Flight Delay	Airline responds	2.48	1.105	1	5
	Customer satisfaction	2.49	1.023	1	5
	Customer loyalty	2.93	1.061	1	5
Flight Cancellation	Airline responds	2.69	1.220	1	5
	Customer satisfaction	2.40	1.199	1	5
	Customer loyalty	2.56	1.135	1	5
Lost or Damaged Luggage	Airline responds	2.49	1.307	1	5
	Customer satisfaction	2.64	1.322	1	5
	Customer loyalty	2.94	1.205	1	5
In-flight Service Issue	Airline responds	2.69	1.083	1	5
	Customer satisfaction	2.71	0.920	1	5
	Customer loyalty	2.89	1.027	1	5
Customer Service Failure	Airline responds	2.62	0.923	1	5
	Customer satisfaction	2.47	0.941	1	5
	Customer loyalty	2.70	1.060	1	5

(Source: Authors' Processed Data)

In the first question on each service failure is being asked on how often the airline responds to the service failure, ranking the highest to lowest based on mean scores, flight cancellations and in-flight service issue has the highest mean score (both are 2.69). Indicating that the airline responded more towards two of these service failure as compared to the rest. On the contrary, flight delay has the lowest mean score of 2.48, means that the airline has responded the least towards this service failure. The second question will be how satisfied the respondents towards the responds given by the airline are, having the highest mean value will be in-flight service issue (2.71) followed by lost or damaged luggage (2.64). The lowest mean value in question number two will be on flight cancellation with a value of 2.40. In the final question in this section will be how likely respondent will be choosing the same airline after experiencing service failure, in other words will they remain loyal towards the airline. The highest mean value goes to lost or damages luggage (2.94), next will be flight delay (2.93). Respondents are more likely to be loyal towards the airline upon facing the above two service failure, whereas the least mean score will be flight cancellation (2.56), respondents are less likely to remain loyal after encountering flight cancellation.

A. Linear Regression Results

Table below shows the summary of the findings:

Table 7 Linear Regression Results

Independent variable	Dependent variable	Hypothesized relationship	B	t	Pvalue	R2	Significancy
Airline responds to flight delay	Customer satisfaction	H2	0.434	7.598	0.000	0.220	Statistically significant
Airline responds to flight cancellation	Customer satisfaction	H3	0.432	4.270	0.000	0.193	Statistically significant



Airline responds to lost or damaged luggage	Customer satisfaction	H4	0.664	7.006	0.000	0.430	Statistically significant
Airline responds to in-flight service issue	Customer satisfaction	H5	0.619	6.976	0.000	0.531	Statistically significant
Airline responds to customer service failure	Customer satisfaction	H6	0.573	6.804	0.000	0.316	Statistically significant
Customer satisfaction in flight delay	Customer loyalty	H9	0.405	6.077	0.000	0.153	Statistically significant
Customer satisfaction in flight cancellation	Customer loyalty	H10	0.547	6.168	0.000	0.334	Statistically significant
Customer satisfaction in lost or damaged luggage	Customer loyalty	H11	0.438	4.424	0.000	0.231	Statistically significant
Customer satisfaction in inflight service issue	Customer loyalty	H12	0.445	2.845	0.003	0.158	Statistically significant
Customer satisfaction in customer service failure	Customer loyalty	H13	0.510	5.073	0.000	0.205	Statistically significant

(Source: Authors' Processed Data)

Table above shows the summary of the findings. The hypothesis tests if airline responds to flight delay carries as significant impact on customer satisfaction towards the failure. The dependent variable customer satisfaction was regressed on independent variable airline responds to flight delay to test the hypothesis H2. Airline responds to flight delay significantly predicted customer satisfaction, $p < 0.05$, $t > 1.96$ ($p = .000$, $t = 7.598$), which indicates that airline responds to flight delay can play a significant role in shaping customer satisfaction ($B = .434$). These results clearly direct the positive relationship of the airline responds to flight delay. Moreover, the $R^2 = 0.220$ depicts that the model explains 22.0% of the variance in customer satisfaction.

