

**ANALYSING THE DIFFERENT OF PHYSICAL ENVIRONMENT BETWEEN LION AIR AND CITILINK. A STUDY OF CUSTOMER IN MANADO****ANALISA PERBEDAAN LINGKUNGAN FISIK ANTARA LION AIR DAN CITILINK. STUDI KASUS PELANGGAN DI MANADO**

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**Abstract:** There is an increasing competition among the Air transportation in Manado. As one of the Airplane provider, Citilink and Lion Air is forced to keep their customer. Physical Environment is a very important part of a business air transportation. Due to the fact that to find new customer is much more costly rather than to retain the existing one they need maintaining and change on physical environment such as Spatiality in-flight, Amenity in-flight and Aesthetics in-flight. Physical environment play a part in building customer revisit feeling safety and comfy experience. In order for Airlines to be able to keep its customer, this study aims to analyze whether there is a significant difference in physical Environment between its Citilink customer and Lion Air customer, for later be used to form the best strategy. This research is a comparative research, which the data is obtained through questionnaire, and the data is analyzed using the Independent Sample t-Test. The population of this research is the customer of airlines users in Manado, with 50 respondents of Citilink customer and 50 respondent of Lion Air customer as the sample. The result shows that there is a no significant difference in physical environment. However, according to the result based on the indicators show that, there are actually no a significant difference, but with the mean value of the Citilink customer is higher than the Lion Air customer.

**Keywords:** *physical environment, spatiality, aesthetics, amenity, airlines*

**Abstrak:** Ada peningkatan persaingan di antara transportasi Udara di Manado. Sebagai salah satu penyedia layanan pesawat terbang, Citilink dan Lionair harus mempertahankan pelanggan mereka. Lingkungan Fisik adalah bagian yang sangat penting dari bisnis transportasi udara. Fakta bahwa untuk menemukan pelanggan baru jauh lebih mahal daripada mempertahankan yang sudah ada, mereka perlu mempertahankan dan mengubah lingkungan fisik seperti Ruang gerak dalam penerbangan, fasilitas dalam penerbangan, dan estetika dalam pesawat. Lingkungan fisik berperan dalam membangun pelanggan mengunjungi kembali perasaan aman dan pengalaman yang nyaman. Agar maskapai penerbangan dapat mempertahankan pelanggannya, penelitian ini bertujuan untuk menganalisis apakah ada perbedaan yang signifikan dalam lingkungan fisik antara pelanggan Citilink dan pelanggan Lionair, untuk kemudian digunakan untuk membentuk strategi terbaik. Penelitian ini adalah penelitian komparatif, yang datanya diperoleh melalui kuesioner, dan data dianalisis menggunakan Independent Sample t-Test. Populasi penelitian ini adalah pelanggan pengguna maskapai penerbangan di Manado, dengan 50 responden pelanggan Citilink dan 50 responden pelanggan Lionair sebagai sampel. Hasil penelitian menunjukkan bahwa tidak ada perbedaan yang signifikan dalam lingkungan fisik. Namun, berdasarkan hasil indikator menunjukkan bahwa, sebenarnya tidak ada perbedaan yang signifikan, tetapi dengan nilai rata-rata pelanggan Citilink lebih tinggi daripada pelanggan lionair.

**Kata kunci:** *physical environment, ruang gerak, estetika, fasilitas, airlines*

## INTRODUCTION

### Research Background

The growth of airlines in Indonesia began after the deregulation of the airline industry in 1999. Since then, the growth of the airlines has led to a high level of competition among them and also competition in terms of the service they provide. According to Peraturan Kementerian No. 26 of 2010. Nowadays, many people in Manado went to somewhere in their itinerary using airplane's rather than ship's. Making a trip by air involves a set of complex experiences over a period of hours with many opportunities for the air passengers to be pleased and comfortable, or disappointed, frustrated and infuriated and observe that not many of these investors have developed competitive edge over others.

As one of the countries that categorized as a develop countries, at this time in Indonesia the opportunity to do a commercial aviation business has a great opportunity. With the diverse of needs and wants of the community, make commercial aviation business opportunities more widely and profitable for Lion Air and Citilink (Garuda). But it takes innovation and creativity to get involved and survive in the aviation business competition that worldwide. The ability to compete in the business world is necessary.

