

AN EXPLORATORY STUDY OF AIRPORT TRAVEL RETAIL SERVICE QUALITY AND ITS IMPACT ON AIRPORT REVENUES

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Abstract: *As one of business entity engaged in airport services, Bali Airport is demanded to increase aeronautical and non-aeronautical revenue stream and also its service level. Where the non- aeronautical revenue produced from concessionaire activity in the airport terminal needs to have the right strategy. This study aims to investigate key attributes of the Service Quality of Travel Retail and analyze the influence of the Service Quality of Travel Retail on Non-Aeronautical Revenue. By using SmartPLS 3.0, the results of research showed that there was a low influence of the Service Quality of Travel Retail on Revenue performance. The research method used was quantitative design by distributing questionnaires to 160 respondents of Bali Airport passengers. The analysis process used was descriptive and validation by using SEM Partial Least Square (PLS) method*

Keywords: *Service quality of travel retail, Bali Airport, Non-Aeronautical Revenue, revenue performance*

Abstrak: *Sebagai salah satu badan usaha yang bergerak di bidang jasa kebandarudaraan, Bandara Bali dituntut untuk meningkatkan aliran pendapatan aeronautika dan non-aeronautika serta tingkat pelayanannya. Dimana pendapatan non-aeronautika yang dihasilkan dari aktivitas pemegang konsesi di terminal bandara perlu memiliki strategi yang tepat. Penelitian ini bertujuan untuk mengetahui atribut-atribut kunci dari Service Quality Travel Retail dan menganalisis pengaruh Service Quality Travel Retail terhadap Non-Aeronautical Revenue Retail. Pendapatan. Dengan menggunakan SmartPLS 3.0, hasil penelitian menunjukkan bahwa terdapat pengaruh yang rendah antara Service Quality Travel Retail terhadap kinerja Pendapatan. Metode penelitian yang digunakan adalah desain kuantitatif dengan menyebarkan kuesioner kepada 160 responden penumpang Bandara Bali. Proses analisis yang digunakan adalah deskriptif dan validasi dengan menggunakan metode SEM Partial Least Square (PLS).*

Kata Kunci: *kualitas pelayanan, Bandara Bali, Pendapatan Non Aerotika, Kinerja Pendapatan*

INTRODUCTION

Background

Airport is one of the most important parts of the aviation industry, It was merely designed to enable an aircraft to take off and land safely. Then, the role of an airport developed not only as a place for runways, but also to serve commercial passengers who wanted to use airline services. Several airports operating in Indonesia have received world-class achievements, one of them is Bali Airport which was awarded as the First World Best Airport based on the Airport Service Quality (ASQ) Awards - Airports Council International (ACI). This airport is an airport with 25 million passengers per year and its passenger characteristics are world-class tourist destinations.

As a company, Bali airport has a mandate to be able to achieve maximum profits for the state interests and state revenues. In this case, airport management must utilize all the resources owned in the airport environment in carrying out commercial activities, both those related to the aircraft fleet and those not related to the aircraft fleet.

Today, the changing dynamics in the aviation industry have changed the role of airports and how they perceive passengers. The existence of the expansion of low- cost carriers (LCC), competition between airlines, ease in purchasing tickets and changes in people's travelling habits have modified the perspective towards airports around the world in managing their business. As a consequence, the revenue focus has shifted from the previous one, traditional aeronautical services to non-aviation revenue. In fact, the positive relationships between tourism and shopping have convinced many airport operators in the world to turn airports that were previously merely a means of air transportation into tourist attractions (Freathy & O'Connell, 1999; Geuns et al., 2014)

Airports basically have 2 revenue streams, namely Aeronautical Revenue and Non-Aeronautical Revenue. Where Aeronautical Revenue includes everything related to the flight service functions to airlines or planes, such as: Aircraft Flight Service Revenue, Aircraft Landing Revenue, Aircraft Services and Parking, Aviobridge, Counter, Baggage Handling System / Handling Baggage System, Extend / Advance and Alternate. Meanwhile, Non-Aeronautical Revenue includes everything that is not related to the flight services functions to airlines or aircraft, namely: concessions, space leases, land leases, warehouse leases, signal transmitters/amplifiers, advertising/billboards and other non-aeronautical revenue. With the shifting dynamics in airport where airports are trying to maximize their non- aeronautical revenue, operators are also competing to increase their non- aeronautical revenue. So, it cannot

be avoided, Bali Airport should make improvements in order to increase its non-aeronautical revenue stream.