H2: There is a significant correlation between airline responds towards *flight delay* and customer satisfaction is accepted.

To test hypothesis H3, the dependent variable customer satisfaction is being regressed on airline responds to flight cancellation. Airline responds to flight cancellation significantly predicted customer satisfaction, $p < 0.05$, $t > 1.96$ ($p = .000$, $t = 4.270$), in other words airline responds to flight cancellation plays an important role in customer satisfaction ($B = .432$). To further support that the relationship is positively related, $R^2 = 0.193$ indicating 19.3% in explaining the variance in customer satisfaction.

H3: There is a significant correlation between airline responds towards *flight cancellation* and customer satisfaction is accepted.

In the next hypothesis, customer satisfaction is being regressed on airline responds to lost or damaged luggage. This regression result is statistically significant with a p-value < 0.05 , $t = 7.006$. With $R^2 = 0.430$, depicts a total of 43.0% explains the variance of customer satisfaction.

H4: There is a significant correlation between airline responds towards *lost/damaged baggage* and customer satisfaction is accepted.

The following hypothesis has shown statistically significant result with customer satisfaction regressed on airline responds to inflight service issue. With $p < 0.05$, $t = 6.976$ has shown that the independent and dependent variable is statistically significant. This model explains the highest percentage of variance in customer satisfaction as it obtained $R^2 = 0.531$, other words 53.1%. This indicates that airline responds to in-flight service issue can play a significant role in shaping customer satisfaction ($B = .619$). H5: There is a significant correlation between airline responds towards *in-flight service issue* and customer satisfaction is accepted.

In testing the relationship in the next hypothesis, customer satisfaction is being regressed on airline responds to customer service failure. The result gained is statistically significant ($P = .000$, $t = 6.804$) and this model explained 31.6% ($R^2 = .316$) of variance in customer satisfaction. Therefore, airline responds towards customer service failure plays a crucial role in customer satisfaction ($B = .573$).



H6: There is a significant correlation between airline responds towards *customer service failure* and customer satisfaction is accepted.

In this next hypothesis testing, customer loyalty is being regressed on customer satisfaction in flight delay. It has gained a statistically significant result with $p=0.000$, $t=6.804$, indicating that customer satisfaction in flight delay plays a significant role in customer loyalty ($B=.405$). Furthermore, this model is able to explain 15.3% ($R^2=.153$) of variance in customer loyalty. H9: Customer satisfaction in *flight delay* has a significant correlation towards customer loyalty is accepted.

The dependent variable customer loyalty was regressed on independent variable customer satisfaction in flight delay to test the hypothesis H10. It has shown a statistically significant result with $p=.000$, $t=6.168$. $R^2=0.334$ depicts that the model explains 33.4% of the variance in customer loyalty. Hence, increasing customer satisfaction in flight delay is important to gain customer loyalty ($B=.547$).

H10: Customer satisfaction in *flight cancellation* has a significant correlation towards customer loyalty is accepted.

In testing hypothesis H11, customer loyalty is being regressed on customer satisfaction in lost or damaged luggage. The result has shown significance as $p<0.05$, $t>1.96$ ($p=.000$, $t=4.424$), in other words customer satisfaction in lost or damaged luggage plays a significant role in customer loyalty ($B=.438$). Moreover, this model has a value of $R^2=0.231$ indicating 23.1% in explaining the variance in customer loyalty.

H11: Customer satisfaction in *lost or damage baggage* has a significant correlation towards customer loyalty is accepted.

Next, customer loyalty is being regressed on customer satisfaction in in-flight service issue. The result has shown to be statistically significant as well with a p-value of 0.003 and $t=2.845$. Customer satisfaction in in-flight service issue shows a major part in retaining customer loyalty ($B=.445$). With $R^2=0.158$, depicts a total of 15.8% explains the variance of customer loyalty. H12: Customer satisfaction in *in-flight service failure* has a significant correlation towards customer loyalty is accepted.

