

Evaluation of Operational Performance and the use of e-Business Technology for the Implementation of Supply Chain Management which has an Impact on Customer Loyalty at PT. DHL Global Forwarding Indonesia

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Abstract:- The large number of business contract termination phenomena over the past year became one of the foundations of the study, while there were no major problems underlying the termination of such employment contracts. So a study is needed to find out what can affect the level of customer loyalty in the International Supply Chain Department. The study was conducted with a total of 75 respondents. The data was collected through an instrument on the questionnaire whose results were changed based on the Likert scale and tested first before analyzing the data using the path analysis method. The results showed that operational performance and the use of e-bussiness technology had a significant positive influence on the implementation of supply chain management. Furthermore, the implementation of supply chain management in accordance with operational performance and the use of e-bussiness technology has an impact on increasing the level of customer loyalty, so that the implementation of supply chain management as an intervening variable is proven to function to strengthen the influence of operational performance and the use of e-bussiness technology on customer loyalty.

Keywords:- operationalwork, use of e-Bussines technology, implementation of supply chain management, and customerloyalty.

I. INTRODUCTION

In the era of globalization that is all digital like today, all people and agencies are required to follow technological developments so as not to be eroded by the times, including the freight forwarder business world. With the emergence of freight forwarder companies in big cities, people are more free to choose and determine which is the best company according to them before deciding to use the services of the freight forwarder they will use. For this reason, companies engaged in freight forwarders are competing to provide better service and have value-added compared to other companies. Not to mention that customer demands are complex and cannot be confused between one customer and another, making a freight forwarder company must be able to evolve into an all-round company and become a solution to every customer problem.

One of the things that affects the company's revenue is the consistency of the number of customers managed by the company. Not a few customers decide to leave the company or not renew the business contract for various reasons, for example, commercial issues. We can't do much when management has tried to provide the most competitive price possible during the contract renewal period but there is no agreement by both parties, therefore researchers are trying to find other causes or problems that cause customers to decide to terminate cooperation with the company.

The researcher conducted an interview with one of the local customers in the export/import department who will complete the business contract in July 2022, from the results of the interview it is known that the termination of the contract is not fully desired by the local customer, which we often refer to as shipper/factory/supplier, but the termination of the contract is apparently done by the real owner of the contract, namely the Buyer. those in the export destination country, there is nothing that can be done even though they are satisfied with the service that has been provided by PT. DHL Global Forwarding Indonesia.

Then the researcher tries to observe the operational performance of the company which is the benchmark of service excellence that the company promises to customers. Because from small mistakes made by the operational team, it can provide a sense of displeasure or discomfort for customers so that it will have a big impact if there is no good control and periodically. For example, whether the operational team has provided services in accordance with the operational standard, whether the operational team has given clear instructions to customers so that mistakes can be avoided. Not to mention the COVID-19 pandemic like today where the majority of operational teams work from home, for example, obstacles such as uneven communication often occur, there is a need for good control so that it does not cause misunderstandings or unwanted things. For this reason, operational performance is very basic for the sustainability of a company.

In addition, to meet *customer* demands that are not only limited to the goods they have finished producing and successfully delivered according to the buyer's request, but also require complete access to the process, position of goods in *real-time*, and minimize unexpected costs or *costs*, DHL Global Forwarding Indonesia provides the "InforNexus" platform which is a platform for access *real-time booking*, documentation, and *tracking*, which is not only intended for local *customers*, but also *buyers* as the real owner of *orders* (type, quantity of products and services sold by *suppliers*).

According to (Wullur & Wardaya, 2017) operational performance grows the *cost of quality* which contributes greatly so as to increase competitiveness in the company, especially in *innovative marketing technology*. In addition, *e-business technology* also has a role that can be seen from two perspectives, namely in terms of technical and managerial. If these two technicalities can run together, then *e-business* collaboration can increase the competitiveness of the company. On the other hand, *supply chain management practices* and poor levels of use of *e-business technology* can reduce competitiveness in the company. According to (Nugroho & Sudaryanto, 2013) trust has a positive effect on customer loyalty, meaning that if consumer confidence in the delivery service increases, it will have an impact on increasing customer loyalty. Meanwhile, according to (Novianty et al., 2020) one of the key factors in determining customer loyalty is customer *value*, which is also a continuous process and does not end in the satisfaction of customer needs alone, but is always continued with repeated and continuous purchases at certain brands.

II. RESEARCH PROBLEM

This study tries to answer the following questions:

- Is there a significant influence between Operational Performance and Supply Chain Management Implementation in PT. DHL Global Forwarding Indonesia?
- Is there a significant influence between the use of E-business Technology on the Implementation of Supply Chain Management in PT. DHL Global Forwarding Indonesia?
- Is there a significant influence between Operational Performance and Customer Loyalty in PT. DHL Global Forwarding Indonesia?
- Is there a significant influence between the Use of E-business Technology on Customer Loyalty in PT. DHL Global Forwarding Indonesia?
- Is there a significant influence between Supply Chain implementation and Customer Loyalty in PT. DHL Global Forwarding Indonesia?
- Whether there is an indirect influence on operational performance on Customer Loyalty through the Implementation of Supply Chain Management in PT. DHL Global Forwarding Indonesia?
- Is there any indirect influence on the Use of E-business Technology on Customer Loyalty through the Implementation of Supply Chain Management in PT. DHL Global Forwarding Indonesia?