According to the 2018 Annual, Bali airport managed to get a total revenue of 3.9 trillion Rupiah with the proportion of non-aeronautical revenue to aeronautical was 39%:61%. This condition shows how Aeronautical revenue still dominates the existing revenues. In order to increase non-aeronautical revenue especially those from the concessionaire (Retail & FnB), it is necessary to implement the proper marketing strategy. According to Graham (2010) airport owners and managers need to implement and develop proper strategies to gain and sustain competitive advantage, because this will be one of the points of how airports can increase non-aeronautical revenue. Holcombe (2009) suggest that the most optimal strategy in competition is to search for company outputs that differentiate from competitors by making a more appealing product to consumers. Service Quality has been found to be crucial for retaining profits in service-providing institutions. Tangible and intangible aspects of service performance affect the service quality which in turn determine purchase intention in many industries including airports.

The ever-increasing importance of service organization to the airport companies actually has been recognized by marketing academics by exponential development in services and marketing research. Within the airport businesses, a prominent research stream has involved the measurement of service quality. Since 2006, Airport Council International (ACI) has provided Generic Scales for perceived service quality in order to continuously improve passenger experience in an airport (Bazerra and Gomes, 2016). However, some suggest that ASQ needs more consideration for validity and reliability to avoid misapprehension of passenger' perceptions. This need has become even more crucial with the spread of notion that service quality will lead to airports profitability. They realize that the inability of airports and their customers to grasp a clear metric or establish a clear standard for performance has only fueled consumer discontent.

ASQ is globally established global benchmarking programme measuring passengers' satisfaction whilst they are travelling through an airport. However, in this fast-changing landscape, ASQ has not provide specific measurements of how to increase passenger satisfaction and improve travel retail business performance in the airport. Therefore, it is necessary for airports to continuously construct their own service quality. This article objectives in twofolds. First is to recognize the attributes of service quality of travel retail and the second is to investigate the impact of the service quality of travel retail strategy on the performance of non-aeronautical revenue at the I Gusti Ngurah Rai Airport - Bali. With these

objectives, this study is expected to propose a practical recommendation of what variables should be emphasized in order to improve service quality on non-aeronautical business activities.

LITERATURE REVIEW

Airport and Non-Aeronautical Revenue

An airport is an area consisting of installations that are built on land or water with facilities intended for landing, take off and ground (taxi) maneuvers of aircraft (Wells & Young, 2004). Based on the functions and facilities available the zone inside the airport is divided into two, namely the air side and the land side. ICAO (2008) defined the air side is an area used for loading and unloading activities of an aircraft and this area cannot be entered by unauthorized person, while the land side is an area beyond the air side area, this area designated for passenger and cargo terminals and other areas not included in the air side. At the beginning of the airport, there is no definition that separated aeronautical revenue and non-aeronautical revenue, because all revenue is derived from aviation activities. However, with the development of the land side area and the more complex needs of passengers before the flight, there is also airport revenue that comes not from the flight it self. According to Doganis (1992) and Graham (2008), it can be concluded that airport revenues consists of aeronautical revenues (related to aircraft operational activities) and non-aeronautical revenues (related to commercial activities)

Aeronautical revenues are based on activities that are directly related to aircraft and the process of transporting passengers and goods, while non-aeronautical revenues related to activities on land, space leases, parking of motor vehicles, commercial activities and so on that are not related to aircraft operational activities and are usually undertaken on the land side of the airport and terminal.

Table 1. Airport Revenue

Aeronautika Revenue	Pendapatan Non Aeronautika
<input type="checkbox"/> Aircraft Landing Revenue	Retail Revenue
<input type="checkbox"/> Passenger Revenue Aircraft	FnB Revenue
<input type="checkbox"/> Storage Revenue	Car Lease Revenue
<input type="checkbox"/> Aircraft Handling Revenue (only if handling is carried out by the airport and not a third party)	Advertising / billboard revenue
<input type="checkbox"/> Terminal lease revenue to airlines (if any)	<input type="checkbox"/> Utilit revenue (gas, water, electricity and others)

Sources: Graham, (2013).

