

Modeling of Service Supply Chain and Its Relationship on Repurchase Intention: Case Study of Lion Air's in Indonesia

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Abstract— Over the past decade, the air travel passengers in Indonesia was recorded high and increased time to time. However, besides the big opportunities, the air travel providers have faced numerous issues such as airlines operation. In conjunction with the issue, this study aims to investigate the model of service supply chain and its relationship on repurchase intention in Lion Airlines. The design of this study is quantitative approach through survey questionnaire. A total of 200 passengers have participated in this study and the data analyzed using structural equation modeling that assisted by LISREL-8. The results of analysis shows that Service supply chain and Complaint Handling have a significant and positive relationship on Corporate Image. Also, this study found that Delay has negatively and significant effect on Repurchase Intention. Service supply chain, Complaint Handling and Corporate Image have a significant positive relationship on Repurchase Intention. In conclusion, this study suggests the airlines must improve their strategies to provide the best service to passengers. It aims to increase their repurchase intention for Lion Airlines.

Keywords— Service supply chain, Delay, Complaint Handling, Corporate Image, Repurchase Intention.

1. Introduction

In modern era, time efficiency and friendly instruments to travel has been being air transportation is gaining popularity around the world as it provides fast and comfortable travel. In 2018, the International Civil Aviation Organization (ICAO) recorded a total of 4.3 billion air passengers traveling around the world in 2018. Indonesia is no exception, because the number of domestic passengers carried on scheduled services in recent years has increased. Based on the records of the Indonesian Ministry of

Transportation, around 197 million passengers traveled on domestic flights in 2018. This positive trend has brought market opportunities for operating airlines, accompanied by competition. This has created a more competitive environment than before, given the airline industry not only provides air travel services but also various factors such as route networks, fleet size, technology, market share and marketing strategy.

High competition has led to various attempts by airlines to attract potential passengers or increase interest in repurchasing their existing passengers. However, problems occur in every industry, although some problems cannot be avoided at least to some extent. Airlines must identify common phenomena that could trigger problems and find ways to eliminate them so that passengers want to fly with them again. Passenger welfare must be the main concern. As a result, maintaining passengers requires airlines to be more sophisticated in understanding passengers' expectations [1]. It is important for airlines to provide profitable services for their passengers because their satisfaction and positive behavioral intentions will create favorable situations for airlines. This study establishes delays, service supply chain complaint handling and corporate image as common variables and examines their effect on repurchase intention.

Lion Air is a low-cost airline based in Indonesia. It is the largest airline in the country by the number of passengers carried. In 2017, Lion Air took the largest percentage of total domestic passengers carried; about 33 million passengers. That is a big advantage over their competitor, the airline Garuda Indonesia, which occupies the 2nd position with 19 million passengers. Their service supply chain is considered cheaper compared to full service airlines. Despite being the market leader, Lion Air is known for its problems. In

September 2019, their on-time performance was only 74.07%, an indication of delays. There are times when a passenger is angry with the delay and immediately projects his complaint to airport officials, but the officer does not provide a detailed explanation for the stranded passenger regarding the delay. Next, a series of unfortunate events with the most prominent recently being the infamous JT 610 crash involving a newly built Boeing 737-MAX which killed everyone on board. The public associates not only airlines with delayed flights but also bad safety concerns. This situation is interesting to study because Lion Air still carries the most domestic passengers despite all of them. Thus, this study is written to investigate the model of service supply chain and its relationship on repurchase intention in Lion Airlines. Numerous previous studies focused on service quality in the airline industry rather than problems and how that affects passenger repurchase responses and intentions. Therefore, the aim of this study is to determine the effect of problems related to waiting time, tariffs, complaint handling and corporate image on repurchase intentions based on the Lion Air case.

2. Literature Review

Delay is the waiting time that a passenger must experience when a flight takes longer to depart or arrive than scheduled. Delay is often measured by comparing actual time to scheduled time. A flight that arrives or departs 15 minutes or more after the scheduled time can be considered a delayed flight [2]. Delays are a common problem in the airline industry, but can trigger negative responses and behavioral intentions from passengers [3]. This is because delays can cause anger, anxiety, uncertainty, and dissatisfaction among passengers [4]. Passengers want a definite schedule for their flight so airlines are obliged to inform their passengers of any delays and explain to them clearly why their flight should be delayed. Furthermore, as explained by the Airport Cooperative Research Program (2014), delays make airlines and their passengers suffer losses because airlines need to increase operating costs, and passengers have to lose time that could otherwise be used as planned. If the waiting time increases, it is more likely that the passenger will respond negatively and thus influence their repurchase intention in the same way.