Bayu Sutanto, Head of the Scheduled Flights Division at the Indonesian National Air Carriers Association (INACA), said there remain several big challenges in Indonesia's aviation industry despite the increase in flights, routes, and air passengers. In Manado City there are community activities cannot be separated from the use of airplanes as an air transportation tool which is very helpful in terms of time and comfort efficiency. Airlines passengers nowadays are not just looking for or want to get on a plane those only offers cheap tickets without any excellent services and Physical Environment or servicescape can help shape appropriate feelings and reaction in customers experience between Lion Air and Citilink. Therefore, researcher is interested to research about "Analyzing the different of Physical Environment between Lion Air and Citilink. A Study of Customers in Manado"

### Research Objective

This Research paper aims to answer this following question. Analyze the difference of physical environment :

1. Between lion air and citilink of costumers in Manado based on Spatiality, Amenity, and Aesthetics.
2. Based on in-flight spatiality between PT. Lion Mentari Airlines and PT. Citilink Indonesia.
3. Based on in-flight amenity between PT. Lion Mentari Airlines and PT. Citilink Indonesia.
4. Based on in-flight aesthetics between PT. Lion Mentari Airlines and PT. Citilink Indonesia.

## THEORETICAL REVIEW

### Marketing

People nowadays think that marketing is an action to just selling product/services or advertising. Now marketing has a to realize in the old sense, but the new sense is satisfying the cost well, to develop product that have superior value, set a price, distribute and promote their product efficiently then these product will sold easily. Thus the sales and advertising is only part of a large marketing mix that works together to influence the market (Kotler and Armstrong 2001:7). Marketing is divided by the term reveals one term as follows: "The most important aspect in the world of business is marketing. This is because marketing deals with identifying and meeting social needs of man and the surrounding environment" (Kotler, 2009). There is also according to Kotler (2009) One of the shortest definitions of marketing is meeting the needs of profitability. There is also a sense of marketing, namely The American Marketing Association, in Kotler (2009), offer to follow the formal definition of marketing is an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders. Marketing is a way for the company to communicate with customer, to know what are the customer wants and needs. Marketing is a form of communication between company and the customers with the goal of selling the product or service to customer. Communicating the value of your product or service is a key aspect of marketing

### Physical Environment

Bitner (1992) named the physical environment of the service industry "servicescape". Also, he defined it as an objective and physical factor controlled by a company, which could influence consumers and employees. To easily describe the concept of Physical Environment, he expressed "built environment" or the Physical

Environment of the service industry as services cape. Moreover, he defined the Physical Environment as a man-made artificial environment as something that was differentiated from the natural and social environment.

Bitner (1992) reported that the Physical Environment had a significant impact on not only the Pre-purchase behavior of service consumers but also service quality evaluation and satisfaction. He also argued that those affected customers and staff would behave in a certain way in accordance with the inner reaction as to the physical service environment. The positive inner reaction of the Physical Environment leads to approach behavior. This approach behavior is something friendly to staff, whereas it refers to such approaches as re-visit, increased expenses, length of visit and loyalty.

### **In-flight Spatiality**

In-flight Spatiality refers to the spatial relationship between seats, between passageways and between facility components including storage space for carry-on baggage, seat arrangement and convenience of movement in the cabin.

### **In-flight Amenity**

In-flight Amenity refers to in-flight air, temperature, light, cleanliness of the cabin and the cabin crew uniforms, which would have an impact on the freshness of the in-flight environment.

### **In-flight Aesthetics**

In-flight Aesthetics means the aesthetic attractiveness of airlines such as the indoor/outdoor appearance of the airplane.

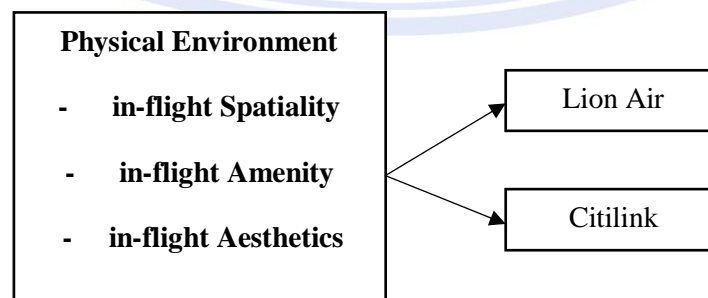
### **Previous Research**

Maeng, Park (2015) A study on the effect of the physical environment in an airplane on customer loyalty explained that this study found that physical environment factors such as spatiality, amenity, aesthetics and entertainingness would have a positive impact on perceived quality. In addition, this study found that perceived quality would have a positive impact on satisfaction, whereas satisfaction would have a positive impact on image and behavioral intention.

