

Satisfaction Model in Inland Transportation Provision for an Airport

(The Case of Soekarno Hatta International Airport, Jakarta)

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Abstract—To support tourism sector in Indonesia reliable high quality mobilities provision has been playing more important roles for the sake of the domestic customers as well as to boost the arrival of tourists from overseas. As many as 67 million people travelling through the main gate of Indonesia at the end of 2018. While the conventional bus services serving to and from Soekarno Hatta Airport is predominantly occupied by state-owned conventional Damri shuttle bus, nowadays intense competition namely by taxi both online and non-online has caused severe competition among the inland transportation operators. With the objective, among other, to find out satisfaction level among passengers while travelling to and from the airport, this study was carried out to focus on objective to find out factors which have affected customers satisfaction in using inland transport vehicles. Some operators can serve better services than the others, differentiating in quality services has been one of their motions, though price matters and reflects truly the quality. Damri has been threatened by the existence of the online taxi competitors apart from conventional taxi services such as Blue Bird which now also introduced online booking to its fleets and Express taxi. The opening of airport railway services by the Government since August 2017 can also endanger Damri's leadership position at the route. The phenomenal Gojek which also offers Go-Car, and Grab have played important roles in Damri's dominance. Operators were worried that the advancement of online taxis could make intense rivalry among themselves. To combat the market Damri also has started selling its tickets online though it is in introductory stage in its life cycle. Survival of the thick market for inland transport providers are the industry's main concern, while the Indonesian economy is prospering despite supporting infrastructure to the airport is limited, it is predicted that the demand for the inland transport would keep growing. Thus, research on customer information on insight to satisfaction is needed by many operators. Practical and exploratory research by conducting interviews through surveys which measures customers' perception and focus on overall service quality applied in this research. A non-probability, purposive sampling, with total of 185 inland transport customers who regularly use the inland transportation modes, at least once a month over the last six months withdrawn. Importance Performance Analysis (IPA) analysis which measures the relationship between customer perception and priority on increasing product or service quality compared to their expected satisfaction measured, with analysis using SPSS 22. IPA combines the measurements of importance (degree of care) and performance (degree of satisfaction) in two dimensions which

enable easy interpretation. It was found that CSI index scored 70.05 which means customers were moderately satisfied, and is a big homework from all the operators. This research concluded that even CSI result was fairly achieved and at satisfactory level, to be able to sustain market existence and moreover dominance operators must maintain at least 80 CSI index, high satisfaction point index, thus formulating new strategies and tactical strategies needed. Among the major tasks for the operators have been to be able to increase reliability and responsiveness rates of personnel, apart from upgrading the physical look and condition of the fleets. Regular customer excellence trainings needed to boost the customer index since personnel plays important key in services, while keeping up with the digital invention and implementing it in their services also immensely important, such as by providing WiFi fleets, and easy access to booking and canceling. Other strategy included offering differentiated products with more attractive incentives to customers such as existence of loyalty programs and points reward are most desired, apart operational mode enhancement whereby all fleets would become more advance with reliable personnel and ability in delivering high quality services, and punctuality would be the two main keys would enable players to triumph in the market.

Keywords: *Service Quality (ServQual), CSI (Customer Satisfaction Index), inland transportation*

I. INTRODUCTION

Proper implementation of marketing policies has become deterrents to the success of many companies. Customer oriented philosophy which could enhance closeness to customers needed to enhance demands from the targeted market segments for airport inland transportation providers. Effectiveness in implementing marketing policies matters thus policies should be frequently updated following the market dynamics and controlled tightly, and firms should know parameters that could measure results of marketing implementation.

The objectives this research were to analyze insight to customers especially focus on customer satisfaction index and to measure the degree of importance and performance analysis based on variable quality of service and Service Quality (ServQual), with five dimensions: tangibles, assurance, reliability, responsiveness, and empathy. Gaps analyses and closing gaps activities applied. The objects of the research were

individual customers of inland transportation providers at SHIA airport.

The scope of this research focused on effectiveness of marketing policies implementation of the inland transportation providers obtained by interviewing customers who have travelled at least three times within the last 12 months using one of five bus operators serving airport SHIA, which included: Perum Damri, Hiba Utama, Agra Mas, Sinar Jaya, and X-Trans. Thus this research was a snapshot of reflection of operators as perceived by their customers, and period of research was from January to April 2019.

