

Innovation Strategy and Customer Loyalty for Indonesian Freight Forwarding Company

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ABSTRACT

One of the problems in logistics companies in Indonesia is the fact that some companies have not implemented innovation strategies properly in the pre-booking and forecast expectancy container systems in shipping companies. It makes quite difficult for customers to get delivery orders for the export shipping process. These companies, normally, create ways to maintain customers' loyalty by implementing innovation strategies and service quality in the company's operational performance. The aim of the research is to determine and analyze the influence of innovation strategies and service quality on operational performance and their implications on customers' loyalty. The research used Path Analysis with sample of 30 logistics staff who have worked in freight forwarding company for at least one year. Based on the data analysis, it is concluded that innovation strategy has no influence on employees' performance. Service quality also does not have partial influence on employees' performance and employees' performance does not have partial influence on customers' loyalty. However, innovation strategy, service quality and operational performance simultaneously have a positive effect on customers' loyalty.

Keywords: operational performance, innovation strategy, quality service, customers' loyalty, employees' performance

A. Introduction

Today, the development of the sales service industry is growing rapidly, which triggers the demand for goods and other related services to increase. The demand for these needs is not only by individuals but also by companies engaged in production and distribution activities, both domestically and internationally. Production and distribution activities to and from abroad are known as export and import activities, which always use transportation as one of the key instruments. Export and import activities or delivery and receiving of goods to a destination are

made easier with the existence of a freight forwarder company. The freight forwarder industry is an industry that operates in the service sector as a third-party logistics service provider. Freight forwarders send goods from one place to another using various modes of transportation, such as trucks, ships, and airplanes. Freight forwarders are growing rapidly everywhere in the world, including in Indonesia. The emergence of freight forwarder companies, especially in big cities in Indonesia, will provide more choices in export and import operations. Consumers can make choices based on the services offered, certain performance qualities that provide

better value, and more competitive prices. According to the Association of Indonesian Express Delivery Service Companies, the logistics industry will increase by more than 15% compared to 2017.

While the Indonesian Logistics Association predicts the logistics industry will grow at least 10% in 2018, Based on the Ken Research report, the Indonesian logistics market is estimated to reach 7.9% in the next five years to 2021, with freight forwarding being the segment with the fastest growth, with an estimated Compound Annual Growth Rate (CAGR) of 9.2%. In the shipping and packing industry, there are three different types of markets, namely general freight, specialized freight, and air freight, both for domestic and foreign markets. Based on market segment, the main users of shipping industry services are the manufacturing industry, the wholesale industry, and the retail industry. The largest customer is in marine export services; one of these Indonesian freight forwarder companies is a manufacturing company that can be categorized as a large manufacturing company in Indonesia. Apart from manufacturing companies, there are other industrial companies that are customers of freight forwarder companies, such as garment companies, palm oil companies, and so on.

The large number of requests for containers every month makes the company better able to meet the service requests of each of its customers. Based on the data of a freight forwarder company in Jakarta, Indonesia, in 2019, it can be seen that the demand for each customer varies greatly per month, with a total of around 1000-1500 containers/month or 2000-3000 TEUs/month. This condition greatly affects the performance of employees who are required to be extra at work and must coordinate with the shipping company to provide empty containers and ship space, or what can be referred to as a delivery order. Delivery Order is a confirmation booking from the shipping company that has confirmed to provide empty containers and ship space for

the export process. Hard-to-get delivery orders raise complaints from customers and affect customer loyalty; in other words, customers look for other freight forwarding companies. In this case, the Indonesian freight forwarder company created an innovation strategy as a way to keep customers loyal by implementing a delivery pre-booking system or empty container forecast or monthly forecast of container needs to shipping companies so that delivery orders can be sent on time and according to customer needs.

Apart from that, the company also conducts routine checks for every shipment that has been running, assisted by robotic technology. The pre-booking system is the ordering process or booking of ship space and empty containers from the shipping company through the website of each shipping company and confirmed with evidence in the form of a delivery order. The implementation of the pre-booking system was carried out because it was difficult to get delivery orders from shipping companies, such as ONE, Cosco, CMA CGM, APL, Evergreen, Sinokor, and KMTC. One of the reasons for the difficulty in getting a delivery order is due to the peak season conditions between the middle of the year and the end of the year; besides that, it is also due to the habitual shipper who sends the shipping instruction suddenly. For that, the system pre-booking is a preventive action taken by the company to optimize the services provided to its customers in small batches.

