

**AN ANALYSIS OF DOMESTIC AIRLINES COMPARE  
WITH INTERNATIONAL AIRLINES  
(IN TERMS OF 5 DIMENSION OF SERVICE QUALITY)**

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Abstract

Airways are the one of transportation type that is interesting for many people because of it doesn't take a lot of times. Airways Industry or usually called by Aviation industry was already known in Indonesia since 60 years ago, and now there are many Aviation industry exist in Indonesia and other country, it also because of the advantages of these businesses. Therefore, the objective of this thesis is to provide information and suggestion regarding the 5 Dimensions of service quality of the air transport that will show a map position that automatically shows the location of the competition between domestic and international aviations, so that positive improvement may apply to the Aviation

that was survey by researcher. As a descriptive quantitative analysis, the researcher uses primary data to acquire the data for analyzing and also spread questionnaire randomly to 50 respondents to become a main data and researcher uses Multivariate analysis - Multidimensional scaling to precede the data into a specific result. For recommendation, the researcher provides some maps to inform the position those 10 Aviation Industries that served route Jakarta – Singapore.

**PANEL OF EXAMINERS**  
**APPROVAL SHEET**

The Panel of Examiners declare that the thesis entitled “**An analysis of domestic airlines compare with international airlines (in terms of 5 dimension of service quality)**” that was submitted by Florence Ariani Palapessy majoring in Management from the Faculty of Economics was assessed and approved to have passed the Oral Examinations on 24<sup>th</sup> September 2010.

**Chair-Panel of Examiners**

**Examiner**

**Examiner**



# CHAPTER 1

## INTRODUCTION

### **I.1 Background of Study**

Products and services are two from most of important things to fulfill our life's, beside we are doing many activities, we also need to consume the product, and the remaining thing that we need is additional help from services.

For achieving all of those necessary we need to include transportation as part of activity and as the services to complete the process to consume the product. Transportation is the facilities that help to deliver us to our needs. In briefly transport is the movement of people and goods from one to another "Wikipedia".

Transportation services divided into four types; air, water, road and rail. The fastest commercial transport is aircraft or commonly called airplane, it is able to transport people faster and limited amounts of cargo over longer distances, but incur high cost and energy use; for short distance and because of these effectiveness the aviation industry are much related to business aspect opportunity.

In addition, based on the WHO report, WHO estimates that up to 500,000 people, are on planes at any time and also according to research that were done around the world, said many country which their citizen using a airways transport to do an international journey. It has five main reasons they choose airways transport, to business purposes, leisure, family, and special event.

Airlines services industry (Airlines business) can be categorized as being intercontinental, intra continental, domestic, or international and may be operated as scheduled serviced or charters. As we can see, today's the international flight are very attracted, because go with the world changes, many people are willing to go to faraway place doing their activity in fastest way. The reason is nothing but try to reach their needs.

From business sides, Aviation business own the good prospect compare to the other transportation. Because it's had a unique characteristic which is also need by many people.

Based on the background mentioned above, writer is highly focused and motivated to do research about people perception in order to measure position of domestic flight compare to other international fully service airlines that served route Jakarta – Singapore.

## I.1.1 Transportation

### I.1.1 .1 Definition of Transportation

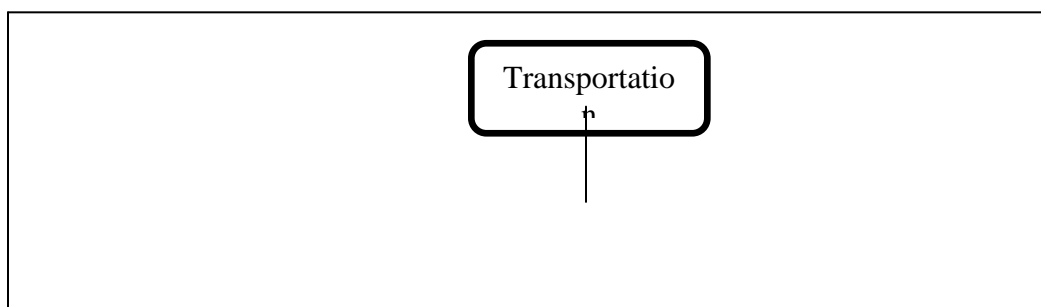
Transportation is the one of service that consumable by people to making they can transferred from one area to another more quick rather than if they have to walk. This is a need for people to complete their life, such as helping their work, their mood, and others.

Business dictionary also described transportation as any device used to move an item from one location to another. Common forms of transportation include planes, trains, automobiles, and other two-wheel devices such as bikes or motorcycles.

The other instrument of transportation is passenger; the passenger is something to run business transportation. Passenger transport may be public, where operators provide scheduled services, or private.

### I.1. 1.2 Types of transportation

Transportation services are divided into 4 types: Air, Water, Road (Road and Rail) and Rail. But in this thesis the researcher are shape it into three types of transportation, there are Water, Air, and Land. (Please see the Figure 1)



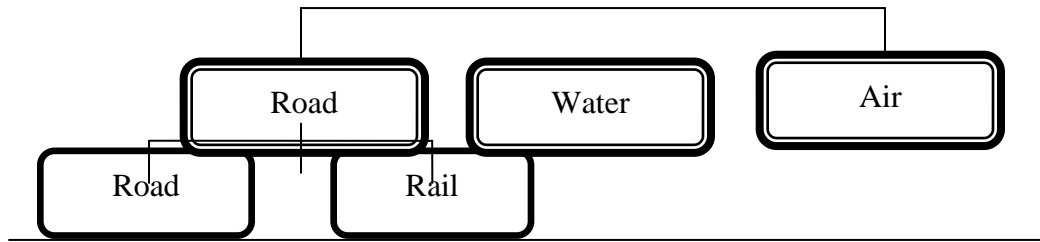


Figure.1 Transportation Chart  
Source: Illustrate from wikipedia

#### I.1.1.3 Roadway transportation

Roadway transportation can separate by two, Road or Rail. For road, the transportation that belongs to this group is car, motorcycle, bus, bicycle, taxi and for the Rail groups its only train (in Indonesia).

This transportation was important for daily activity, it's automatically makes this kind of business will running well.

#### I.1.1.4 Waterway transportation

Different with Roadway and Airways transportation that are common used by people to go around, waterway is the uncommon to use, because it's not only the one chosen of transportation that has a special advantage, but this transportation are used to reached some place that are remote.