II. LITERATURE REVIEW

A. Product Quality

According to Juran, it is not easy to define the word Quality since it is perceived differently by the different set of individuals [1]. If experts are asked to define quality, they may give varied responses depending on their individual preferences. These may be similar to following listed phrases. The word quality can be defined either as; Fitness for use or purpose, to do a right thing at first time, to do a right thing at the right-time, Find and know, what consumer wants?, Features that meet consumer needs and give customer satisfaction, Freedom from deficiencies or defects, Conformance to standards, Value or worthiness for money. As for the operators product quality matters as it can be implemented as one of competitive tools to offer to their customers.

B. Service Quality (*ServQual*)

Inland operators might want to know what customers (internal or external) care about. Service quality is on of prominent item, degree product quality also counts. But for service providers, customers care most about is service quality. After extensive research, Parasuraman et al., found five dimensions customers use when evaluating service quality [2]. They named their survey instrument *ServQual*. In other words, if providers get these dimensions right, customers will hand over the keys to their loyalty. Because they will have received service excellence. According to what's important to them. The five *ServQual* dimensions are:

- Tangibles: appearance of physical facilities, equipment, personnel, and communication materials.
- Reliability: ability to perform the promised service dependably and accurately.
- Responsiveness: willingness to help customers and provide prompt service.
- Assurance: knowledge and courtesy of employees and their ability to convey trust and confidence.
- Empathy: caring, individualized attention the firm provides its customers.

The importance of classification of the attributes of service certification on the basis of the relationship between the level of customer satisfaction and the degree of fulfilment of

certification, so that *ServQual* can be enhanced by companies [3].

C. Importance Performance Analysis

Martilla and James wrote an article which discusses importance-performance analysis, a method used to determine the effectiveness and consumer acceptance of marketing programs [4]. According to them, marketers must first identify the key features of their marketing mix, using methods such as personal interviews, focus groups and managerial judgment [4]. They noted that importance measures and performance should be kept separate from one another, also the ability the of importance-performance to bring marketer's attention to aspects of a marketing program that need improvement.

D. Customer Satisfaction Index (*CSI*)

Adapted from the American Customer Satisfaction Index (ACSI), *CSI* is a measure of how products and services supplied by a company meet or surpass customer expectation. They focus employees on the importance of fulfilling customers' expectations. Customer satisfaction scores and customer satisfaction indices are an attempt to measure how satisfied customers are with the performance of the company. The assumption being that the more satisfied a customer is the more likely that are to stay as a customer. A customer satisfaction index combines the customer survey scores from different business attributes to create a single customer satisfaction index that indicates the overall customer satisfaction. The main issue with this approach is determining how important each attribute is in driving customer satisfaction. At this research *CSI* Index was explored to observe and analyze customers' perception towards quality of service of the bus operators at the time of during and after transactions. Quality certification affects customer satisfaction [3].

III. METHODOLOGY

Methodology used for this research included qualitative and quantitative research, which focused on real data obtained from desk research and surveys. The survey was taken during the period of January to April 2019. It was one shoot, cross sectional study. A non-probability sampling, where samples are selected based on the subjective judgments of the researcher, with purposive sampling technique applied, selected samples were 185 customers who have at least three times travelling within the last twelve months using one of the bus operators. Survey results were analyzed using SPSS 22 version. Secondary data obtained from published materials included textbooks, journals and websites. Analysis using performance and important index as well as Customer Satisfaction Index (*CSI*).

IV. FINDINGS AND ARGUMENT

A. Market Environment

Segmentation of the bus operator include individuals and families, looking for cheap affordable fares, middle and middle up income classes, travelers as well as workers who have jobs

at SHIA area. The growth of demand in average during the period of 2009-2016 around 24%, and daily sales at around 30.000 seats sold. Since 2014 the Ministry of Transportation allowed bus operators apart from Perum Damri to serve SHIA – Jabodetabek route. A part from existing six players: Perum Damri, Hiba Utama, Agra Mas, Sinar Jaya and X-Trans other indirect competitors include online taxi operators such as Grab and Uber, and in this year SHIA railway link which connects the city center to operation. Fares offered from Rp. 40.000,- to Rp. 75.000,- one way. Other issue has been the raise of the middle income class and their ability in purchasing cars though trough credits, and environment condition such as smoke and forest fire determine also demand. Since 2014 the Ministry of Transportation changed its policy of floor price for low cost carriers, thus, fares for airlines nowadays not as cheap as before the policy was introduced, all these factors affect.

B. Perceived Marketing Performance – Customer Satisfaction

Profile respondents: Proportionately distributed with total 185 loyal customers surveyed. 58% surveyed was male with ages range from 20 years young adult to senior of 60 years old, 65% of them live in Jabodetabek areas and the rest from other cities.