In this research, customer loyalty is the dependent variable to be analyzed, whether it is influenced by the innovation strategy and service quality variables as well as the operational performance variable partially or simultaneously. The respondents in this research were the staff of an export-import company. Container customers in the period of one month ahead, where the data is obtained from the customers themselves, then from this data the company decides to add a 20% portion of container requirements to shipping companies in order to anticipate additional volume outside the forecast from customers.

Generally, this forecast is sent by customers who have container needs of more than 100 TEUs per month or in large parties, such as PT. Manufacturing A, PT. Manufacturing B, and PT. Manufacturing C.

Shipping companies commonly used are SITC and Sealand Maersk. With this Empty Container Volume Forecast, shipping companies can prepare the container needs that companies need every month. While robotics is a new innovation set by the Head of the Sea Export Department, which aims to assist employees in checking each ongoing sea export shipment. Robotics is the latest IT technology purchased by the Indonesian freight forwarder company as a resource to optimize sea export services by monitoring each schedule of all sea export shipments, whether there are delays/early departures/arrivals or changes in connecting vessels. This robot works three times a day, namely at 06.00–09.00, 17.00–20.00, and 00.00–03.00, by checking all shipments through the shipping company website, and if there is a change, the robot will update an Excel file that employees can see.

In this way the company assumes that if all shipments are well controlled and employees can actively communicate well with customers, then customers will be loyal to continue using the company's services, because not all freight forwarding companies offer innovation strategies like this. In addition, the quality of service from employees is needed to support the optimization of the innovation strategy created by the company. In this pre-booking system, all delivery orders that have been obtained from the shipping company must be properly controlled by employees so that there are no complaints from the shipping company due to a sudden cancellation if the delivery order is not used. Similar to Forecast Empty Container Volume, employees must also control the forecast so that complaints do not occur due to shortfall bookings. In this way the relationship between shipping companies and Indonesian freight forwarding companies will be good. For Robotic, Sea

Export Department employees often find inaccuracies and delays in information from Robotic, so employees have to double-check back on the shipping company's website for each shipment.

This causes additional employee work or increased job load, and robotics needs to be upgraded immediately so that it can optimally help employees work properly. As time goes by, there are still employees who have not fully implemented the innovation strategy and good service quality so that delivery orders cannot be sent according to customer needs, and the customer has to postpone the delivery of goods and also has to leave the goods in the safekeeping warehouse because the warehouse is full. This causes the customer not only to complain but also to charge storage fees to the company, and the rest, frankly, will not use the company's services anymore and will use the services of other freight forwarders.

From the previous explanation and based on field observations, it can be assumed that some of the problems that exist in this Indonesian freight forwarder company are related to innovation strategy. Besides, employees do not apply the innovation strategy properly in the pre-booking and forecast empty container system at shipping companies, so it is difficult to get a delivery order for each customer's export shipment process due to limited ship space and empty containers. The robotic function is to check the status of each sea export shipment, which increases the job load of employees due to suboptimal performance. In the variable quality of service, employees do not properly control the innovation strategy in the pre-booking and forecast empty container system so that the shipping line is not loyal in giving delivery orders due to sudden cancellations and shortfall bookings. Employees must double-check the work performed by Robotic because the accuracy of the data is not maximized. On the variable operational performance, delays in the delivery of delivery orders due to limited ship space and empty containers have resulted in complaints from customers because they had

to delay the stuffing process. In the variable customer loyalty, the customer is looking for other freight forwarder alternatives because the company cannot provide a delivery order according to customer needs. Customers charge goods storage fees due to delays in delivery order delivery.