The briefly definition of waterway transportation is the transportation that trough the water. It's the process of transport a watercraft, such as a barge, boat, ship or sailboat, makes over a body of water, such as a sea, ocean, lake, canal or river. The need for buoyancy unites watercraft, and makes the hull a dominant aspect of its construction, maintenance and appearance

#### I.1.1.5 Airways transportation

Airways or called Aviation industry could divide into two types, commercial and non-commercial. The commercial Aviation serve the flights for business purposes, but the non commercial serve the flight for free or public purposes.

Aviation can also divide into two types from the service side; they are cargo service or passenger service. As we know the cargo service was only brought the stuff only and for the passenger, surely it was brought the people and also a few of their stuff. Now a day's aviation industry were growth so fast, they come up with many unique character and brave to offer their special variety.

#### I.1.1.6 Others transportation

Based on the report from Wikipedia 2010, the transportation not only divided into 3 categories, but also there was another uncommon transportation, like describe below.

Pipeline transport sends goods through a pipe, most commonly liquid and gases are sent, but pneumatic tubes can also send solid capsules using compressed air. For liquids/gases, any chemically stable liquid or gas can be sent through a pipeline. Short-distance systems exist for sewage, slurry, water and beer, while long-distance networks are used for petroleum and natural gas.

Cable transport is a broad mode where vehicles are pulled by cables instead of an internal power source. It is most commonly used at steep gradient. Typical solutions include aerial tramway, elevators, escalator and ski lifts; some of these are also categorized as conveyor transport.

Spaceflight is transport out of Earth's atmosphere into outer space by means of a spacecraft. While large amounts of research have gone into technology, it is rarely used except to put satellites into orbit, and conduct scientific experiments. However, man has landed on the moon, and probes have been sent to all the planets of the Solar System.

Suborbital spaceflight is the fastest of the existing and planned transport systems from a place on Earth to a distant other place on Earth. Faster transport could be



achieved through part of a Low Earth orbit, or following that trajectory even faster using the propulsion of the rocket to.

## **I.2 Company Profile (Wikipedia)**

Researcher comparing between 10 Aviation Companies from domestic and International that are operated in Indonesia (Soekarno-Hatta International Airport), but specifically who are serving route Jakarta – Singapore, and they are include :

### 1. Garuda Indonesia

PT (Persero) Garuda Indonesia is the national airline of Indonesia. It is named after the mystical, giant bird Garuda of Hinduism and Buddhist mythology. It is headquartered at Soekarno-Hatta International Airport in Tangerang - Banten near Jakarta-Indonesia.

### 2. Lion Air

PT Lion Mentari Airlines, operating as Lion Air, is Indonesia's largest private carrier and Asia's first hybrid carrier which offers both economy and business-class seating, based in Jakarta, Indonesia. Lion Air also flies to Malaysia, Singapore, Vietnam and Saudi Arabia. Its main base is Soekarno-Hatta International Airport, Jakarta. It operates scheduled passenger services on an extensive domestic network from Jakarta to 42 destinations with 226 daily flights (as of December 2009).

### 3. Air Asia

AirAsia Berhad dba AirAsia is a Malaysian low-cost airline. It operates scheduled domestic and international flights and is Asia's largest low-fare, no-frills airline. AirAsia is a pioneer of low-cost flights in Asia, at Kuala Lumpur International Airport (KLIA). AirAsia's registered office is in Petaling Jaya, Selangor while its head office is on the grounds of Kuala Lumpur International Airport in Sepang, Selangor. In 2010 AirAsia won an award for the world's best low-cost airline.

#### 4. Eva Air

EVA Airways Corporation is an airline based at Taiwan Taoyuan International Airport near Taipei, Taiwan operating passenger and dedicated cargo services to over 40 international destinations in Asia, Australia, Europe and North America. EVA Air is largely privately owned and flies a fully international route network. It is the second largest Taiwanese airline, next in size to its main rival, China Airlines. EVA Air is headquartered in Lujhu, Taoyuan County.

#### 5. China Airlines

China Airlines), commonly abbreviated is the flag carrier of the Republic of China (commonly known as Taiwan). The airline is not directly state-owned but is 54% owned by the China Aviation Development Foundation which is owned by the Republic of China. Unlike other state-owned companies in the Republic of China, the chairperson of China Airlines does not report to the Legislative Yuan.

## 6. Cathay Pacific

Cathay Pacific Airways is the flag carrier of Hong Kong, with its headquarters and main hub at Hong Kong International Airport. The airline was founded on 24 September 1946 by American Roy C. Farrell and Australian Sydney H. de Kantzow. Cathay Pacific is a founding member of the Oneworld alliance, with its subsidiary, Dragonair, as an affiliate member. The airline was awarded with a Five Star Airline ranking and 2009 Airline of the Year by Skytrax.

## 7. Lufthansa

Deutsche Lufthansa AG is the flag carrier of Germany and the largest airline in Europe in terms of overall passengers carried. The name of the company is derived from *Luft* (the German word for "air"), and *Hansa* (after Hanseatic League, the powerful medieval trading group).

The airline is the world's fifth-largest airline in terms of overall passengers carried, operating services to 18 domestic destinations and 183 international destinations in 78 countries across Africa, Americas, Asia and Europe. Together with its partners Lufthansa services around 410 destinations. With over 722 aircraft it has the third-largest passenger airline fleet in the world when combined with its subsidiaries.

## 8. Air France

Air France, S.A. (formally *Société Air France*), stylised as AirFrance, is the French flag carrier headquartered in Tremblay-en-France, France (near Paris), and is one of the world's largest airlines. It is a subsidiary of the Air France-KLM Group and a founding member of the SkyTeam global airline alliance.

#### 9. Malaysian Airlines

Malaysia Airlines (MAS) is the government-owned flag carrier of Malaysia. Malaysia Airlines operates flights from its home base, Kuala Lumpur International Airport, and its secondary hub in Kota Kinabalu. It has its headquarters on the grounds of Sultan Abdul Aziz Shah Airport in Subang, Selangor.

#### 10. American Airlines

American Airlines, Inc. (AA) is a major airline of the United States and is the world's second largest airline (behind Delta Air Lines) in passenger miles transported, passenger fleet size, and operating revenues. American Airlines is a subsidiary of the AMR Corporation and is headquartered in Fort Worth, Texas, adjacent to its largest hub at Dallas/Fort Worth International Airport. American operates an extensive international and domestic network, with scheduled flights throughout North America, Latin America, Europe, Asia/Pacific and the Caribbean. American Airlines was listed at #120 on the Fortune 500 list of companies.