Soelasih (2015) Is Physical Evidence Still Valid? A Study of Low Cost Carriers in Indonesia explained that Physical evidence has been widely accepted as variable that has impact on satisfaction, specifically in airline service. However, this study showed some opposite result for low cost airlines in Indonesia. It revealed that physical evidence has no effect on the passengers'

Asiegbu, Igwe and Nenaaton (2012) Physical Evidence and Marketing Performance of Commercial Airlines in Nigeria explained that the main purpose of this study was to determine the extent to which physical evidence affects marketing performance of commercial airlines in Nigeria We therefore, recommend innovations in the provision of ambience, constantly engaging personnel of high job repute and competence, and putting in place air traveler – friendly service systems designs.

### **Conceptual Framework**



**Figure 1. Conceptual Framework**

*Source: Data Processed, 2019*

### Research Hypothesis

- H0: There is no a significant difference in Physical Environment between Lion Air and Citilink of Costumers in Manado based on Spatiality, Amenity, & Aesthetics.
- H1: There is a significant difference in Physical Environment between Lion Air and Citilink of Costumers in Manado based on Spatiality.
- H2: There is a significant difference in Physical Environment between Lion Air and Citilink of Costumers in manado based on Amenity.
- H3: There is a significant difference in Phisical Environment between Lion Air and Citilink of Costumers in Manado based on Aesthetics.

## RESEARCH METHOD

### Research Approach

This research is considered a quantitative research. To answer the main problem question, which is the purpose of this research is to compare the Physical Environment between Lion air customer and Citilink customer. The types of thin research are quantitative and comparative approaches. Quantitative research is that entailing the collection of numerical data and exhibiting the view of relationship between theory and research as deductive. a predilection for natural science approach, and as having an objectivist conception of social reality. So this specific form of research uses the quantitative data to analysis. Quantitative research is the systematic empirical investigation of observable phenomena via statistical. mathematical or computational techniques.

### Population, Sample, and Sampling Technique

Population refers to the entire group of people, events or object of interest that the researcher seeks to investigate (Sekaran, 2010: 127).The population identification of this research is based on the results above,the sample size of the study will be 100 respondents that divided by 50 respondents of lion air and 50 respondents of citilink customers.

### Data Collection Method

Secondary data used for research that was not gathered directly and purposefully for the project under consideration (Hair *et al.* 2013:118). Secondary data collected for some purpose other than problem at hand taken from books, journals, articles, and relevant literature from library and internet. This data is readily available and can be used in this research

### Operational Definition of Research Variables

Table 1.Operational Definitions and Indicators

No	Variable	Operational Definition	Indicator
	Physical Environment		
1	In-flight Spatiality	In-flight Spatiality refers to the spatial relationship between seats, between passageways and between facility components including storage space for carry-on baggage, seat arrangement and convenience of movement in the cabin.	- space between seat - space between passageway - storage space for carry-on baggage -easy access to washroom and doorway
2	In-flight Amenity	Amenity refers to physical and psychological states felt when one feels very good because the spirit and body of a human are integrated. It can also be said as a very	- in-flight air, temperature, -light of the cabin -cleanlines of the cabin - cabin crew uniform

		personal and subjective thing. Such factors as noise, temperature, air, light, cleanliness of cabin and the cabin crew uniforms, which would have an impact on the freshness of the in-flight environment.	
3	In-flight Aesthetics	In-flight Aesthetics means the aesthetic attractiveness of airlines such as the indoor/outdoor appearance of the airplane. Such as cabin color provides a comfortable feeling. Interior is stylish and modern. Airplane appearance is attractive. It is the latest models.	-cabin color -interior stylish and attractive -airplane attractive -the latest airplane model

Source: Author's Note, 2019

### Validity and Reliability Test

Validity test is done to determine whether the measuring instrument corresponding to the desired variable or not. Validity test aims to examine whether questionnaires as research instruments are appropriate for measuring indicators in research. Questionnaires can be said to be valid if the question in the questionnaire is able to reveal something that will be measured by the questionnaire. The questions in the questionnaire can be said is valid if the correlation coefficient above 0.30 (Sugiyono, 2013:40). Reliability test is a measuring instrument to measure a questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable if someone's answer (respondent) to the question is consistent or stable over time (Sugiyono, 2013:40). To test the reliability of the data used the Cronbach Alpha formula analysis technique. The value of an instrument is said to be reliable if the value of Cronbach Alpha is  $\geq 0.60$ .

### Independent Sample *t*-Test

The Independent-Samples *t*-Test evaluates the difference between the means of two independent or unrelated groups. That is evaluate whether the means for two independent groups are significantly different from each other according to Black (2010:356)

### Normality Test

Normality test is a common thing to do before a statistical method. The purpose of normality test is to determine whether the distribution of data follow a normal distribution or close to. The distribution of data with normal distribution pattern (data distribution is not skewed to the left or right).