III. LITERATURE REVIEW

A. Customer Loyalty

Loyalty means that consumers come back and come back again to make business transactions (purchases), even though maybe the products owned by the company are not the best products on the market or have the lowest prices. This fairly "irrational" consumer behavior can be explained by the view that the "*good relationship*" established with consumers is the key to a company's success in retaining customers (Kartika & Kezia, 2011). According to Tjiptono quoted by (Purbohastuti, 2018) loyalty is a repurchase behavior solely concerned with purchasing certain brands that are the same repeatedly (it can be because only one brand is available, the cheapest brand and so on). Customer loyalty is a deep customer commitment to re-subscribe or repurchase selected products/services consistently in the future, even though the influence of the situation and marketing efforts has the potential for behavior change (Nasrin & Moch.Trenggana, 2020). Meanwhile, according to (Griffin, 2010) about loyalty, a consumer is said to be loyal or loyal if the consumer shows regular purchase behavior or there is a condition that requires consumers to buy at least twice in a certain interval of time. The characteristics or characteristics of consumer loyalty include:

- Make repeat purchases of a product on a regular basis.
- Buying between product lines and services of a brand.
- Provide positive support to the company.
- Less likely to be affected by the appeal of other brands.
- Want to refer a product or brand to others

Based on Kincaid's statement cited by Oke (Srivastava & Rai, 2018), *customer loyalty* is defined as consumer behavior, built on positive experience and value, which leads to the purchase of a product, even when it may not be the most rational decision. From some of the understandings above, it can be concluded that *customer loyalty* is a customer behavior that continues to be committed to certain companies to continue to repurchase goods or services without being affected by other brands because of satisfaction with the services provided as well as the emergence of trust and *emotional bonding* towards the company.

Based on some of the definitions above, the researcher concluded that customer loyalty is a form of *customer loyalty* to goods/services continuously or *continuously* because of the satisfaction felt and tends to give rise to an attitude to be willing to recommend the goods/services to others. The dimensions used in this research are *repurchase* and *referral*, with the following indicators: reuse of services, loyalty to the company, renewal of business contracts, offers to other products of the company, and product promotion to other business partners.

B. Supply Chain Management

Supply Chain according to (Dawei, 2011) is a group of interrelated corporate participation that adds value to the flow of input changes from their source of origin to the final product or service demanded of the intended end consumer. A *supply chain* can only be formed if there is more than one participating company. The supply chain has a dual purpose, on the one hand to improve the performance of individual organizations and the entire supply chain. On the other hand, it aims to reduce the cost of the supply chain, Li et al quoted by (Banerjee & Mishra, 2017). The definition of *supply chain management* is the integration of activities to obtain materials and services, convert them into semi-finished goods and finished goods, and deliver them to consumers. This activity also includes purchasing activities, *outsourcing* activities coupled with other functions that are important for the relationship between *suppliers* and distributors (Yulianti, 2015).

According to (Lotfi et al., 2013) supply chain management is defined as the act of sharing information, materials and financial information within an organizational unit, so that it will meet customer needs and lead to an improvement in the entire supply chain involved. And following from the *International Forwarding Association*, the components of *supply chain* management offered by *freight forwarder* companies include planning and control, work / organizational infrastructure, *product flow*, *storage*, *reverse logistics*, to risk management.

Based on some of the definitions above, it can be concluded that *supply chain management* is a method to integrate the flow of information from processes starting from production, transportation, to distribution with the aim of maximizing time and minimizing costs.

C. Operational Performance

Performance (work performance) is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him, according to Mangkunegaracited by (Dwianto et al., 2019). Meanwhile, according to Moehertonoyang quoted by (Maulana & Surya, 2019), performance is a picture that has to do with the level of achievement of an activity / program / policy in realizing the goals, objectives, mission, and vision of the organization as outlined in the strategic planning of an organization.

Operational performance reflects the company's internal operating performance in terms of costs and waste reduction, improving product quality, developing new products, improving delivery performance, and increasing productivity (Ibrahim, 2016). The measurement of operational performance is measured through several measurement dimensions, namely the cost of the product, product quality, process quality, ability to handle changes in the number of requests, the ability to meet changes in customer tastes, timely delivery, and the ability to deliver before the specified time, according to Leong cited by (Rita, 2010).