Service Quality

Airports provide their service with outcomes that are inherently different from those of any service providers and manufactures and other product-based bussinesses. A customer orientated approach towards understanding quality has permeated the airport service operations literature. The literature on the multi-dimensionality of service quality and customer evaluations thereof is now well-established (see, for example, Parasuraman et al., 1985). On the other hand, based on the literature review, comparison of the manufacturing and service quality on customer orientation reveals that there are a number of differences while they share a customer-based perspective on quality management.

The Multi Dimensions of Service Quality

The discussion of the nature of perceived product quality can become very obscure as it involves measuring consumers' expectations of what a firm should provide in the industry and what consumers' perceptions are in respect of this service provision. The perception of quality, however, has changed from time to time as the quality concept has been sometimes conflicting.

Parasuraman, et al (1985) began a research process to investigate consumers' expectations and perceptions of service quality. The idea was unidimensional scales but was considered as unsatisfactory for measuring service quality given its multidimensional nature and consequently multidimensional scales were developed. Based on their research, they proposed for the very first time that service quality expectation components and classification consists of five variables: tangibles; reliability; responsiveness; assurance and empathy. It was ten dimensions then they reduced it to five. It came through numerous qualitative studies. They evolved a set of five dimensions that have been consistently ranked by customers to be most important for service quality, regardless of service industry. These dimensions are presented as in the table 2.

Table 2. Service Quality Dimensions

Tangibles	Physical appearance, employee appearance, equipment availability and communication structure
Reliability	The ability of a firm and its employees to deliver the service accurately and in a trustworthy manner
Responsiveness	The ability of a firm and its employees' ability to deliver an efficient and fast service
Assurance	The ability to inspire confidence, a guarantee of consistent quality in their service.
Empathy	The capability of the service provider to understand consumers' needs

These dimensions have been subjected to empirical testing by number of authors (see, Parasuraman, et al 1988; 1993; Carman, 1990; Babakus and Boller, 1992; Cronin and Taylor, 1992, 1994; and Sureshchandar, Rajendran, and Kamalanabhan, 2001). Although they found lack specificity in certain industries, Parasuraman et al (1991) assert that the underlying dimensions what is so-called SERVQUAL scale; provide framework that can be enhanced through the use of additional items that are specific to certain context.

Within the airport industry, and in specific to ASQ, the surveys have been systematically carried out by many airport operators all over the world (ACI, 2020). Different from PZB (1985), ASQ components and classification have 8 components: access; check-in; passport/personal ID control; security; wayfinding; airport facilities; airport environment; and arrival services.

However, Bazerra and Gomes (2016) suggest that due to the complexity of the airport service environment, an effective process of measuring and analyzing passenger perceptions of ASQ is not easily achieved. Generic scales for perceived service quality might not cover some particularities such as Service quality of Travel Retail; and there has been only limited consideration for validity and reliability.

These concerns are certainly relevant to avoid misinterpreting passenger perceptions. The proposed measurement model could be considered an alternative for a multidimensional approach in the context of airport performance measurement regarding service quality.

Conceptual Framework & Research Hypothesis

Many previous studies have focused on the differences in passenger characteristics between low-cost carriers and full-service carriers (FSCs). In terms of qualitative research, Chiou and Chen (2010) focused on factors influencing LCC and FSC passengers and compared both types of passengers. Forgas et al. (2010) examined LCC and FSC passenger loyalty and made comparisons between the two types of passengers. Martinez and Royo (2010) used cluster analysis to segment LCC passengers in Spanish airports. Kim (2015) recently investigated the impact of perceived value on satisfaction and purchase intention for LCCs and FSCs in South Korea and discovered that a passenger's perceived value differed between the two types of carriers.

Studies that focus on the relationship between LCC and airport non-aeronautical activities suggest that LCC passengers spend more at airport commercial facilities than other types of passengers, such as FSCs. Because of the lack of free in-flight refreshments, LCC passengers, according to Graham (2014), are particularly good users of food and beverage services. Furthermore, due to the relative remoteness of some secondary airports, LCC passengers tend

to use more car parking. According to Gillen and Lall (2004), there are some arguments that LCC passengers are different and spend more money at airport concessions because they do not receive meals during their flight. They demonstrated that, while airline revenue per enplaned passenger decreased from US \$7.24 in 1998 to US \$5.92 in 2000 when Southwest Airlines (a low-cost carrier) began service at the airport, non-airline revenue per enplaned passenger increased from US \$7.60 in 1998 to US \$10.55 in 2000.