Service Supply Chain Management (SSCM) is an analog systems approach it is suitable for providing cellular services such as parcel delivery, cabling, and home health care. The key element that differentiates SSCM from SCM is two-way optimization, perishability, and management of capacity and demand simultaneously. In SSCM, technological innovations such as the Internet and wide area wireless connectivity incorporate customers into the service company's knowledge management strategy in new ways. Dynamic availability of individual customer needs and preferences and the ability to link them to costing and optimization strategies companies in "real time" provide a new dimension to the knowledge management strategy service Company.

A service supply chain, unlike a physical goods supply chain, often involves the customer as a active participants in the production process. The latest advancement in information technology (e.g., the internet, global positioning satellites, and wide area wireless networks) involves customers in a very direct way. This involvement opens opportunities for companies to create a competitive advantage by leveraging existing new knowledge management strategies built around and include customers. This strategy provides opportunities for growth quality of service while lowering the costs of providing service.

Stages of the service chain for field workers providing services to customers analogous to that found in a physical goods supply chain as shown in Figure 1. SSCM follow the supply chain paradigm conceptually, but the approach and importance is relative each component is different. In short, all services act on something provided by the customer. This is right. The implication is that all services have the customer as the main supplier of input. In other words, the customer is the supplier in all service businesses, that is, supplier-customer duality.

A complaint is an expression of dissatisfaction made for or about an organization, in relation to a product, service, staff or complaint handling, for which a response or resolution is expected to be explicit or implicit or legally required [5]. Complaint handling is simply the company's way of handling complaints from their customers that need resolution. It consists of the ease, flexibility and efficiency of recovery policies [6]-[8] and the empathy, politeness, sensitivity and treatment of employees and the efforts they put into solving

problems [9]. Service meetings between companies and their customers can fail to some extent for a variety of reasons. This failure created dissatisfaction because customer expectations were not met [10]. Companies need to listen to customer complaints as a form of their negative response.

Customers may show angry emotions if they are unhappy with the way the company handles their company. Satisfaction correlates with the way companies handle complaints from their customers. This is the overall affective feelings of customers about the way the company handles their complaints [7]. It is believed that when companies handle customer complaints in a way that satisfies them, their repurchase intent will increase. Therefore, how a company handles complaints from its customers is critical because it can determine their behavior towards the company in the future. Complaint handling can also have a positive influence on the company's image.

Company image is a reflection of how customers perceive the organization with their own associations. The overall perception of the company has been found in the minds of various segments of society [11]. Corporate image influences consumer behavior so that companies can strive to develop and manage their image to create good perceptions and associations in the minds of consumers [11]. Planning and managing an image well is a promising marketing strategy to retain existing customers because a good image seems to appeal to them. The more preferred the company image, the more likely the customer will think that the services offered by the company are getting better [1]. This is similar in the airline industry; an airline with an image that is preferred will have less negative elements associated with it. The better the image of an airline in the minds of its passengers, the less negative assessment they will give to the airline [1]. A good company image can positively influence the customer's intention to repurchase.

Repurchase is defined as actual consumer behavior that results in purchasing the same product or service more than once [12]. In full terms, the intention to repurchase is an individual's assessment of buying again a designated service from the same company, taking into account its current situation and its possible circumstances [13]. After obtaining a service, consumers generally conduct an evaluation to decide whether they will use the same service and become loyal

customers [14]. Consumers evaluate a service positively when it provides them with benefits and satisfaction that encourages them to buy back the same service. Various factors can influence repurchase intentions. This study will determine delays, service supply chain complaint handling and corporate image as the main focus and will examine their empirical influence on repurchase intention. In line with a relevant literature, this study proposes a conceptual model which involving the variable of delays, service supply chain complaint handling and corporate image respectively on repurchase intentions and, in addition, the effects of service supply chain and complaint handling on corporate image.

3. Methodology

This study is designed using quantitative approach through survey questionnaire (self-administered). In ref [15], he said that the methodology seeks to measure data and usually applies statistical analysis. The population of this study is Lion Air domestic passengers at Soekarno-Hatta International Airport (1A and 1B). A total of 200 passengers have been participated in this study. In addition, the questionnaire was designed and used previous indicators that have published. The indicators are listed and respondents are asked to rate their level of agreement with each statement on a scale of 1, which shows the strongest level of disagreement, to 6, which indicates the strongest level of agreement. The indicators as seen in Table 1.