In the last hypothesis testing, customer loyalty is being regressed on customer satisfaction in customer service failure. This has gained a statistically significant result with $p<0.05$, $t>1.96$ ($p=.000$, $t=5.073$). As there is an increase in customer satisfaction in customer service failure, customer loyalty in the airline industry would increase as well ($B=.510$). Besides this model is able to explain 20.5% ($R^2=.205$) of variance in customer loyalty.

H13: Customer satisfaction in *customer service failure* has a significant correlation towards customer loyalty is accepted.

Table 8. Airline responds variable mean, standard deviation, maximum and minimum.

Airline responds	Mean	Std. Dev.	Min.	Max.
Satisfactory resolution	4.09	0.920	1	5
Received an appropriate compensation	4.07	0.981	1	5
Give customer what they need	4.18	0.878	1	5
Handle complaints in a thoughtful and respectful manner	4.24	0.845	1	5
Handles and solves service failure fast	4.27	0.815	1	5
Apology given by the airline is acceptable	3.93	0.922	1	5
An explanation of the service failure is offered	3.79	0.963	1	5
Visible improvement from the airline	4.15	0.837	1	5

(Source: Authors' Processed Data)

Airline responds has been grouped into 8 category which has been collected during conducting preliminary research. From the 8 category of airline responds, handles, and solves service failure fast and handle complaints in a thoughtful and respectful manner scores the highest with a mean score of 4.27 and 4.24 respectfully. During any travel, the most crucial key player in the plan is time. Time is the first major factor that has an impact on any plan, be it a holiday or work to travel plan or even a plan on returning home. An expectation to have their service failure being handled and solved fast has therefore emerged top on the list considering time is an important element to take into consideration. Next, customer has expectation on handle complaints in a thoughtful and respectful manner. Very frequently service failure has gone unattended by the airline company, it is right and just for customer to have their



complaints handled in a thoughtful and respectful manner. When a complaint is being handled well that is another loyal customer being secured. Imagine having to attend to customers complaints is able to lay down a smooth pavement for an airline company in the near future. For instance, a simple reason on why the service failure occurred will be valued a lot by customer facing it as they are not being hid in the dark and an explanation is given towards the service failure.

Followed by giving customer what they need and visible improvement from the airline with a mean score of 4.18 and 4.15 respectively. In an event of airline service failure, it is important to know the needs of the customers. For instance, during a flight delay customer would need a specific explanation of the cause of the delay and the updated time of departure, but often airline chooses to not tell the real reason and continue to have several delays on the same flight. In the line of service, it is almost impossible to have 100% satisfactory rate among customer especially frustrated and angry customer, but the least airlines could do is to minimize the negative impact by providing what customer need. While conducting a qualitative preliminary research, respondents that responded with them willing to be loyal towards the airline company once again after seeing improvement is another way of them giving the airline a second chance. When they have seen improvement on the airline, they are most likely to feel their voices are being heard and taken into consideration. This is one of the many methods that company should use when they are in a service industry, and this is also to generate a stronger bond among their customers. While there is a long list of competitors out there, customer is more likely to stuck with a company that choose to hear what they say and want, this allows customer to have a sense of belonging with the specific company.

Another two types of airlines respond worth mentioning that is above 4.0 of mean score will be satisfactory resolution and received an appropriate compensation with a score of 4.09 and 4.07 respectively. Satisfactory resolution often varies, this has a strong linkage between what customer needs, as needs are specific, satisfactory resolution is on a broader spectrum. The resolution may not suffice customer's need but at the very least it is satisfactory which means customer are not disappointed with the resolution given as a result they will be more loyal towards the company. Following that will be receiving an appropriate compensation, customer who values money the most when it comes to air transportation had most likely to rate this airline responds at the higher end on the Likert-scale. An appropriate compensation can come in several forms, it can either be a flight compensation voucher on a cancelled flight, food voucher on the delayed flight to compensate the delay or even hotel accommodation compensation. This is valued by customer as there is an unexpected service failure, they may not have anticipated the additional cost to book another flight or to have a night over in the departing country.