### **I.3 Problems Identification**

Since there are many Aviation company that serve route Jakarta – Singapore with their own standard services and capability, the passenger will facing a complicated situation to choose what aviation they will used and also it was created a competition around 10 Aviation that researcher going to focused on it. In this case researcher will try to count the data from questionnaire about perception a person who ever used those 10 Aviations (at least he/she ever tried 7 Aviations). So by the result passengers will realized about the condition and position that Aviation in maps.

The main reason that Aviation Company has to look into these maps is to realize whether it has a good or bad position in others perception related to the 5 dimension of service quality.

To fulfill the confusing thought of passenger, researcher provides the data about strength and weakness that aviation that has a big competition. So, for the aviation, researcher hopes that it can be a positive improvement for the Aviation to develop their company more, and became a key for passenger to choose the aviation when they are going to have a journey from Jakarta to Singapore or from Singapore to Jakarta.

### **I.4 Statement of the Problem**

Determining the position each of Aviation comparing to others 10 Aviation domestic or international that are operated in Indonesia, the problem that researcher will evaluate in this thesis about the standard quality service of those 10 Aviations.

1. Does domestic Airlines and Domestic Airlines have a capability to do a competition?
2. According to 5 dimension of service, in which position we found the Airlines that has good image from the perception of respondent.

### **I.5 Research objectives**

This analysis is going to find out the position between 10 aviations industry that were included Garuda Indonesia, Lion Air, Air Asia, Eva Air, China Airlines, Cathay Pacific, Lufthansa, Air France, Malaysian Airlines and the last is American Airlines throughout the questionnaire that conducted to 5 dimension of service quality to perceived the image of those airlines by the perception of respondent. That will show a result of the competition between domestic flight and international flight.

This research may uses for:

- a. Having a map position of those 10 aviations from respondent perception.
- b. Found the strength and weaknesses of all aviations.
- c. Comparing the local aviation with foreign aviation from the point of view respondent.

## **I.6 Significance of Study**

For Academy, this analysis would be a journal for the next generation of President University that also do an analysis and also can be the sample of other researcher outside President University students.

For Aviation User, this thesis can be the reference to be a simple key for choosing the aviation that they will be use easily and also for domestic user (Indonesian) will realized that they are have a contribution to our country if they were used domestic aviation.

For Aviation Company, this thesis can show the perception map that are useful for Aviation Company to checked their strength and weaknesses in order to maintain their services.

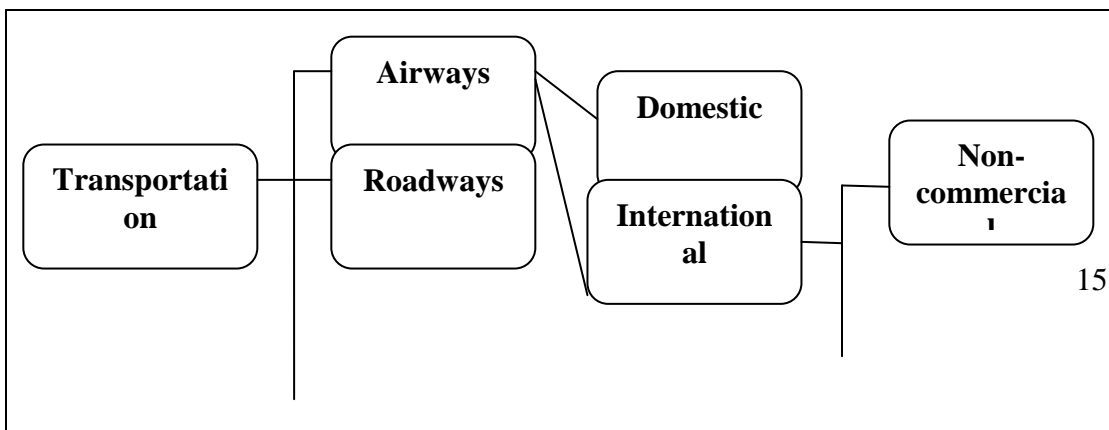
For Researcher, this journal was made to fulfill undergraduate requirement, and also created the wider point of view for researcher as a positive improvement.

## **I.7 Theoretical Framework**

This theoretical framework were built as a guide for researcher to develop the thesis with the right flow, the researcher choose the characteristic that arrange in these theoretical framework with its own reason, such as:

- a. Airways: The fastest transportation after JET.
- b. Commercial: The Business is an important activity that has a big opportunity to all future.
- c. International: The major that have been taken by the researcher is Business major, and related to its sides, the researcher was analysis International one.
- d. Route Jakarta – Singapore: Researcher thought that Singapore now is the one of famous meeting point and also shopping place for Indonesian especially.

(Please see Figure 2)