## RESULT AND DISCUSSION

### Validity Test Result

To test the validity of the research, the Pearson Product Moment is used, by seeing the value of significance and comparing the value of *rxy* table with *r* product moment. If the significance value  $> 0.05$ , and if the value of *rxy*  $>$  *r* table product moment, then the instrument is declared valid.

**Table 1. Correlations**

	Total Score		N
	Pearson Correlation	Sig. (2-tailed)	
Q1	.783	.000	100
Q2	.752	.000	
Q3	.770	.000	
Q4	.779	.000	
Q5	.594	.000	
Q6	.692	.000	
Q7	.704	.000	
Q8	.694	.000	
Q9	.799	.000	
Q10	.702	.000	
Q11	.784	.000	
Q12	.811	.000	
	1		

Source: SPSS Output, 2019

Table 1 shows that both the significance value is  $> 0.05$  and the value of  $r_{xy} > r$  table product moment, which is 0.196. Hence, the instrument is declared valid.

### Reliability Test Result

**Table 2. Reliability Statistic**

Crobach's Alpha	N of Items
.923	12

Source: SPSS Output, 2019

Table 2 shows that Alpha Cronbach is 0.923 which is above the acceptance limit of 0.6; therefore the research instrument is reliable.

### Normality Test Result

**Table 3. Test of Normality**

	Shapiro-Wilk		
	Statistic	Df	Sig
Spatiality in-flight	.943	.000	.000
Amenity in-flight	.926	.000	.000
Aesthetics in-flight	.965	.000	.010

Source: SPSS Output, 2019

The result shows that the significance of Spatiality in-flight, Amenity in-flight and Aesthetics in-flight is normally distributed.

### Independent Sample t-Test Result

**Table 4 Group Statistics per variable**

	Airplane Provider	N	Mean	Std. Deviation	Std. Error Mean
Physical environment	Citilink	50	45,8000	5,43233	,76825
	Lionair	50	40,4600	7,04276	,99600

Source: SPSS Output, 2019

To consider that there is significant difference, the p-value has to be above 0.05. In the Table 4., the p-value resulted in 0.00 for the Physical Environment. The result indicates that there is a no significant difference between Citilink and Lionair customer .

**Table 5**  
**Group Statistics per indicator**

	Airplane provider	N	Mean	Std. Deviation	Std. Error Mean
Spatiality	Citilink	50	14,940	2,0143	,2849
	Lionair	50	13,040	3,2322	,4571
Amenity	Citilink	50	15,940	1,6464	,2328
	Lionair	50	14,700	2,2520	,3185
Aesthetics	Citilink	50	14,920	2,6484	,3745
	Lionair	50	12,720	2,3908	,3381

Source: SPSS Output, 2019

The table shows that Spatiality indicator and Amenity indicator and Aesthetics indicator the mean value of indicators have a result of Citilink customer higher than the Lion Air customer.

**Table 6 Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Spatiality	Equal variances assumed	19,298	,000	3,528	98	,001	1,9000	,5386	,8312	2,9688
	Equal variances not assumed			3,528	82,073	,001	1,9000	,5386	,8286	2,9714
Amenity	Equal variances assumed	9,565	,003	3,143	98	,002	1,2400	,3945	,4571	2,0229
	Equal variances not assumed			3,143	89,741	,002	1,2400	,3945	,4562	2,0238
Aesthetics	Equal variances assumed	,462	,498	4,360	98	,000	2,2000	,5046	1,1987	3,2013
	Equal variances not assumed			4,360	96,992	,000	2,2000	,5046	1,1986	3,2014

Source: SPSS Output, 2019

The result in the table 6 shows that there's no indicator has a result indicating that there is a significant difference. In the Physical Environment, there are 3 indicators with p-value resulted under 0.05, which are Spatiality indicator, Amenity indicator and Aesthetics indicator.

## Discussion

The diversification of Airplane provider in Manado City has increased, along with the addition of the capacity of Airports. There is a growing importance in regards to the Physical Environment for the services of service-centric companies. Therefore, there is a need for the studies related thereto. The increasing competition between airlines is getting more intense and inevitable. Thus, it is imperative to have differentiated points for the Physical Environment by meeting the expectations of passengers. Hence, it is important for these stores whether those that have been operating long ago, or the recent ones, to be aware, and keep maintaining their business to be able to compete with each other, as well with the possible new ones later in the future.