The remaining airline responds includes apology given by the airline is acceptable (3.93) and an explanation of the service failure is offered (3.79). 2 of these responses are likely to come in last as it is the mildest and the most required type of oh responds. By merely having an apology given by the airline does not really help to change service failure that had already happened, but it is able to soften the mood of the customer. By admitting it was the airline fault allows customer to know that what the airline did was wrong as there are some cases, airline refuses to admit to their mistake and further increase the problem upon the occurrence of service failure. Came in last but with a score of 3.79 which is considered to still be relatively high will be offering an explanation on the service failure. As previously mentioned, customer is frequently being hid in the dark and given any sort of explanation regarding the service failure. This is the most required type of responds that airline needs to offer but overlook the importance about it and the impact it could bring towards the company. Once an explanation is given, the follow up responses are usually more acceptable for customer to take in, given they know what is going on and what the airline is doing.

BUSINESS SOLUTION

From the analysis in the previous section, a total of 207 respondents have taken part in giving their personal scoring on the fivepoint Likert-scale on the responses they would prefer the airline gave them in order for them to be loyal towards the airline even in a occurrence of a service failure. The table below shows the raking on airline responds preferred by respondents according to the mean score.

Table 9. Business Solution

Airline responds	Mean	Rank	Business Solution
Handles and solves service failure fast	4.27	1	(1)
Handle complaints in a thoughtful and respectful manner	4.24	2	(2)



Give customer what they need	4.18	3	
Visible improvement from the airline	4.15	4	(3)
Satisfactory resolution	4.09	5	(4)
Received an appropriate compensation	4.07	6	
Apology given by the airline is acceptable	3.93	7	(5)
An explanation of the service failure is offered	3.79	8	

(Source: Authors' Processed Data)

Based on the table above, rejection of null hypothesis (H2 to H6 and H9 to H13) and analysis of the study, the following business solutions on similar airlines respond is being grouped and can be proposed to address the issues related to airline responses to service failure:

- (1) Increase efficiency: The speed of handling service failures has to be fast and efficient. As previously stated, one of the most important factors to take into account when traveling is time, this applies to anyone that are in the airport, whether they are there for business or pleasure. Airlines should prioritize immediate and efficient actions to minimize the impact of delays, cancellations, and other issues since customers value immediate resolution of service failures. To quickly handle service failures, this may involve setting up effective communication lines, giving real-time updates, and optimizing internal procedures.
- (2) Enhance complaint handling and customer service: Airlines should prioritize educating staff members to manage complaints in a considerate and respectful manner. This entails paying close attention to customer concerns, feeling sympathetic for their problems, and offering suitable answers. Effective complaint management can assist in converting a dissatisfied client into a loyal client and minimize bad publicity and reduce the occurrence of negative word-of-mouth which could harm the reputation of the specific airline company.
- (3) Focus on continuous improvement: Upon causing service failures, airlines should actively look for chances to demonstrate that they have actually had improvement and customer voices are being heard based on feedback and suggestions from customers. When customer voices are being heard and actually taken into consideration, this may cultivate a sense of belonging which may allow customers to give second chance to the airline company upon seeing their improvements. Eventually, customer loyalty will be more likely to take place while experiencing the continuous improvement in airline services.
- (4) Provide appropriate compensation and resolutions: When service failures occur, airlines must be sure to compensate customers appropriately. Based on the rules stated by the Department of Transportation, giving the right compensation to customer will increase customer experience. Therefore, airlines should be sure to guarantee that they give customers the proper compensation when service failures occur.. This could include offering compensation vouchers for future flights, providing accommodations or alternative transportation when flights are cancelled or delayed, and addressing lost or damaged baggage promptly and adequately.
- (5) Communicate and explain service failures: It is crucial for airlines to provide clear, thorough explanations of service failures. This helps customers understand the reasons behind the failures and creates a sense of transparency and trust. By gaining trust from customer is a step closer to having loyal customer. Clear communication regarding service failures can also help manage customer expectations, reduce frustration and at the same time increasing customers' understanding of the situation. By implementing these business solutions, airlines can improve customer satisfaction and loyalty by addressing service failures effectively and ensuring that customers' needs, and expectations are met. These measures can help retain customers, enhance their overall experience, and strengthen the reputation and competitiveness of the airline industry as a whole. While the analysis in the previous section had shown positive association on customer loyalty and customer satisfaction, customer satisfaction and airline respond, the more it is important for airline industry to implement the above mention solution in the company when a service failure occurred and causing a stir in the waiting gate, airline check-in counter or even at the customers' own home.