In contrast, Fasone et al. (2016) discovered different results using ridge regression and partial least squares. Using pooled data from 2009 to 2012, they investigated the determinants of non-aeronautical revenue in 15 German international airports. According to the findings, both the share and number of LCC passengers have a negative impact on non-aeronautical revenue per passenger and per square metre, whereas passenger share has a positive impact on non-aeronautical revenue per passenger and per square metre in the case of non-LCC. Choo and Oum (2013) demonstrated a similar finding using panel data from 63 U.S. airports from 2007 to 2010, that the share of LCC passengers has a negative impact on the airport's Variable Factor Productivity (VFP).

Following figure which explains the relationship between each variable. In this study, the dependent variable was Non-Aeronautical Revenue Performance, while the independent variable was Service quality of Travel Retail. Thus, the built hypothesis in this study to be tested is Service quality of Travel Retail has an effect on Non-Aeronautical Revenue Performance. It can be seen from the following figure:

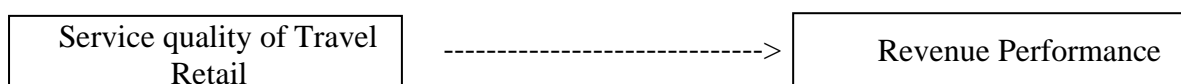


Figure 1. The relationship pattern of service quality of travel retail and revenue performance

To analyze the effect of service quality of travel retail on revenue performance, the researcher proposed the operational variable. Operational variable was required to determine the dimensions, indicators, and scale of the variables involved in the study so that testing can be performed correctly according to the research title. The dependent variable in this study is Non-Aeronautical Revenue at Bali airport while the independent variable is service quality of travel retail.

RESEARCH METHODOLOGY

This is quantitative research in nature that conducted at the Domestic Terminal of Bali Airport in May 2020. The sampling technique used was purposive sampling, in other words .

the sample size is determined (Hair et al., 2010). As the population in this study was 6 million passengers on domestic flights, the sample size as much as 160 passengers.

Data Collection Method

Primary data were obtained directly from passengers departing from Bali Airport, through a questionnaire consisting of questions about the research variables using "Likert" scale measurement. It is a scale with score range of 1-5 to determine the degree of respondents to a series of questions contained in the questionnaire. The scale has an 'arrangement and score for each answer in the questionnaire as follows:

Table 3. Types and Scales of Data Measurement; OEI Istinjo: 2010

Description	Code	Value	Negative Score	Scale Type
Strongly Agree	SA	5	1	Ordinal
Agree	A	4	2	Ordinal
Neutral	N	3	3	Ordinal
Disagree	D	2	4	Ordinal
Strongly Disagree	SD	1	5	Ordinal

Instrument Development

However, when designing the questionnaire, 23 items in the SERVQUAL questionnaire developed by Parasuraman et al. (1985) were ignored. Instead of that the service items were derived from modifications and adaptations. The result items can be seen as follows:

Table 4. The Overview of Independent Variables of Service Quality of Travel Retail

Dimension	Indicator	Item No.
Solution	1. Product sold according to necessity	1
	2. I Gusti Ngurah Rai Airport - Bali provides a complete range of services	2
Information	1. Bandara I Gusti Ngurah Rai - Bali provides information service center that is ready to help consumers.	3
	2. Bandara I Gusti Ngurah Rai - Bali provides information center for each product	4
Value	1. Value is in accordance with the quality offered	5
	2. The value of the products offered varies	6
	3. Passengers get well served experiences when they go shopping	7
Access	1. Bandara I Gusti Ngurah Rai -Bali strategically placed outlets so as it is easy for customers visits	8
	2. The placement of F&B and retail locations has been deemed suitable for consumers	9
Customer Orientation	1. I Gusti Ngurah Rai Airport - Bali creates better value for customers than its competitors	10
	2. I Gusti Ngurah Rai Airport Interact directly with customers (either using questionnaires, social media, etc.) in serving customer needs	11
Competitor Orientation	1. I Gusti Ngurah Rai Airport responds quickly to the innovative actions of competitors in the downtown	12