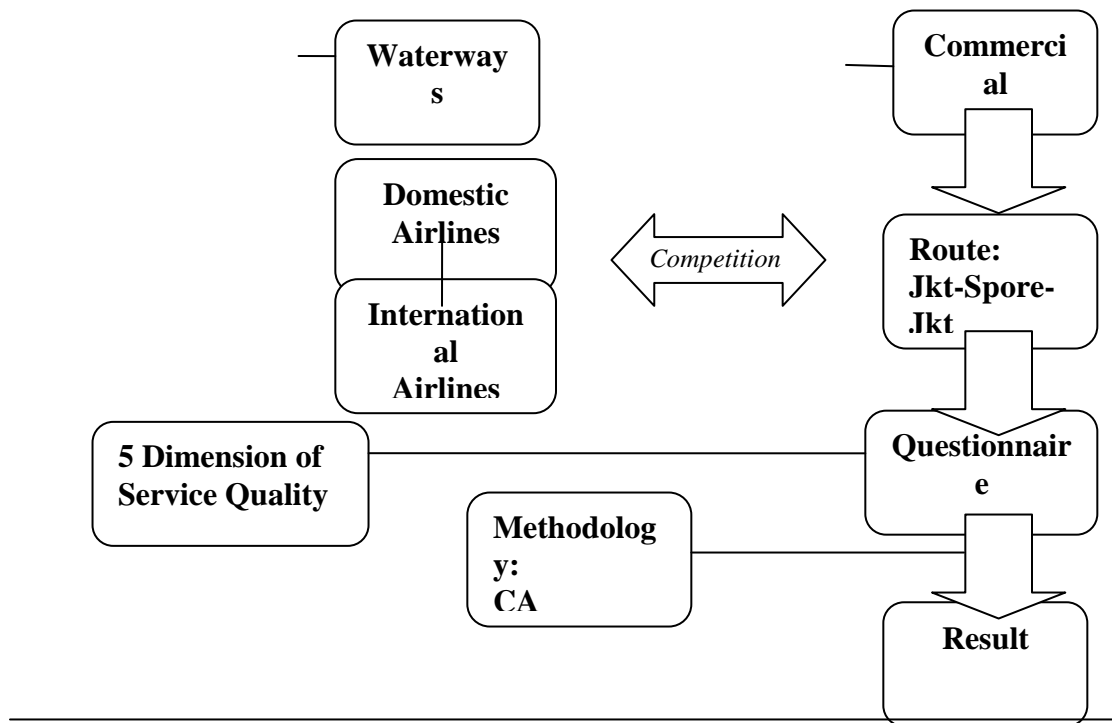


Figure. 2 Theoretical Framework

Source: Researcher Analysis

### I.8 Scope and limitation of study

In this research, the population that researcher uses is the one who has go to Singapore by at least 5 out of those 10 aviation, and the sample for questionnaire are the people who has the purchasing power and needs to go to Singapore on age around 25 – 50 years old, the reason is they might be have their own perception for each aviation, because of they has a power to choose by themselves.

The scope of the study is limited only to the 5 Dimensions of service quality; which's is the key points of customer satisfaction such as Reliability, Responsiveness, Assurance, Empathy, Tangible. for this case, the customers are the respondent (a people who has the purchasing power and needs to go to Singapore that researcher have mentioned before). Other variables will not discuss.

### I.9 Definition of terms



- a. Transportation: carriage from one place to another; removal; conveyance (<http://www.brainyquote.com/words/tr/transportation231896.html>)
- b. Aviation: Operation of heavier-than-air aircraft and related activities. (<http://answers.encyclopedia.com/question/aviation-80652.html>)
- c. Airlines: An airline is a company which offers air transport for passengers and freight (<http://www.wisegeek.com/what-is-an-airline.htm>)

## CHAPTER 2 LITERATURE REVIEW

### II.1 Service

#### II.1.1 Definition of service

Kotler (1996) said

*“A service is any act or performances that one party can offer to another that are essentially intangible and do not in the ownership of anything. Its production may not be tied to a physical product”*

Mike Boyd (Article), said

*“Service is otherwise known as any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything.”*

Some basic **assumptions**:

- There are a number of unique characteristics that separate service from tangible goods.
- These service characteristics pose issues that are not faced by everyday goods marketers

- Goods marketing strategies are not adequate in dealing with those issues.

## II.1.2 Characteristic of Service

### **1. Intangibility**

Services are intangible and insubstantial: they cannot be touched, gripped, handled, looked at, smelled, tasted or heard. Thus, there is neither potential nor need for transport, storage or stocking of services. Furthermore, a service cannot be (re)sold or owned by somebody, neither can it be turned over from the service provider to the service consumer nor returned from the service consumer to the service provider. Solely, the service delivery can be commissioned to a service provider who must generate and render the service at the distinct request of an authorized service consumer.

### **2. Perishability**

Services are perishable in two regards

- The service relevant resources, processes and systems are assigned for service delivery during a definite period in time. If the designated or scheduled service consumer does not request and consume the service during this period, the service cannot be performed for him. From the perspective of the service provider, this is a lost business opportunity as he cannot charge any service delivery; potentially, he can assign the resources, processes and systems to another service consumer who requests a service. Examples: The hair dresser serves another client when the scheduled starting time or time slot is over. An empty seat on a plane never can be utilized and charged after departure.

- When the service has been completely rendered to the requesting service consumer, this particular service irreversibly vanishes as it has been consumed by the service consumer. Example: the passenger has been transported to the destination and cannot be transported again to this location at this point in time.

### **3. Inseparability**

The service provider is indispensable for service delivery as he must promptly generate and render the service to the requesting service consumer. In many cases the service delivery is executed automatically but the service provider must preparatorily assign resources and systems and actively keep up appropriate service delivery readiness and capabilities. Additionally, the service consumer is inseparable from service delivery because he is involved in it from requesting it up to consuming the rendered benefits. Examples: The service consumer must sit in the hair dresser's shop & chair or in the plane & seat; correspondingly, the hair dresser or the pilot must be in the same shop or plane, respectively, for delivering the service.

### **4. Simultaneity**

Services are rendered and consumed during the same period of time. As soon as the service consumer has requested the service (delivery), the particular service must be generated from scratch without any delay and friction and the service consumer instantaneously consumes the rendered benefits for executing his upcoming activity or task.

### **5. Variability**

Each service is unique. It is one-time generated, rendered and consumed and can never be exactly repeated as the point in time, location, circumstances, conditions, current configurations and/or assigned resources are different for the next delivery,

even if the same service consumer requests the same service. Many services are regarded as heterogeneous or lacking homogeneity and are typically modified for each service consumer or each new situation (consumerised).

### II.1.3 Type of Service

Based on Earl Nauman (1995), there are two major types of services.

- a. **Pure Services:** When a service provides no tangible product (goods) but all service, it is called pure service. Examples are hair cut, education, aviation, etc.
- b. **Support Service:** When a service provides tangible products, it is often easy to identify the additional service provided; and those some additional services are called support service. There are three categories of support. Which are:
  1. Presale services which are support services that precede a purchase transaction.
  2. Transaction services are support services which are directly related to the transaction.
  3. Postsale services are support services which follow the transaction and extend throughout the product's life.