CONCLUSION AND RECCOMENDATION

This chapter contains the study's concluding results, which also includes an interpretation of the empirical findings in light of the study's goal. Additionally, answers to the research questions will be provided accompanied with recommendation, shortcomings and suggestion for future research.



A. Conclusion

This study sheds light on the relationship between airline responses to service failures, customer satisfaction, and customer loyalty in the airline industry. By analysing and interpreting the findings and addressing the initial research questions, the following conclusions have been drawn:

1. How does airline respond to service failure impact customer satisfaction in the airline industry?

The manner in which airlines respond to service failure has a substantial impact on consumer satisfaction in the airline industry. Effective and efficient responses to service failures, such as prompt communication, personalized customer care, and appropriate resolutions, play a crucial role in addressing service failures and positively influencing customer satisfaction levels, given that customers value timely resolution of issues and expect clear explanations and solutions for service failures.

2. To what extent does customer satisfaction affect customer loyalty in the airline industry?

The relationship between customer satisfaction and customer loyalty in the airline industry is directly correlated. Customers who are satisfied are more likely to demonstrate loyalty by resisting transferring to competitors in other words they are less likely to consider switching airlines. Therefore, it is essential for airlines to prioritize customer satisfaction as a key factor in cultivating long-term consumer loyalty. Positive experiences with airline responses to service failure can aid in fostering customer loyalty and lowering the customer dissatisfaction rate.

3. What are the factors that contribute to customer satisfaction and loyalty following a service failure in the airline industry?

Several factors contribute to customer loyalty and satisfaction in the airline industry after a service failure. These include the speed of handling and resolving service failures, the effectiveness of complaint handling and customer service, continuous improvement initiatives, appropriate compensation and resolutions, and transparent communication and explanations of service failures. By concentrating on these factors, airlines can effectively address service failures, rebuild customer trust, and increase customer satisfaction and loyalty.

In addition, airlines should invest in continuous improvement initiatives, gather customer feedback actively, and demonstrate a commitment to enhancing their services. Transparent communication regarding service failures is essential, as it assists in managing customer expectations, reducing customer frustration, and building customer trust. In conclusion, the airline industry must prioritize the efficient handling of service failures, improve complaint handling and customer service, prioritize continuous improvement, offer suitable compensation and resolutions, and effectively communicate and explain service failures. By implementing these strategies, airlines can increase customer satisfaction, cultivate brand loyalty, and improve their industry-wide reputation.

This study's conclusions have practical implications for airline marketers. It is essential that airlines marketers work closely among other related division in developing and enhancing a thorough airline respond strategy to address service failures. By having a physical image on how the airline responds directly impacting customer satisfaction and loyalty, this study hopes to contribute to generating a better marketing strategy in the airline company so that they are able to maintain a good brand image, continue to be an attractive company among their competitors and lastly to increase customer satisfaction, resulting in greater customer loyalty.