Several previous studies related to the variables studied, such as innovation strategy, quality service, operational performance, and customer loyalty, have produced varying conclusions. Ouyang & Bu (2024) explain the need to develop a strategy in the field of international freight forwarding that is dynamic and contributes to innovation, which has practical implications for driving industrial competitiveness. Pervaiz & Shepherd (2010) explain that innovation is based on the process of realizing a new idea, which is different from the previous one in the past, by means of production or by making it real, where innovation includes evaluation generation, new concept, and implementation. In general, the development of logistics innovation can help organizations reduce operating costs to create increased logistics capacity and competitiveness for international entrepreneurs. (Leepaitoon et al., 2020).

Other authors, Rogers et al., (2014), said that innovation is an idea, object and practice that is based on and accepted as something new by a certain person or group to be applied or adopted. *S t r a t e g y* innovation is an important factor, usually making an organization unique and different from the competition. This means that the uniqueness of the company in something is considered very important by consumers. Transportation of goods and logistics through contemporary innovation has a major contribution in achieving sustainable services in the global market (Khakdaman et al., 2022). Business growth through the study of Simarmata et al., (2018), is directly and indirectly influenced by innovative services and will help logistics service entrepreneurs gain competitive advantages. Service quality, through research by Huang et al., (2019)

and Subhashini & Preetha, (2019), shows a significant contribution to increasing customer satisfaction. In addition, the freight forwarding industry requires a larger budget for improving logistics infrastructure in order to provide improved service quality (Yoganandan & Vasan, 2024). Meanwhile, Ricardianto (2018) explains that performance is a description of the level of achievement of an activity program or policy in realizing the goals, objectives, vision and mission of an organization as outlined through an organization's strategic planning. Performance is the value of a series of employee behaviors that contribute, either positively or negatively to the achievement of organizational goals (Colquit et al., 2019). Related to the development of research hypotheses, Noviasuti et al., (2024), found that product quality needs to be supported by innovation quality to produce high operational performance. While in the development of the second hypothesis, Service quality is generally stated to be closely related to improving operational performance in the logistics industry (García Dastugue & Eroglu, 2019). The discussion related to the theory and several phenomena of previous research results leads to the development of the first and second hypotheses, namely innovation strategy and operational performance, as well as service quality and operational performance.

H₁: Innovation strategy directly influences on operational performance

H₂: Service quality directly influences on operational performance

Loyalty is defined as non random purchase expressed over time by some decision making unit (Griffin, 2021). According to Gibson et al., (2012) and Kotler & Keller, (2016) customer loyalty is a behavioral drive to make purchases repeatedly and to build customer loyalty to a service produced by the business entity requires a long time through a process of repeated purchases. A research by Olfebri, (2024) in the field of freight forwarding shows that increasing customer loyalty can be achieved through consistent improvement in service quality. The discussion related to the

theory and several phenomena of previous research results leads to the development of this third hypothesis, related to operational performance and customer loyalty.

H₃: Operational performance directly influences on customer loyalty

The development of the fourth hypothesis is based on the relationship between the variables of innovation strategy and service quality on customer loyalty through operational performance. In general, the results of the study explain that service quality has an effect on customer loyalty (Latif et al., 2023; Singh et al., 2023). Several previous studies conducted by, Lermatan et al., (2023), Chao et al., (2023) have proven a significant influence between service quality on customer loyalty in freight forwarding companies. The research by Ellitan, (2022) and Olfabri, (2024) also explain that improving service quality is very important for increasing loyalty. Pratiwi & Suwandi, (2023) in another study found that service quality has a positive effect on customer loyalty. The results of measuring supply chain performance at logistics providers affect their loyalty and will increase their business (Wararatchai & Chaitorn, 2023). In general, the results of research by Marín-García et al., (2023) show that sustainable technological innovation is closely related to loyalty. The discussion related to the theory and several phenomena resulting from the research leads to the development of the fourth hypothesis.