	2. I Gusti Ngurah Rai Airport appears to be better able to predict market trends	13
Inter-functional Coordination	1. Customers experience that all units at I Gusti Ngurah Rai Airport are coordinating with each other	14
	2. Customers feel there is cooperation of all units at I Gusti Ngurah Rai Airport to serve passengers	15
Differentiation	1. I Gusti Ngurah Rai Airport - Bali way to attract the service users for shopping at the airport.	16
	2. Product specifications only available at I Gusti Ngurah Rai airport - Bali.	17
Focus	1. Product specifications with the theme "Bali"	18
	2. Product specifications with the theme "beach"	19
Style	1. Passengers think that the product sold has its own style or characteristics	20
	2. Passengers think that the product is in accordance with the current trend	21
Uniqueness	1. Passengers think that the product sold is unique	22
	2. Passengers find the display outlets at I Gusti Ngurah Rai Airport is unique	23

Non-Aeronautical Revenue in this study is a manifestation of the results of a questionnaire score that will assess how much passengers will be willing to shop and how much they will spend the money they have as well as repurchase behavior.

Table 5. The Outline of Non-Aeronautical Revenue Variables

Dimension	Indicator	Item No.
Revenue	1. Whether the customer will buy the product offered	30
	2. How much money do you spend every time you shop at I Gusti Ngurah Rai Airport – Bali	31
	3. Will the customer go shopping again if he goes to Bali airport	32

RESULT AND DISCUSSION

This collected data was arranged and processed using descriptive analysis to determine the respondents' response to each research variable. Then continued using Partial Least Square (PLS) Structural Equation Modeling (SEM) analysis to analyze the effect of Service Quality of Travel Retail on the non-aeronautical revenue performance. The data collection method used was field research in which the researcher distributes questionnaires to the research object.

Description of Passenger Customs

One of the questions asked by the researcher to the respondent is what the passengers' habits are after checking in. Through the survey findings resulted in sequence of passengers' habits while waiting at the airport, the following findings were obtained:

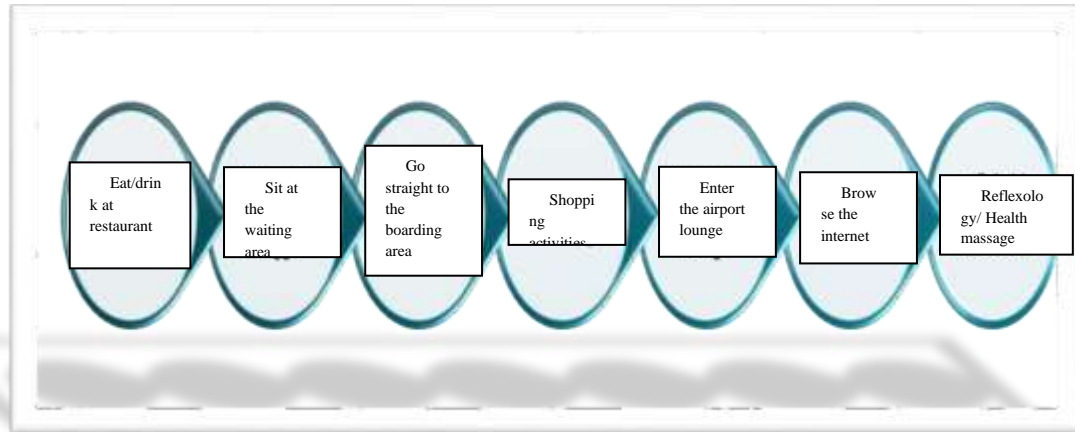


Figure 2. The sequences of habits at the airport according to the survey findings

With the following assessment notes:

1. The most preferred activity was place / activity performed for the first time
2. The place / activity cannot be selected 2 times

Choosing to eat and drink at the airport while retail shopping activities are in the fourth place. This shows that f & b at airports is still more popular than retail.

Descriptive Analysis of Research Variables

Based on the respondents' responses, it can be concluded that from 23 indicators of service quality of travel retail variables, an average (mean) of 3.69 was obtained, which means that the respondents agree with the service quality of travel retail at Bali airport. The highest response from respondents was on the attribute: "I Gusti Ngurah Rai Airport - Bali provides various types of complete services" with a mean of 3.86. The lowest response was on the attribute: "Do you think that the products offered at the airport are diverse enough" with an average (mean) of 3.64.