1) Gap analysis

TABLE I. GAP ANALYSIS PRODUCT QUALITY AND SERVQUAL

| Dimension | Performance | Importance | Gap (Performance – Importance) |
|-----------------|-------------|------------|--------------------------------|
| Product Quality | 3.78 | 3.60 | 0.18 |
| Tangibles | 3.94 | 4.11 | -0.17 |
| Reliability | 3.63 | 4.67 | -1.04 |
| Responsiveness | 3.77 | 4.05 | -0.28 |
| Empathy | 3.86 | 4.18 | -0.33 |
| Assurance | 4.15 | 4.02 | 0.13 |
| Average | 3.85 | 4.11 | -0.25 |

Source: Researcher, 2019

Gap analysis which measures performance score deducted by importance score, and for dimension Product Quality and five dimensions for ServQual: Tangibles, Assurance, Reliability, Responsiveness, and Empathy, obtained:

- In average the total average performance of operators was -0.25, below the customers; expectation.
- The highest negative gaps obtained for dimension Empathy with -0.33, then for Responsiveness and Tangibles each with score -0.28 and -0.17.

2) Product Quality

TABLE II. PRODUCT QUALITY

| Items | Performance | Importance | Gap (Performance - Importance) | Indicators |
|------------------------|-------------|------------|--------------------------------|------------------------------------|
| <i>Product Quality</i> | | | | |
| Product_1 | 3.96 | 4.41 | -0.45 | Well served |
| Product_2 | 3.75 | 4.10 | -0.35 | Competitive fares |
| Product_3 | 3.97 | 4.15 | -0.18 | Comfort place |
| Product_4 | 3.84 | 4.54 | -0.70 | Service assurance |
| Product_5 | 3.64 | 4.24 | -0.60 | Routes vary |
| Product_6 | 3.74 | 4.26 | -0.52 | Appearance attractive |
| Product_7 | 3.45 | 4.25 | -0.80 | Promotion informative |
| Product_8 | 3.72 | 4.35 | -0.63 | Customer relationship program |
| Product_9 | 3.45 | 4.24 | -0.79 | Degree of advancement in operation |

Source: Researcher, 2019

Product quality do matters for the inland providers, its performance revealed that there were gaps, with the Degree of Promotion informative with gap -0.80, followed by the Degree of advancement in operation -0.79 adm Service assurance with gaps -070 need to focus to rectify the situation.

3) Degree of importance

TABLE III. DEGREE OF IMPORTANCE

| Attribute | Score |
|---|--------|
| Physical appearance, equipment, crew, communication materials | 21.05 |
| Ability for the inland provders to provide services as promised | 22.05 |
| Availability of the crews to help customers in serving them with the best | 16.24 |
| Knowledge of the crews and ability to build trust from their customers | 21.61 |
| Individual attention to customers | 19.05 |
| Total | 100.00 |

Source: Researcher, 2019

For the degree of importance out of the total score of 100 with five selected attributes the customers decided as follow:

- Ability for the inland providers to provide services as promised 22.05.
- Physical appearance, equipment, crew, communication materials being second most important with score 21.05.
- Knowledge of the crews and ability to build trust from their customers 21.61
- Individual attention to customers 19.05.
- Availability of the crews to help customers in serving them with the best 16.24.

4) Degree of customer loyalty

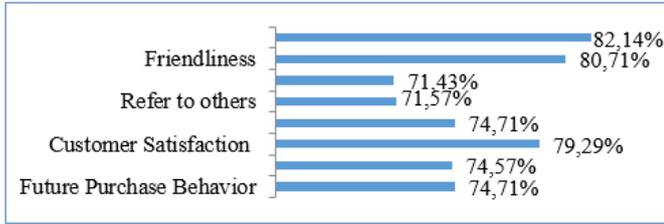


Fig. 1. Degree of customer loyalty.

The measurement of degree of customer loyalty with the scale of maximum 7 (100%) obtained the following results:

- Customer orientation with 82.14%
- Friendliness with 80.71%, and
- Customer satisfaction with 79.29%.

This result revealed that the customers orientation is the highest followed by friendliness of staff, while their intention for future purchase is moderate.

5) Importance Performance Analysis (IPA)

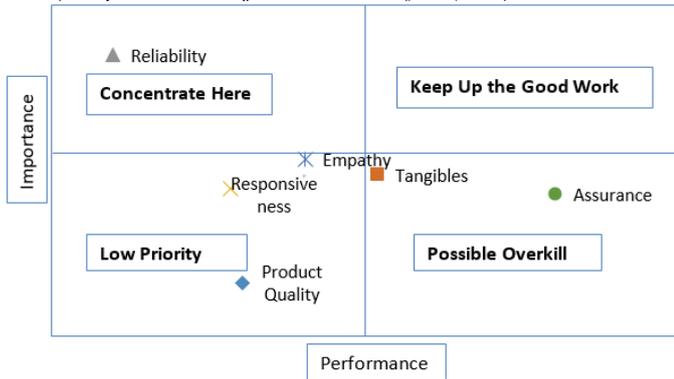


Fig. 2. Importance performance analysis matrix.