In particular, it would be imperative for the national medium-scale airlines. Citilink Airlines and Lion Air Airlines) to have differentiated points with unique and high-class prestige strategies by satisfying the expectations and demands of customers in order to increase competitiveness against the foreign airlines and low-cost airlines that are equipped with new airplanes and offer low fares. This study has great significance because it provides the information as to the inflight Physical Environment factors that have not been covered in the previous studies on inflight services, which have focused on the services of human service and goods and because it reveals the influence of the in-flight on Physical Environment.

Spatiality refers to the spatial relationship between office furniture, supplies, equipment, service place, passageway placement method and the components hereof. It will be easier for customers to enter when the Physical Environment is designed to have Spatiality. Also, they will be able to access complementary services such as the washroom, restroom, and snack bar. Amenity refers to physical and psychological states felt when one feels very good because the spirit and body of a human are integrated. It can also be said as a very personal and subjective thing. Such factors as noise, temperature, air, light and color in a specific place are important determinants of the comfort of a given place. The psychological state and behavior of humans vary in accordance with the aforementioned factors.

Moreover, Wakefield and Blodgett (1996) this study research the variables Aesthetics for facility Aesthetics that would increase the attractiveness of Physical Environment through customer perception as to such factors as indoor and outdoor facilities and functions of decorations. Those Aesthetics factors provided by such complementary tools as staff uniform, pen and paper perform a critical role in increasing the attractiveness of the Physical Service Environment in addition to service facilities. Furthermore, they may have a significant impact on the positive awareness of customers for the quality of services provided to them.

The result shows that there is a no significant difference in Physical Environment. However, according to the result based on the indicators show that, there are actually no a significant difference, but with the mean value of the Citilink customer is higher than the Lion Air customer. In Physical Environment, they are the Spatiality in-flight indicator, the Amenity in-flight indicator and the Aesthetics in-flight. It indicates that in mean value, the Citilink customer is more affected rather than the Lion Air. Hence, it is better for Citilink keeps they improvement and Lion Air to form a strategy to compete with Citilink that offer the best suitable, safety and targeted to the to customer, particularly in terms of the indicators above.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

After examining the findings, the conclusions based on this research can be formulated as follows:

1. There is no a significant difference in Physical Environment between Lion Air and Citilink of Costumers in Manado based on Spatiality, Amenity, & Aesthetics.
2. There is a no significant difference in Physical Environment between Lion Air and Citilink of Costumers in Manado based on Spatiality in-flight.
3. There is a no significant difference in Physical Environment between Lion Air and Citilink of Costumers in Manado based on Aesthetics in-flight
4. There is a no significant difference in Physical Environment between Lion Air and Citilink of Costumers in Manado based on Amenity in-flight.

### Recommendations

As the result shows that there is a no a significant difference in Physical Environment between Lion Air and Citilink of costumers in Manado based on Spatiality, Amenity, & Aesthetics. Hence the focus of the improvement in order to develop a better strategy approach to boost the customer preference intention to the choose airplane provider should be prioritized mostly in these 3 indicators, particularly aimed to the single customer. For the Spatiality in-flight indicator, could be by providing the best suitable space so the customers will feel free to walk or to change their position to get their comfortable position in the airplane it would feel really great to have some enough space. For the Amenity in-flight indicator, by providing the best suitable environment so the customers will feel familiar to change such factors as temperature, air, light and color in a specific place are important determinants of the comfort of a in-flight can given. For the Aesthetics in-flight indicator, will by having employee and customer to enhance desired service environment with using the proper tone of color, scent and design in-flight and to give they feeling experience about that.



The results of this study can be used as references for contributing the knowledge of management marketing, specifically the customer preference intention based on Physical Environment. This study has the following limitations and problems. Thus, it is believed that there should be a follow-up study to complement these limitations and problems.

First, it would be impossible to generalize the findings of this study because it only sampled 100 manadonese respondent despite the fact that many passengers from different city, countries might have different preferences. And in this cases the random sampling have almost balance preferences experience that high school respondents who mostly using lion air and the civil servant respondent who using citilink.

Second, it would be possible to establish more useful and diverse marketing strategies if this study conducted a more detailed analysis for each class, airplane mode and route because this study conducted the survey only with passengers of economy class.

Third, a majority of the survey work was conducted a certain period after the flight. Thus, it would be possible to gain higher quality survey data to allow us to have a more accurate understanding and judgment of responses if the survey was conducted in the cabin during the flight itself.

Fourth, this study extracted only those factors suitable for the inflight Physical Environment components based on the previous studies as to the Physical Environment of the leisure industry such as hotels, restaurants, etc. Therefore, it cannot be said that these questions include all the airlines in-flight Physical Environment factors.

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