The data will be analyzed using structural equation modeling by assisting the LISREL 8.8. For the first step, we conduct the exploratory factor analysis (EFA) that was carried out by using SPSS-20. Then, the confirmatory factor analysis (CFA) was carried out to test the suitability of the hypothesized model for each latent variable. Six indices are used: probability (equal to or greater than 0.05); CMIN / DF (equal to or less than 2.00); CFI (equal to or greater than 0.95); RMSEA (equal to or less than 0.08); NFI (equal to or greater than 0.90); and RMR (equal to or less than 0.05). The next stage is to collect all the models to build a complete structural equation model. There is a goodness-of-fit index that does not meet the criteria so it needs to be modified. As a result of three indicators are eliminated; one of the service supply chain one of

the company image and one of the repurchase intentions, leaving 20 indicators with a good degree of conformity. Finally, all hypotheses were tested.

4. Results and Discussion

Before embarking on the final result, this section presents the demography profile of respondents. The result of demography profile of respondents as seen in Table 2.

Table 2 displays the general information of respondents. Among 200 respondents, 87 (43.5%) were women and 113 (56.5%) were men. In terms of age, the largest age group is between 29-34 years or reaching 24.5% of the total percentage. Judging from the educational background, the largest group is undergraduates, reaching 57% of the total percentage. Finally, in terms of work, respondents who work as PNS and TNI have the largest

percentage, namely 32%. In order for data to be processed for CFA, it must meet EFA requirements. The KMO sample adequacy measure must have a value equal to or greater than 0.60, the Bartlett's precision test must have a significance value less than 0.05, and Cronbach's alpha must have a value greater than 0.70. The results showed that all the values of each variable met the criteria: delay had a KMO value of 0.868, a significance of 0.000, and Cronbach's alpha of 0.852; the service supply chain has a KMO value of 0.908, a significance of 0.000, and a Cronbach alpha of 0.957; complaint handling had a KMO value of 0.921, a significance of 0.000, and a Cronbach alpha of 0.932; corporate image has a KMO value of 0.865, a significance of 0.000, and a Cronbach alpha of 0.946; repurchase intention has a KMO value of 0.858, a significance of 0.000, and a Cronbach alpha of 0.929. Thus, CFA can be done.

Table 1. The Summary of Questionnaire Indicators (Adopted)

Variable(s)	Indicator(s)	References
Delay	<ul style="list-style-type: none"> - Waiting time was longer than scheduled - Waiting time was longer than other airlines - Waiting time was longer than expected - Waiting time was long 	[16]
Service supply chain	<ul style="list-style-type: none"> - Channel structure - Service recipient - Flow of service - Flow of information - Service delivery 	[17]
Complaint handling	<ul style="list-style-type: none"> - Staffs treated passengers with respect - Staffs paid attention to passengers' concerns - Staffs gave a pleasant attitude - Staffs were fast in handling complaints - Staffs provided ease for passengers to complain - Staffs handled passenger's complaint as fast as possible 	[18]
Corporate image	<ul style="list-style-type: none"> - Good reputation - Good credibility - Good attitude - Good attraction 	[19]
Repurchase intention	<ul style="list-style-type: none"> - Want to fly again with the same airline - Interested to fly again with the same airline - Interested to try another products from the same airline - Interested to make the same airline a first choice 	[20]

Table 2. The Result of Respondent's Demography Profile

Demography	Category	Frequency	Percentage
Sex	Male	87	43.5
	Female	113	56.5
Age	23-28	30	15.0
	29-34	49	24.5
	35-40	39	19.5
	41-46	44	22.0
	47-52	26	13.0
	Above 52	12	6.0
Educational background	Junior high	13	6.5
	Senior high	30	15
	Diploma	22	11.0
	Bachelor	114	57.0
	Post-graduates	21	10.5
Occupation	Student	12	6.0
	Civil servants/Army	64	32.0
	Employee	53	26.5
	Entrepreneur	24	12.0
	Others	47	23.5

By using the LISREL's results, the goodness indices are all appropriate for each model that is hypothesized. Based on these results, the relationship between variables can then be made to build a structural model. The degree of kindness must be tested to demonstrate full acceptance of the model. The results show that there is an index that does not meet the requirements: the probability is only 0.001 and RMR 0.058. Therefore, the modification had to be made by adding the error covariance as suggested in the results. After repeating, model fit is achieved without an unsuitable index. The probability has been corrected to 0.285 and the RMR has been corrected to 0.033. As a result, the model was accepted and no further modification was required.

Finally, all hypotheses were tested. The estimates are then converted into t-values. The hypothesis is accepted if the t value is greater than 1.645 or -1.645. The results showed that all hypotheses were accepted: delay had a negative effect on repurchase intention with t-value -2,823; perceptions of tariffs have a positive effect on corporate image with a t-value of 4.118; complaint handling has a positive effect on corporate image with a t-value of 3.885; perceptions of tariffs have a positive effect on repurchase intention with a t-value of 4.756; handling of complaints has a positive effect on repurchase intention with a t-value of 6,435; Company image has a positive

effect on repurchase intention with a t-value of 8.186.