B. Recommendations

1. **Develop a Strong Brand Reputation:** Airline companies should prioritize building and maintaining a strong brand reputation by providing services that are consistent and up to customers' expectation. This includes mitigating the negative impact of service failures by immediately responding to customers in an event of any service failures.
2. **Personalize Customer Interactions:** Implementing personalized marketing strategies can assist airlines in strengthening customer relationships and increasing customer satisfaction in the aftermath of service failures. This may involve segmenting customers based on their preferences and past interactions, personalizing communication and offers for each customer, and utilizing customer data to provide personalized recommendations and experiences.
3. **Implement a Customer Loyalty Program:** Airlines should create a comprehensive customer loyalty program to encourage repeat purchases and cultivate loyalty. This may include loyalty schemes, exclusive offers and rewards for frequent fliers, and targeted marketing campaigns designed to build customer relationships.
4. **Enhance Social Media Engagement:** Actively engaging with customers on social media platforms can assist airlines in managing their brand image and addressing customer concerns in the aftermath of service failures. Airlines can demonstrate their dedication towards their customer base by promptly responding to customer inquiries and complaints, sharing positive customer stories, and providing proactive updates during service failures.



5. Leverage Technology: Airlines should utilize technology to enhance service delivery and streamline processes. This may involve implementing customer relationship management (CRM) systems to track and manage customer interactions, utilizing data analytics to identify patterns and trends in service failures, and employing automated communication channels to provide customers with real time updates and information during service failures.

C. Shortcomings and Future Study

Shortcoming of this study includes:

1. Limited Marketing Factors: The study focused on airline service failure responses and customer satisfaction and loyalty. To further understand the marketing effects of service failures and recovery attempts, future study might include brand image, word-of-mouth marketing, and customer lifetime value.
2. Insufficient Analysis of Marketing Channels: Social media, online reviews, and customer feedback platforms were not adequately examined in influencing customer perceptions and loyalty. Future research could examine how these channels affect service recovery strategies.
3. Competitive Advantage: The study did not fully examine how service recovery can give airlines an advantage over competitors. To better understand the competitive landscape and marketing plans, service recovery efforts, customer satisfaction, loyalty, and market share could be researched.
4. Potential Bias in Data Collection: As snowball sampling and convenience sampling were being used in this study for data collection, surveys and customer samples may have introduced response bias or selection bias into the study's conclusions. Interviews, focused group discussion or mixed-method research could provide more thorough and unbiased findings.

Recommendation for future research:

1. Assess the Impact of Service Recovery on Brand Image: Future research can analyse how effective service recovery operations affect airline brand perception and reputation. Understanding how service failures and recovery efforts effect consumer impressions of the airline's brand can help increase brand loyalty.
2. Explore the Role of Marketing Communication: Examine how marketing communication methods help customers understand service recovery efforts. Research can evaluate how diverse communication channels, messaging, and storytelling variations improve service recovery and customer satisfaction and loyalty.
3. Examine Customer Segmentation and Personalization: Determine how customer segmentation and personalization can be used in service recovery. To improve service recovery and customer loyalty, analyse consumer preferences, demands, and expectations.
4. Evaluate the Effectiveness of Loyalty Programs in Service Recovery: Explore how loyalty program features, incentives, and rewards can boost customer loyalty and repeat business after service failures.

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APPENDIX

Appendix 1. Cronbach's Alpha for the entire data set

Reliability Statistics	
Cronbach's Alpha	N of Items
.943	15



Appendix 2 P-P plot and scatterplot for customer satisfaction as dependent variable

Independent variable	Dependent variable	P-P Plot	Scatterplot
Airline responds towards flight delay	Customer satisfaction		
Airline responds towards flight cancellation	Customer satisfaction		
Airline responds towards lost or damaged luggage	Customer satisfaction		
Airline responds towards in-flight service issue	Customer satisfaction		
Airline responds towards customer service failure	Customer satisfaction		



Appendix 3 P-P plot and scatterplot for customer loyalty as dependent variable

Independent variable	Dependent variable	P-P Plot	Scatterplot
Satisfaction on flight delay being handled	Customer loyalty		
Satisfaction on flight cancellation being handled	Customer loyalty		
Satisfaction on lost or damages luggage being handled	Customer loyalty		
Satisfaction on in-flight service issue being handled	Customer loyalty		
Satisfaction on customer service failure being handled	Customer loyalty		

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