H₄: Innovation strategy and service quality indirectly impact on customer loyalty

through operational performance

Based on the background of the problem, the following problems were identified: Employees did not apply the Innovation Strategy properly in the pre-booking and forecast empty container systems at shipping companies making it difficult to get a Delivery Order for each customer's export shipment process due to limitations space ships and empty containers. The robotic function is to check the status of each sea export shipment, which increases the job load of employees due to sub-optimal performance. Employees do not properly control the quality of service in the pre-booking and forecast empty container systems so that shipping lines are disloyal in giving Delivery Orders due to sudden cancels and shortfall bookings. Employees must double check the work done by Robotic because the accuracy of the data is not maximized. There are complaints from customers to employees because they have to delay delivery of goods due to delays in sending Delivery Order. Customers are looking for alternative Freight Forwarders because the company cannot provide Delivery Order according to customer requirements. Customers charge for safekeeping of goods due to delays in delivery of Delivery Order. The objectives of this study are: To know and analyze direct and indirect effects on loyalty and service quality simultaneously.

Based on theoretical studies and analysis from researchers, the model of this study is depicted in the Figure1.

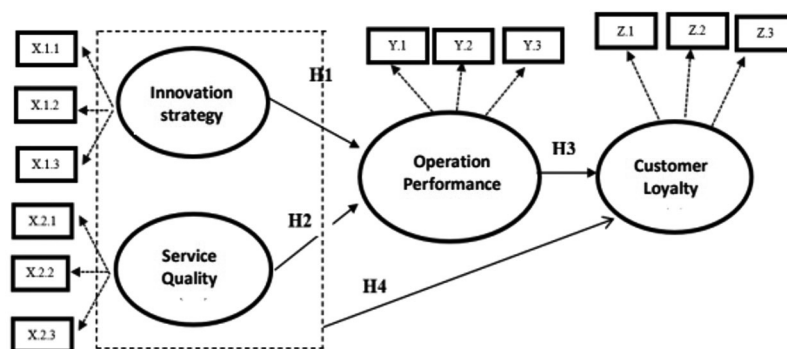


Figure 1 Research Model

B. Methods

The population of this study is the customers of Indonesian Freight Forwarder company. Samples were taken from all members of the population, namely all users of cargo delivery services at the Indonesian Freight Forwarder company in 2019, as many as 30 respondents. All respondents were taken from each company which was represented by one respondent who had been part of the Exim/Logistics company for at least one year and with a staff position level. Primary data were collected through surveys, interviews and FGDs with users of Indonesia Freight Forwarder companies, secondary data are obtained from notes, books, magazines in the form of company published financial reports, government reports, articles, books as theory, magazines, and so on. Furthermore, in this study, a path analysis tool was used with two structural models. Hypothesis test and statistical test and F_{test} and continued with sobel test and bootstrapping.

C. Results and Discussion

a. Focus Group Discussion

Focus Group Discussion (FGD) was conducted in this study which aims to assist researchers in understanding the findings. The FGD was conducted twice (internally and externally), namely before the questionnaires were distributed and after the subject's answers were obtained. In the implementation of internal and external focus group discussions, questions on the research sample are in the form of open-ended questions, free to express opinions on the questions raised. The results of the FGD are that the performance of export operations has not been maximized due to delays in DO shipments which affect delay stuffing. This was due to the late provision of containers at the depot which caused DO not to be released. To support the availability of containers with the container repo process, customers can provide a Forecast for the next month to prepare a container so that it is ready

for pick-up by customers. In the process of operational performance quality, the Pre-Booking and Forecast control process plays a very important role and has a major influence on the process of taking containers by customers for export to various destinations. And also, for cargo tracking to be an added value for the innovations that have been created by KWE, the customer is appreciated. Therefore, in order to provide even better service, all informants agreed that more attention should be paid to and maximized in terms of sending DO by customers with Forecast delivery, container repo processes and provision of containers with good quality standards. Based on the results of the answers from 30 respondents to the questionnaire items used in this study, it can be seen in the analysis with the presentation of data aimed at knowing the identities of respondents who used the SPSS v.22 program tools which were processed in 2020.

2. Validity and Reliability Test

All the four validity tests of the observed variables show significant results so that the four research indicators are confirmed to be valid, meanwhile correlation statistics shows the value with a range between 0.652 to 0.952, Cronbach alpha (α) shows the value that is greater than 0.6, so that it can be concluded that all research variables are reliable, with a range between 0.667 to 0.825.