This study analyzes the factors that influence passengers' intention to repurchase domestic flights from Lion Air. This study also provides support for the establishment of an airline's marketing strategy with the aim of reducing problems that have an impact on passengers' positive behavioral intentions. First, delay has been shown to be a factor influencing repurchase intentions. In particular, it negatively affects repurchase intention. Although most respondents disagreed with statements about procrastination, it is important to remember that negative relationships may work the other way around. These results support previous research which proves that delay has a negative effect on repurchase intention because it has an impact on passenger acceptability and negative responses as waiting time increases [16].

Conversely, the dominance of agreement over statements about postponement can result in disagreement with statements about repurchase intentions [16]. So, it makes negative relationship valid for different consensus. There is still room for Lion Air to clean up because there are respondents who agree with the postponement statement. Even if they are used to waiting, passengers may start complaining as the waiting time increases. Lion Air needs to develop various

strategies to reduce flight waiting times so that the intention to buy back passengers can be increased.

Second, service supply chain are proven to be a factor that positively affects corporate image and repurchase intentions. In addition, company image is also proven to have a positive effect on repurchase intention. These results support previous research which proves that service supply chain have a positive influence on company image and repurchase intentions [21]. Respondents considered the Lion Air fare to be profitable because they agreed that the price was affordable and even cheaper compared to other airlines. They also agree that service supply chain their services and benefits. However, it cannot be concluded that Lion Air provides excellent services and benefits as far as they are a low cost airline. Lion Air must continue to improve their services so that passengers' perceptions of their service supply chain can be better than before and thus positively influence their repurchase intentions. This is supported by previous research that it is empirically proven that company image has a positive effect on repurchase intention.

Finally, complaint handling is proven to be a factor, each of which has a positive effect on company image and repurchase intention. These results support previous research which proves that complaint handling has a positive effect on corporate image [22] and repurchase intentions. Although most respondents agree with the statements regarding the handling of complaints in the questionnaire, it cannot be concluded that Lion Air has actually performed very well in handling complaints from its passengers. Therefore, Lion Air must conduct a thorough assessment of passengers and staff regarding the factors associated with handling complaints. It is imperative to identify the lack of their handling of this situation to consider in developing a strategy that prioritizes attention to passenger welfare when

dealing with their complaints. Satisfaction from a well-managed complaint handling will lead to a positive perception of the airline's image and consequently make them want to fly with the airline again.

There are limitations to this research. Hence, further studies will be useful. First, conducting a survey at another airport terminal where there are no Lion Air flights departing or arriving can provide reverse questionnaire results. It is possible that the respondents of this study already have good loyalty to the airline, so that their level of approval is different from what was predicted, even though the statistical analysis accepts the hypothesis. It is interesting to reach respondents who are still moving between airlines or are concentrated in places other than airports. It is possible that the respondent might agree with the statement about procrastination and it might produce the opposite result while maintaining the same negative relationship.

This could serve as a new finding that could contribute to the improvement of this study and provide airlines a more accurate description of their passengers and their real conditions. Second, the situation may differ according to the characteristics of the airline and passengers. Passengers may have different preferences, levels of acceptance, satisfaction, loyalty, and more according to the airline they are using. Therefore, it is necessary to do research on the same variables used in this study on other airlines. This could be a new finding whether similar problems that have occurred around Lion Air also occur with competitors such as Air Asia or Citilink or even on Garuda Indonesia airlines and other full service airlines. Finally, different variables can be used for future studies to further examine the factors that influence repurchase intention and how they might be affected.

Table 3 The Results of Hypotheses Testing

	Path Analysis	Beta	t-values	Decision
H1	Delay → Repurchase Intention	0.20	-2.823	Accepted
H2	Service supply chain → Corporate Image	0.33	4.118	Accepted
H3	Complaint Handling → Corporate Image	0.29	3.885	Accepted
H4	Service supply chain → Repurchase Intention	0.37	4.756	Accepted
H5	Complaint Handling → Repurchase Intention	0.48	6.435	Accepted
H6	Corporate Image → Repurchase Intention	0.64	8.186	Accepted

4 Conclusions

Delay has been shown to be a factor influencing repurchase intentions. In particular, it negatively affects repurchase intention. Although most respondents disagreed with statements about procrastination, it is important to remember that negative relationships may work the other way around. Service supply chain are proven to be a factor that positively affects corporate image and repurchase intentions. In addition, company image is also proven to have a positive effect on repurchase intention. These results support previous research which proves that service supply chain have a positive influence on company image. Complaint handling is proven to be a factor, each of which has a positive effect on company image and repurchase intention. These results support previous research which proves that complaint handling has a positive effect on corporate image and repurchase intentions.

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