## II.2 Quality

Peter Drucker (1985) said that,

*“quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for.”*

Most definitions and policies are linked to the customers' perception of quality and to customer relations. Edvarsson (1988. p.91) argues that:

*“Quality is a matter of finding out what creates values for the customer and achieving it. For this it is necessary to really understand the customer and the current situation. Of fundamental it is necessary to really understand the customer's demands in the right way. If this is not done, good quality cannot be achieved. Knowledge and understanding of what the customer needs must*

*then be translated into a demand specification for the services. In the next step the demand specification must be transformed into concrete services.”*

## II.3 Service Quality

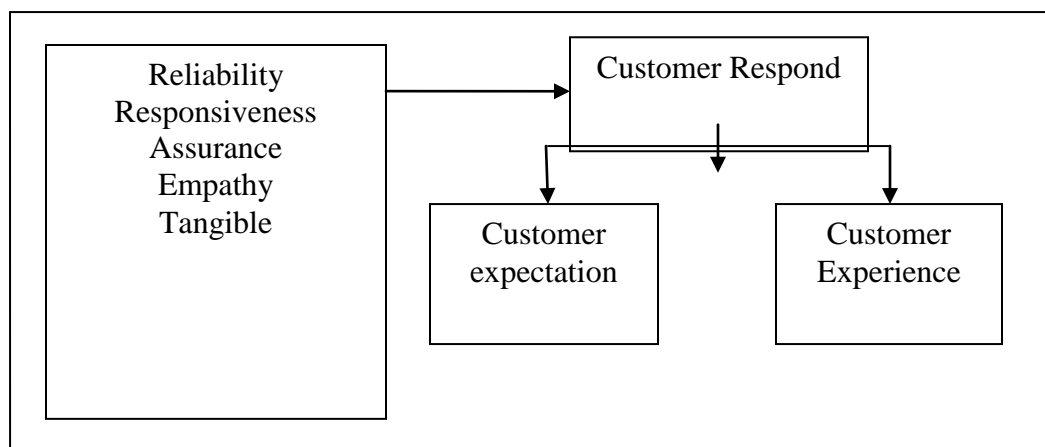
Wikipedia described,

*“Service quality refers to a number of inter-related factors including the way in which individuals are treated by providers, the scope of services and contraptives available to clients, the quality of the information provided to the clients and quality of the counseling skills, the promotion of individual choice, the technical competence of providers, and the accessibility and continuity of services.”*

### II.3.1 Dimensions of Service Quality

Consumers mainly consider five dimensions in their assessments of service quality, and researcher used this dimensions as a tools to look the result of corporate image perception. Based on Philip Kotler, et all (2006) and Valerie A. Zeithaml (2003), service quality is evaluated based on five specific service quality dimensions:

- a. Tangibles: Appearance of physical facilities, equipment, personnel, and communication materials.
- b. Reliability: Ability to perform the promised service dependably and accurately.
- c. Responsiveness: Willingness to help customers and provide prompt service.
- d. Assurance: Knowledge and courtesy of employees and their ability to convey trust and confidence.
- e. Empathy: Caring, individualized attention the firm provides its customers.



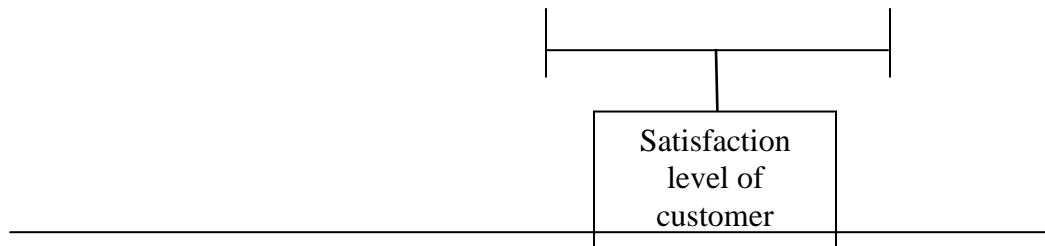


Figure 3. Five Dimensions of Service Quality

Source: Phillip Kotler, Marketing Management, 1994, P. 476

This figure can show the relation of 5 Dimension of Service Quality and the satisfaction of customer to the performance of each aviation.

## II.4 Correlation

Researcher was analyzed the competition of domestic and international Aviation by calculating the data of level of performance 10 Aviation that are operated in Indonesia and specially who served International route, Jakarta-Singapore.

By the performance of service that were shown by each aviation, the respondent could assess the image of those aviation from their point of view (perception), so the respondent able to choose what aviation is best for them to flided to Singapore.

From the assessment of respondent the researcher can look up the position of ten aviation and easily to know, where the competition are happened between domestic and International Aviation.

## **CHAPTER 3**

### **METHODOLOGY**

#### **III.1 Methodology**

Research can be done by two different ways that are quantitative and qualitative. These two analyses were used according to what problem has to be solved in research.

The researcher decided to use quantitative analysis because of there's a number of statistical data that was gathered to have calculated and the result can showing us the map position of the 5 aviation.

##### **III.1.1 Quantitative Analysis**

### III.1.2 Definition

Quantitative Analysis is statistical analysis techniques to process the determining value by examining its numerical and measurable characteristics. Quantitative analysis is different from the Qualitative analysis because in Qualitative analysis the Journal will have no a calculation of the numerical data, they are focus on the theory and words but on the other hand Quantitative analysis will focus on using a calculation the input data to reach the output.

Based on quantitative research methodology books quantitative analysis are influenced by the philosophy empires and behavioral that are lead by Thomas Hobbes, John Locke, and David Hume. They said that all of experiences are effect of interaction between a human with their environment. Experience comes from our Because of the researcher analyzing the rating of 5 Aviations and also need the position of those all aviations, so the researcher used the Quantitative analysis on this journal, and also the reason why the researcher used qualitative analysis? Because qualitative analysis is one of analyze system which can be use to research something and will produced an objective summary. For the statistical data, the researcher chooses Multivariate and CA (Categorical Analysis) as a part of Multivariate system to count it.

### III.1.3 Multivariate Analysis

Multivariate analysis is the analyzing system that having a purpose to see the relation of some variable

Explained by encyclopedia that multivariate analysis is a Univariate analysis consists in describing and explaining the variation in a single variable. Bivariate analysis does the same for two variables taken together (covariation). Multivariate analysis (MVA) considers the simultaneous effects of many variables taken together. A crucial role is played by the multivariate normal distribution, which allows simplifying assumptions to be made (such as the fact that the interrelations of many variables can be reduced



to information on the correlations between each pair), which make it feasible to develop appropriate models. MVA models are often expressed in algebraic form (as a set of linear equations specifying the way in which the variables combine with each other to affect the dependent variable) and can also be thought of geometrically. Thus, the familiar bivariate scatter-plot of individuals in the two dimensions representing two variables can be extended to higher-dimensional (variable) spaces, and MVA can be thought of as discovering how the points cluster together.

The most familiar and often-used variants of MVA include extensions of regression analysis and analysis of variance, to multiple regression and multivariate analysis of variance respectively, both of which examine the linear effect of a number of independent variables on a single dependent variable. This forms the basis for estimating the relative (standardized) effects of networks of variables specified in so-called path (or dependence or structural equational) analysis—commonly used to model, for example, complex patterns of intergenerational occupational inheritance. Variants now exist for dichotomous, nominal, and ordinal variables.