3. Multiple Linear Analysis Results

a. The influence of innovation strategy and service quality on operational performance.

The research model used is multiple linear regression. The regression coefficient of innovation strategy and service quality of 2.218. The regression coefficient of innovation strategy has a value of 0.212. The regression coefficient of service quality is 1.070. Based on this analysis, it can be explained that there is an influence or close relationship between innovation strategy and service quality on the dependent variable operational performance.

the effect of innovation strategy and service quality and operational performance on customer loyalty.

- b. The influence of innovation strategy, service quality and operational performance on customer loyalty.

The research model used is multiple linear regression. The regression coefficient of innovation strategy and service quality and operational performance of -0.197. The regression coefficient of innovation strategy has a value of 5.703. The regression coefficient of quality of service has a value of 0.468. The regression coefficient of operational performance is 0.741. Based on this analysis, it can be explained that there is an influence or close relationship between innovation strategy, service quality and operational performance customer loyalty.

- c. The effect of innovation strategy and service quality on customer loyalty through the operational performance variable using the Sobel Test.

From statistical calculations, it can be concluded that the effect of innovation strategy variable on operational performance on customer loyalty is 0.02964 with a significance of 0.84 and the effect of service quality on operational performance on customer loyalty is 0.148941 with a significance 0.54.

4. The Path Analysis

- a. Model I Path Coefficients

Based on the analysis, the significance values of the two variables, innovation strategy is 0.212 and service quality is 1.070,

are greater than 0.05. So, the value of R^2 is 0.566 and the analysis results show that innovation strategy and service quality contribute to operational performance by 56.6%. Thus, the path diagram of the structure model I is depicted in the following Figure 2.

- b. Model II Path Coefficients

Based on the analysis, the significance values of the three variables, innovation strategy is 5,703, service quality is 0,468 and operational performance is 0,741, are greater than 0.05. So, the value of R^2 is 0.566 and the analysis results show that innovation strategy, service quality and operational performance contribute to customer loyalty by 56.6%. Thus, the path diagram of the structure model II is depicted in the following Figure 3.

5. Hypothesis Test Results

- a. T_{Test} (Partial Test Test)

The constant is 2.218, meaning that if innovation strategy and service quality are considered constant, then operational performance remains unchanged and its value is 2.218. The regression coefficient of innovation strategy has a value of 0.212. Based on this analysis, it can be explained that there is an influence or close relationship between innovation strategy and service quality on the dependent variable operational performance. The effect of innovation strategy and service quality and operational performance on customer loyalty. The research model used is multiple linear regression. This test tool is used to analyze the results of regression or the influence between innovation strategy,

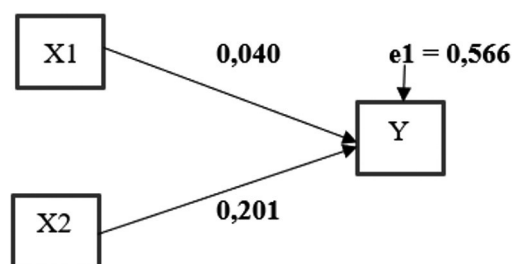


Figure 2 Diagram of the Path I Model

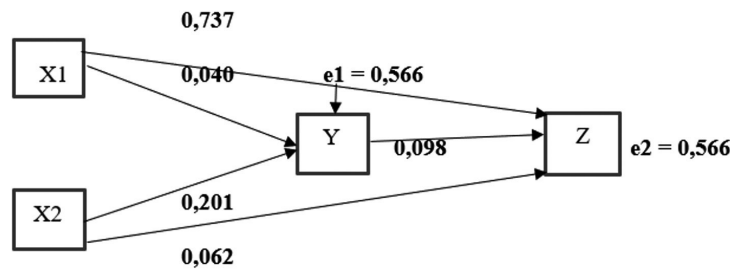


Figure 3 Diagram of the Path II Model

service quality and operational performance on customer loyalty individually or partially.