Description of Non-Aeronautical Revenue Variable

The Non-Aeronautical Revenue Performance variable in this study was measured by 3 statement items. Based on the respondents' responses as shown in the Non- Aeronautical Revenue Performance table above, it can be concluded as follows:

From the 3 indicators of the Non-Aeronautical Revenue Performance variable, the average (mean) was 3.37, which means that the respondents agree with the Non- Aeronautical Revenue Performance. The highest respondents' response on Non- Aeronautical Revenue Performance was on the indicator "Do you think that it is feasible to repurchase at outlets at Bali airport" with a mean of 3.47. This means that the assessment of passengers to repurchase at outlets at Bali airport received a good assessment from the respondent.

The lowest response from Non-Aeronautical Revenue Performance was on the indicator Revenue 1 "Do you always buy products when you visit or use services at I Gusti Ngurah Rai airport" with an average (mean) of 3.26.

Reliability

The main objective of this research is to investigate the service quality of travel retail variables which will then be linked to the revenue performance at the airport.

This study used Cronbach alpha coefficient as a measure of internal consistency. The Cronbach alpha technique is the most common technique for testing consistency reliability between items and shows a fairly perfect reliability consistency index. A construct or variable is categorized to be reliable if the Cronbach Alpha value amounting to > 0.60 . The reliability that is less than 0.6 is not good enough, so it cannot be accepted.

Based on the results of data processing, it was found that the value of each variable was found to be positive and all Cronbach's Alpha values were > 0.60 . This shows that the questionnaire is categorized to be reliable. Furthermore, there is no need for any modifications to the questionnaire and all 23 tested variables can be assigned as an attribute of the service quality of travel retail

Test Validity

The test validity was performed on each item of the instrument or question items related to the variables using the Pearson correlation analysis method. If the correlation between each variable indicator to the total construct variable shows a positive value and a significant result, it is declared valid. In this case, the significant level is at 0.05 (2-tailed). Then, all the data that has been collected is calculated from the entire model using smartpls and it can be seen that all indicators have a loading factor $r > 0.60$, meaning that all indicators are valid indicators to measure the construct validity.

Discriminant Validity Testing

This discriminant validity relates to the principle that different construct measures (manifest variable) should not be highly correlated with other manifest variables. The discriminant validity test using PLS software can be seen from the cross-loading value by comparing the correlation of the indicator with the latent variable which must be greater than the correlation between the indicator and other latent variables.

Based on the results of testing using SmartPLS 3.0 software, the findings obtained that the cross-loading value for each indicator was higher when compared to the correlation of the

indicator with other latent variables, so that the latent variable has sufficient discriminant validity.

The relationship between service quality of travel retail and revenue performance

The final analysis of this study was to link the service quality of travel retail to revenue Performance. From the Table 5, it was found that although there was a positive correlation between service quality of travel retail and three indicators on revenue performance, the relationship is moderately low. The correlation was merely range from 18 to 31 percent. The analysis indicates that the large unexplained variance of more than 70 percent. This means however ver that the model proposed in this study was proven although it is not strong.

It means that the factors influencing service quality of travel retail on revenue performance has not yet completely answered. This is not very surprising because some other factors may be considered more important for service quality-profitability proposition, such as: value; attribution and equity; information availability and atmosphere; and some others

Table 6. Correlation Analysis

		P1	P2	P3
TRAVEL RETAIL SQ	R2	0.181	0.264	0.312

**Correlation is significant at the 0.01 level

CONCLUSION

This study attempts to answer the research objectives, namely to investigate the attributes of service quality of travel retail and to analyze the effect of service quality of travel retail on non-aeronautical revenue performance with a research focus on Bali airport. Where the non-aeronautical revenue that will be assessed is only the retail shop in the departure area. It can be concluded that: Service Quality of Travel Retail can be used as a measuring tool to see a significant effect on Non-Aeronautical Revenue at I Gusti Ngurah Rai Airport - Bali.

It is necessary to evaluate and pay attention to the application and measurement system of Service Quality of Travel Retail. This is important considering that in order to understand what passengers want, the airport needs to continuously interact with passengers; increasing retail and f & b products that have a variety that can merely be found at Bali Airport; as well as building and displaying unique outlets that has their own characteristics.

This study will only examine the effect of Service quality of Travel Retail on the performance of non-aeronautical revenue at Bali airport. Where the non- aeronautical revenue that will be assessed is merely the retail shop in the departure area. The condition of Covid-19

also challenged during the data collection which may better during normal conditions. Another limitation that the article found that some variables were not included in the modeling.

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