A common use of MVA is to reduce a large number of inter-correlated variables into a much smaller number of variables, preserving as much as possible of the original variation, whilst also having useful statistical properties such as independence. These dimensionality-reducing models include principal components analysis, factor analysis, and multi-dimensional scaling. The first (PCA) is a descriptive tool, designed simply to find a small number of independent axes or components which contain decreasing amounts of the original variation. Factor analysis, by contrast, is based on a model which postulates different sources of variation (for example common and unique factors) and generally only attempts to explain common variation. Factor analysis has been much used in psychology, especially in modelling theories of intelligence.

#### III.1.3.1 CA (Categorical Analysis)

### III.1.3.2 Definition of CA

Categorical analysis is the processing of data in order to compare objects by entering the performance of a number of variable factors of the object, unlike the MDS which only measure the similarity between objects in the perception of the client. In CA patients are not only asked the similarity between the aviation but also asked his opinion about the rates and other variables.

In the analysis with CA in the input data is data categorical and in many cases the data used is nominal. The filling process, such as SPSS dialog boxes are usually, but use syntax facilities.

Syntax is basically a series of commands used to un particular method.

## **III.2 Research instrument**

### III.2.1 Data collection method

In this research, researcher using questionnaire as an instrument, Business dictionary said that questionnaire is List of a research or survey questions asked to respondents, and designed to extract specific information. It serves four basic purposes: to (1) collect the appropriate data, (2) make data comparable and amenable to analysis, (3) minimize bias in formulating and asking question, and (4) to make questions engaging and varied.

The data used in this research was acquired directly from the analyzed objects of respondent, which is so-called primary data. Questionnaires were given to customers using closed-ended questions in which customers are provided some choices to be chosen.

The questionnaire will cover:

1. Personal information; this type of question will cover the general information of the respondent profile. Name will be an optional whether the sample of the research want to fill it or not.
2. Tangibles dimension question; this type of question will cover a tangibles dimension of service quality that will be evaluated by the respondent.
3. Reliability dimension question; this type of question will cover a reliability dimension of service quality that will be evaluated by the respondent.
4. Responsiveness dimension question; this type of question will cover a responsiveness dimension of service quality that will be evaluated by the respondent.
5. Empathy dimension question; this type of question will cover an empathy dimension of service quality that will be evaluated by the respondent.
6. Assurance dimension question; this type of question will cover assurance dimension of service quality that will be evaluated by the respondent.

### III.2.2 Research variables and indicators

Questionnaire was designed based on the five dimensions of service quality

Researcher got 5 key points of services that important for built questionnaires, they are:

- a. Reliability
- b. Responsiveness
- c. Assurance
- d. Empathy
- e. Tangible

The shape of services in Airlines that are:

- Reliability: the scheduling (On time Performance-Pen) of flight
- Responsiveness: a power to solving the problem by giving the right solution and clear information.

- Assurance: safety promise, the ability of staff, either in ground staff or in-flight staff
- Empathy: caring to passenger
- Tangible: Decorating of exterior and also interior

From these 5 key points researcher got 9 variables to be counted, there are

| No | Variables                                    |
|----|--|
| 1  | Clear Information                            |
| 2  | Quick response for solving a problem         |
| 3  | Friendly service                             |
| 4  | On time schedule                             |
| 5  | ground staff and in flight staff skills      |
| 6  | Safety, security, and comfort                |
| 7  | Appearance of the stewardess                 |
| 8  | Design interior and exterior of the aircraft |
| 9  | Price  |

Table 1. Variables assessment  
Source: Made by the researcher

### III.2.3 Questionnaire Design

The format questionnaire was designed based on analysis and monitoring tool of service quality. The questions are derived from the five dimension of service quality, which are reliability, responsiveness, tangible, assurance, and empathy. They are evaluated based on performance according to perceptions.

The rating scale of questionnaire is using Polar question, Polar question is In linguistics, a yes-no question, formally known as a polar question, is a question whose expected answer is either "yes" or "no". Formally, they present an exclusive disjunction, a pair of alternatives of which only one is acceptable. In the English language, such questions can be formed in both positive and negative forms (e.g. "Will you be here tomorrow?" and "Won't you be here tomorrow?").

Yes/No questions are in contrast with non-polar wh-questions, with the Five Ws, which do not necessarily present a range of alternative answers, or necessarily restrict that range to two alternatives.

For the example of the questionnaire, see appendix 1.

#### III.2.4 Validity and Reliability

For validity and reliability, this research will have no a validity and reliability test because it used “Polar Question”

### **III.3 Sampling Design**

The population of this research is the aviation user, the man or women that have flew from Jakarta-Singapore, and ever used these 10 aviations.

Furthermore, researcher used simple random sampling, one of the five probability sampling methods. Through this method, each item or person in the population has the same chance of being included. (Douglas A. Lind, et al, 2003) Due to the time and cost limitation, the number of respondent is set to be 50, as the sample size from the total of many people who have a route that mentioned before.

### **III.4 Statistical Treatments**

Below are statistical treatments that researcher uses for this study in order to analyze the result of questionnaire

Based on the categorical analysis formula, researcher used the assessment variable, as follow:

Value of zero (0), is the variable on the aviation that are dissatisfy, or there are many weakness on services of the aviation

Researcher categorized it as “NO”

Value of one (1), is the variable on aviation that was satisfy  
 Researcher categorized it as “YES”

### III.5 Limitations

Researcher analyzes 10 different Aviation that are exactly had their own characteristic and also their own standard and can't be customized.

Some respondent refused to fill the questionnaire. The researcher also cannot gather the data from all the population, because of the limitation of time.

Researcher also has no secondary data for the population because for CA, the data need was only from primary data which is from questionnaire.