Based on the results of the T_{test} it can be explained as follows:

H₁. Innovation Strategy and Operational Performance

Based on the calculation results in Hypothesis 1, it is suspected that innovation strategy has an affect on operational performance, however the calculated t_{value} is $0.212 < t_{table} 2.05553$. Thus, innovation strategy has no significant effect with an error rate of 0.05 on operational performance, because $t_{statistics} < t_{table}$. The results of this first hypothesis test did not support several previous studies such as Berndt et al., (2024), and Sojipun et al., (2024). They showed that innovation is a strong driver of operational performance and through improving service quality can improve logistics performance and the competitive advantage of logistics service provider businesses. Based on the results of first hypothesis which explains that the variables studied partially do not have a significant effect on each other, it is stated that they are not in line with several previous findings.

H₂. Service Quality and Operational Performance

Based on the calculation results in Hypothesis 2, it is suspected that service quality has an effect on operational performance, however the calculated t_{value} is $1.070 < t_{table} 2.05553$. Thus, service quality has no significant effect with an error rate of 0.05 on operational performance, because $t_{statistics} < t_{table}$.

$t_{statistics} < t_{table}$. This second hypothesis test is also not in line with the findings of Sojipun et al., (2024), which shows that improving service quality can improve logistics performance and the competitive advantage of logistics service provider businesses. The results of this study are also not supported by the findings of García-Dastugue & Eroglu, (2019), which state that service quality in general is closely related to improving operational performance in the logistics industry. Based on the results of second hypothesis which explains that the variables studied partially do not have a significant effect on each other, it is stated that they are not in line with several previous findings.

H₃. Operational Performance and Customer Loyalty

Based on the calculation results in Hypothesis 3, it is suspected that operational performance has an effect on customer loyalty, however the calculated t_{value} is $0.741 < t_{table} 2.05553$. Thus, operational performance has no significant effect with an error rate of 0.05 on customer loyalty, because $t_{statistics} < t_{table}$. The results of the third hypothesis test are also not in line with the research results by Olfebri, (2024), who recommends, in the field of freight forwarding, that increasing customer loyalty can be achieved by consistently improving service quality. Based on the results of third hypothesis which explains that the variables studied partially do not have a significant effect on each other, it is stated that they are not in line with several previous findings.

b. F_{test} Results (Simultaneous Test)

Based on the calculation results, the F_{value} is 11.320 with a significant probability of 0.000. Because the calculated F_{value} (11.320) is greater than the F_{table} (3.35), it can be concluded that innovation strategy, service quality and operational work simultaneously have a positive effect on customer loyalty. In general, the results of this F_{test} are in line with the results of the study by Prasetyo & Wahyuningtyas, (2024) which shows that sustainable technological innovation has an impact on increasing loyalty. This study is in line with the results of previous studies on freight forwarding companies conducted by Huma et al., (2020) and Balci et al., (2019) which showed a significant influence of service quality on customer loyalty. The results of the hypothesis test in this study support the findings of Liao et al., (2024) who directly found that service quality has a positive effect on customer loyalty. The results of this study support other findings that service quality have an indirectly effect on customer loyalty (Rahmanita et al., 2023; Ricardianto et al., 2022). Meanwhile, according to Ricardianto et al., (2021) findings, operational performance variables are interrelated with customer loyalty so this research is not in line. Thus, based on the results of this forth hypothesis which explains that the variables studied simultaneously have a significant effect on each other, it is stated that still in line with several previous findings.

D. Conclusion

The results showed that the analysis of the influence of innovation strategy and service quality variables through operational performance variable on the customer loyalty each has a direct effect. The managerial implication is the implementation of the innovation strategy in this case in the form of implementing pre-booking, sending forecast empty containers to shipping companies and daily tracking containers by robotic running together with quality of service in controlling

the innovation strategy, and good employee operational performance. can attract the attention of customers to remain loyal to using marine export services at PT. Kintetsu World Express Indonesia. As input material for PT. Kintetsu World Express Indonesia to be able to implement the innovation strategy and service quality in employee operational performance together in order to achieve customer loyalty. In this case, so that customers remain loyal and do not use other Freight Forwarder companies. Future researchers should conduct research that focuses more on indicators of service quality that are not yet available in this research, such as assurance and empathy. Thus, there are all the main factors that influence service quality which can be assessed from expected service and perceived service.

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