Refer to Table 1 above the data can be used for plotting the IPA matrix, as shown at Figure 2 above, overall the IPA results revealed the following:

- Quadrant 1 *Concentrate here* which means actions needed to be focused by the bus operators with one item *Reliability*. Thus the skills of the crews needed to upgrade.
- *No item* in quadrant 1 *Keep up the good work* which reflected that no specific performance is beyond the customers' expectation.
- Empathy, Responsiveness and Product quality in Quadrant 3 *low priority* which means it was not the main focus for customers, they felt that it was sufficient, though maintaining and upgrading product and services still important tasks for the bus operators.
- Tangibles at Quadrant 4 *Possibly Overkill* which means strategies implementation of the bus operators have been sufficient, and no items which could contribute to customer dissatisfaction.

6) *Customer Satisfaction Index (CSI)*: Overall score of CSI was 70.05 which means satisfied and reflected the overall actual performance as perceived by customers. The challenge has been to increase the CSI to score at least 80.01 thus would satisfy the customers even better.

TABLE IV. CSI SCORE

| CSI | | Weighted | Score |
|----------------------|--------------------|--------------------------|--------|
| Product Quality | | | 81.55 |
| SERVQUAL | Tangibles | 0.198 | 63.46 |
| | Reliability | 0.191 | 74.82 |
| | Responsiveness | 0.177 | 70.59 |
| | Empathy | 0.153 | 70.88 |
| | Assurance | 0.158 | 71.50 |
| | | Weighted | Score |
| Product Quality | | 0.427 | 81.554 |
| SERVQUAL | | 0.573 | 61.465 |
| CSI | | 70.050 | |
| Criteria | Remarks | Inland Transport at SHIA | |
| 0.00 - 20.00 | Not Very Satisfied | | |
| 20.01 - 40.00 | Not Satisfied | | |
| 40.01 - 60.00 | Acceptable | | |
| 60.01 - 80.00 | Satisfied | | |
| 80.01 - 100.00 | Very Satisfied | | |

Source: Researcher, 2019

V. CONCLUSION

A. Summary

- Overall the performance of the bus operators still below the expectation of the customers. Microenvironments being the most affected. Marketing communication has been limited and system operational run manually, not yet applied with the Internet of Thing strategies and advancement.
- From the survey can be summed up as follows:
 - From IPA can be derived that negative gap obtained by *Empathy and Responsive* with -0.33, -0.28 gaps.
 - From loyalty score the loyal customers tend to have priority on customer orientation and friendliness with score 82.14 and friendliness with 80.71.
 - Score for *CSI with result average satisfaction and scored 70.05* from 100 points.
- There has been rivalry among the players as well as conventional taxis and airport railway service which threatened the industry. The raise of middle income class has increased the ownership of cars thus reducing the market shares and potential.

B. Recommendations

- Strategic Solutions for closing gap activities for the two dimensions of Product Quality and ServQual would be: Keep increasing innovation to satisfy the customers. There need be ServQual campaigns, a part from

increasing Product Quality features. The increase on staff's skills would be based treated with regular in-class and on the spot trainings. Further, replacing old fleet with new ones needed and this include on board facilities such as free WiFi. Quality Assurance is making sure that all fleet are safe on the road, thus regular maintenance is needed.

- Performance based management can be adopted which focus on change initiatives and focus on operational excellence, service excellence (zero defect and minimum customer complaints), as well as sustainable profit and potential growth. Four elements will be important for this policy to smooth: safety, timeliness, speed and accuracy.
- Key Success Factors (KSFs) for the bus operators would be: Differentiation strategies on systems, people, product and place. Focus on Operational excellence: safety, comfort, timeliness, effective and cost efficient Integrated Marketing Communication (IMC). Enhance HR through education / training / skills upgrading to crews needed to implement regularly, apart from regular tight Operational monitoring.

- As far as theoretical application concern Juran's Quality focus, IPA and CSI are the three tools most important, and can be widely use in other industries. Future research should focus on other aspects such as pricing sensitivity as there will be introduction of airport railway service by this year, the dynamic modelling od variant modes of transport as well as the trending of application of e-marketing would be interesting themes.

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