## CHAPTER 4

### ANALYSIS AND INTERPRETATION DATA

#### IV.1 Data Presentation

| No. | Statement                                    | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 |
|-----|--|----|----|----|----|----|----|----|----|----|-----|
| 1   | Clear Information                            | 43 | 31 | 40 | 37 | 32 | 40 | 39 | 34 | 32 | 34  |
| 2   | Quick response for solving a problem         | 40 | 33 | 38 | 38 | 31 | 44 | 41 | 31 | 30 | 36  |
| 3   | Friendly service                             | 44 | 31 | 33 | 30 | 30 | 41 | 43 | 34 | 28 | 30  |
| 4   | On time schedule                             | 46 | 30 | 40 | 42 | 32 | 47 | 46 | 33 | 31 | 29  |
| 5   | Design interior and exterior of the aircraft | 45 | 29 | 41 | 40 | 37 | 46 | 45 | 35 | 37 | 38  |
| 6   | Appearance of the stewardess                 | 43 | 28 | 38 | 39 | 38 | 45 | 46 | 40 | 36 | 40  |

|   |   |    |    |    |    |    |    |    |    |    |    |
|---|---|----|----|----|----|----|----|----|----|----|----|
| 7 | Safety, security, and comfort           | 47 | 33 | 40 | 41 | 32 | 44 | 46 | 31 | 31 | 30 |
| 8 | Ground staff and in flight staff skills | 39 | 24 | 36 | 34 | 28 | 41 | 40 | 26 | 33 | 30 |
| 9 | Price                                   | 37 | 29 | 35 | 46 | 28 | 39 | 38 | 30 | 27 | 26 |

Based on the questionnaire gathered, the specific calculation can see in appendix.2, researcher got the answer from respondent with each dimension as follow:

Table 2. Nominal Result

Source: Primary data input

#### IV.1.1 Research variables

This research was using the five dimensions of service quality and for the question in the questionnaire, the researcher are break down those five dimension into a 9 questions or variables. (see in the Table.3)

| Factors        | Variables                                    | Statement no |
|----------------|--|--------------|
| Responsiveness | Clear Information                            | 1            |
|                | Quick response for solving a problem         | 2            |
| Reliability    | Friendly Service                             | 3            |
|                | On time schedule                             | 4            |
| Tangible       | Design interior and exterior of the aircraft | 5            |
|                | Appearance of the stewardess                 | 6            |
| Assurance      | Safety, security, and comfort                | 7            |
|                | Ground staff and in flight staff schedule    | 8            |
| Empathy        | Price  | 9            |

Table 3. Factors and Variables  
Source: Primary Data

## IV.2 Data Processing

Categorical analysis is used in processing the data in order to find out the dominant factors of service quality in each aviation, which will be explained in the following steps:

1) Organizing data

Organizing data that were collected through respondents is done within a table where the row list is the variables and the column list is the aviation.

2) The data that has been organizing in the first step is ordinal with Polar question. These ordinal data can be calculated by Syntax, and the first step in SPSS is making an ANACOR.

```
ANACOR
TABLE=ALL(9,10)
/DIMENSION=2
/NORMALIZATION CANONICAL
/PRINT TABLE SCORES CONTRIBUTIONS PROFILES PERMUTA
TION
/VARIANCES ROWS COLUMNS SINGULAR
/PLOT ROWS COLUMNS JOINT NDIM(ALL.MAX).
```

Figure 4. Syntax Box

Source: SPSS input

With ANACOR, the management of airlines could find out the strength and weaknesses of their own airlines and also airliner able to see who the airlines are the competitor.

3) After we are processing the data with Syntax, the input are transferring to SPSS, so the SPSS can calculated the data and showed the output as a map position of perception.



( For the detail calculation can see in appendix 2)

### **IV. 3 Data Analysis**

#### IV.3.1 Row Scores

Row scores is the figure that shows a map of the services variables. There are four quadrants of services, the content of quadrant are follows:

Quadrant I:

- Responsiveness  
Variables 1 & 2 : Clear Information and Quick response for passengers
- Tangeble  
Variable 5 & 6 : Internal, External design and appearance of rtewardess
- Assurance  
Variable 8 : Ground staff and in flight staff skills

Quadrant II:

- Empathy  
Variable 9 : Pricing, how aviation set the price

Quadrant III:

- Reliability  
Variable 4 : On time schedule performance
- Assurance : Safety, security, and comfort

Quadrant IV:

- Reliability  
Variable 3 : Friendly service

Analysis:

From the figure below, shows that punctuality and service facilities between responsiveness and tangible are in the first quadrant, and also we can see the third quadrant consist of Reliability and assurance and we can see the remaining variables in the two and fourth quadrants.

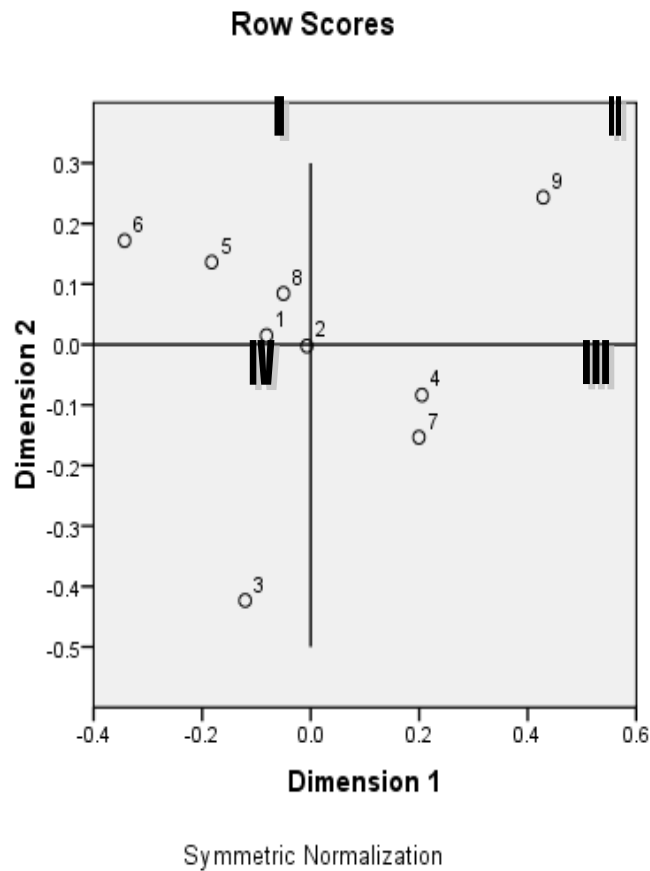


Figure 5. Variable of Services analysis

Source: SPSS output

#### IV.3.2 Column Scores

Column scores is the figure that shows a map of the aviation variables. There are four quadrants of aviation, the content of quadrant are follows:

##### Quadrant I

- Aviation 5, 9, and 10 : China Airlines, Malaysian Airlines, and American Airlines

##### Quadrant II

- Aviation 3 and 4 : Air Asia and Eva Air

##### Quadrant III

- Aviation 1, 2, 6 and 7 : Garuda Airlines, Lion air, Cathay Pacific, Lufthansa

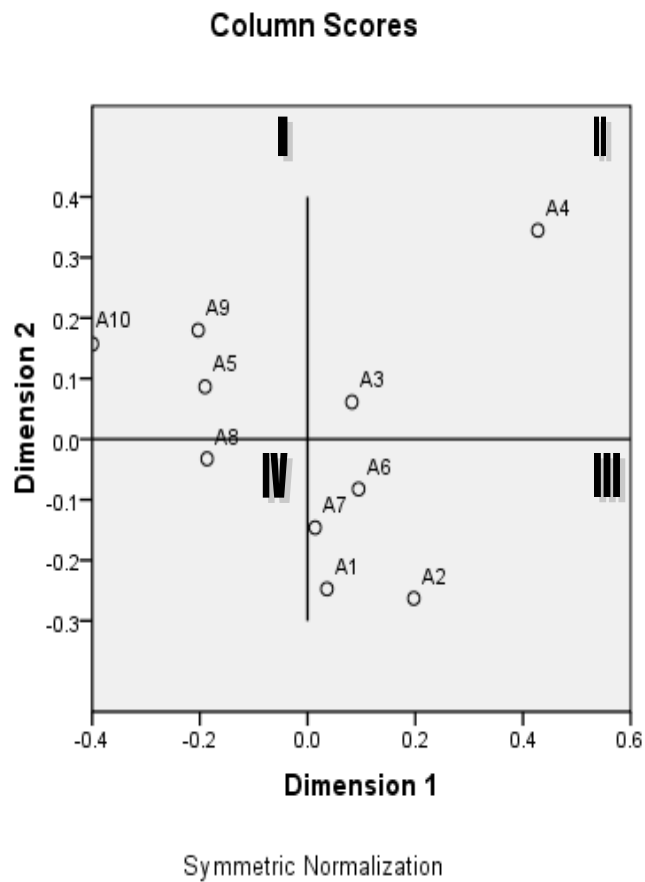
##### Quadrant IV

- Aviation 8 : Air France

##### Analysis:

Showed in the third quadrant, there are the domestic aviation and international aviation are in the same quadrant, means that they are have a same ability to satisfy the customers and on the other quadrant there are also a few international aviation that are have same ability.

For the last step, we are combined the both variables, Services and Aviation.



#### IV.3.3 Row and Columns scores

Row and Column scores is the figure that shows a map of the aviation and also variables. There are four quadrants of aviation and 9 variables, the content of quadrant are follows:

| Quadrant | Aviation  | Dominant factors  |
|----------|---|---|
| I        | China Airlines<br>Malaysian Airlines<br>American Airlines | Clear Information<br>Quick response for solving a problem<br>Appearance of the stewardess |

|     |   |   |
|-----|---|---|
|     |   | Design interior and exterior of the aircraft<br>Ground staff and in flight staff skills |
| II  | Air Asia<br>Eva Air   | Price   |
| III | Garuda Indonesia<br>Lion Air<br>Cathay Pacific<br>Lufthansa | On time schedule<br>Safety, security, and comfort                                       |
| IV  | Air France  | Friendly Service  |

Table 4. Analysis of Row and Column.

Source : Made by the researcher

Analysis:

Based on the analysis of figure 4, we can see the competition between domestic and international aviation are located in third quadrant, in this quadrant the aviation that are exist is Garuda Indonesia and Lion air as a domestic aviation and also Cathay Pasific and Lufthansa as a International aviation. In third quadrant, they are showed close to the service dimension in reliability and assurance side, in spesific they are dominant in the on time performances, safety, security and also comfort.

For the other competitors who are exist in the different quadrant, also have their own superior services, as we can see in fourth quadrant there is Air France aviation with its specialty in friendly service, and in the first quadrant CA analyze that China Airlines, Malaysian Airlines and American Airlines are dominant in responsiveness, assurance and also tangible factors.

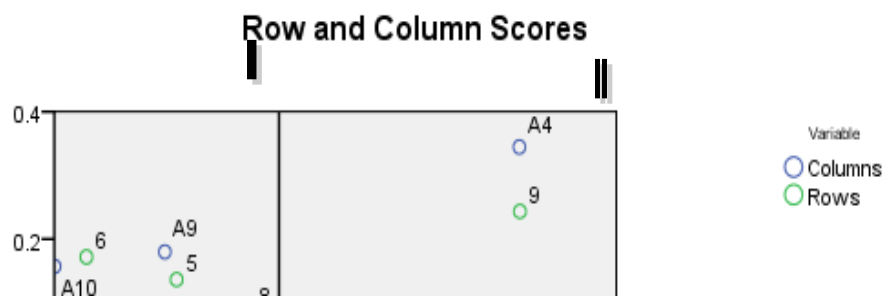




Figure.7 Perception map for aviation  
Source: SPSS output

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATION**

#### **V.1 Conclusion**

Transportation business is the one of business that important, the unique one of this business is the Airways transportation or usually called by Aviation.

Aviation industries have its specification that the other transportation doesn't have. It is they capability of speed. This factor can be dominant because today people are a day because of this opportunity; many kinds of aviation are existing and its make a lot of competition. Especially in International route (Jakarta – Singapore)

As domestic airlines Garuda Indonesia and Lion Air get in to the competition and based on the research that has been conducted to 50 respondents, as the representative of service quality evaluator in competition of domestic and international airlines. Researcher concludes:

- a) Domestic airlines could have a competition with international airlines
- b) Domestic airlines dominant in Assurance and Reliability factors, which are on time schedule, safety, security and comfort
- c) In that two dominant factors domestic airlines are compete with international airlines that are Cathay Pacific and Lufthansa
- d) Other international Airlines also have their own dominant factors that made they are specialize on it.

In summarize, every airlines has their own dominant power that bring they are to the specification image. From the point of view respondent that are gathered by questionnaire, reported that the competition happened between international and domestic airlines because they have the same dominant power characteristic.

## **V.2 Recommendation**

Based on this research, there are some recommendations that the researcher described for the domestic airlines as stated below:

- a) The domestic airlines was already dominant in the reliability aspect that are on time schedule and safety, so domestic has to maintain those dominant factors
- b) For the others factors that are not dominant, domestic airlines have to improve it. In order to develop a high quality service in its airlines.
- c) For the international airlines that already qualify enough, has to maintain their dominant factor and also gain more significant improvement, in order to keep their image.
- d) Also monitoring the other competitor that has different dominant factors.

Beside try to improve in those things, the management of domestic airlines also has to maintain a good work, and make sure that everything is under control and well organized.

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