According to (Muslih, 2012) performance is a measure of an employee's success in carrying out the duties or work charged to him. This opinion can be summed up as the ability of employees to achieve work that can be accounted for. Performance also plays an important role in achieving goals and serves as a driver for someone to be even better at achieving goals. There are several factors that can affect employee performance, namely the creation of a good work environment and providing motivation to these employees. The meaning of the work environment is the presence of adequate equipment and facilities, a pleasant working atmosphere will be able to encourage effective and efficient performance. So it can be concluded that performance is a result achieved by a person in carrying out the tasks assigned to him in accordance with predetermined criteria. Here are the indicators in operational performance according to (Robbins, 2008), namely the quantity of work, the quality of work, and the timeliness.

Based on some of the definitions above, it can be concluded that operational performance is an operational activity that has the aim of advancing a company by prioritizing effectiveness and clear control over a program or policy in realizing the company's goals, objectives, and vision and mission. The dimensions used in this study include *time*, *quality*, and *flexibility*.

D. E-Business Technology

The term *e-business* is defined as a business management method using IT-based communication, especially applications with the Internet. E-business refers to the delivery of documents, exchanging data between manufacturers, distributors and *trade partners*, tools to win new *customers*, market monopolies, and also for *teleconferences* (Brzozowska & Bubel, 2015). Today, the term *e-business* can be used in several contexts. First, *e-business* may be an element of an enterprise management strategy consisting in the use of solutions designed to increase the competitiveness of the company. In this case, companies can carry out part of their activities online, or use technology to improve the company's internal or the exchange of information from external. Second: e-business is a model of a company that operates primarily on the Internet, limiting the "physical" presence in the market or customer service to a minimum (Brzozowska & Bubel, 2015). Technology presents mechanisms or ways how *e-business* can be applied in many ways where it can be put to good use for business purposes as well as internal activities of the organization. However, technology must be managed effectively if the company is to make the best use of its potential (Combe, 2006).

Based on the theory of (Wullur & Wardaya, 2017), e-business technology is a use of internet-based technology by conducting *data transfer* methods that can be done anywhere, anytime, more quickly and accurately. The data can also be combined with other data and is able to carry out data *sharing* with suppliers and customers. The benefit of using technology according to (Wirapraja & Aribowo, 2020) is that it functions as an increase in the company's operational competence by providing facilities for

increasing *gross margins*, as managing employee productivity levels, managing operational talent, in order to create superior operational services. *E-Business Technology* is conceptually believed to allow companies to have the ability to manage margins for products successfully without compromising the quality of the product.

Based on some of the definitions above, it can be concluded that *e-business* technology is a process of utilizing internet-based technology that aims to maximize the company's operational processes, employee productivity, by making business innovations so that it can create *customer value*. The technology used in this study is the GT Nexus. GT Nexus is a *Supply Chain Management* (SCM) platform used by companies to manage and organize supply chain processes such as trade and logistics across a global network. Used in 66 countries around the world, more than \$100 billion (USD) of managed goods annually in the GT Nexus cloud. GT Nexus was acquired by Infor In September 2015 and is now renamed Infor Nexus. Infor Nexus offers a range of supply chain solutions, including: Network Supply Management, Network *Financial Supply Chain*, Network *Demand Fulfillment*, and *Network Transportation Management*.

IV. RESEARCH METHOD

The sampling technique in this study is to use a *non-probability sample* technique with an *accidental sampling* method. The sample used is based on the *Slovin* formula, namely:

$$n = \frac{N}{1 + N \cdot e^2}$$

Where:

n is the number of samples obtained
N is a predetermined population number
e is the tolerable error limit in a population

By using *e* 10% so that a total sample of 75 customers was obtained from a population of 300 *selected customers*. According to (Arikunto, 2010), the sample is a part or representative of the population studied. If the study population is less than 100, then the samples taken are all of them, but if the study population is more than 100 then the sample can be taken between 10-15% or 20-25% or more. So the theory (Arikunto, 2010) is fulfilled.

V. RESULT

A. Validation Test

The critical limit value of validity is 0.227, which if the correlation or *r* value is less than or less than 0.227 then the questionnaire statement is declared invalid. Conversely, if the calculated *r* value is greater than 0.227 then the questionnaire statement is declared valid.

The following are the results of the validity test of the research instrument (questionnaire) for each of the variables studied:

Pernyataan	Nilai Koefisien Koreksi (r Hitung)				Status
	Kinerja Operasional (X1)	E- Bussines Technology (X2)	Supply chain Management (Y)	Loyalitas Customer (Z)	
No. 1	0.843	0.707	0.760	0.821	Valid
No. 2	0.834	0.653	0.738	0.755	Valid
No. 3	0.872	0.734	0.739	0.659	Valid
No. 4	0.872	0.532	0.760	0.707	Valid
No. 5	0.842	0.694	0.783	0.810	Valid
No. 6	0.883	0.765	0.820	-	Valid
No. 7	0.879	0.818	0.841	-	Valid
No. 8	0.860	-	-	-	Valid
No. 9	0.853	-	-	-	Valid

Table 1: Validation Test Results

Source: processed primary data (SPSS 26.0)

From the table above, the value of *r* is obtained >0.227 (*r* table with *n*=75), which is the basis for drawing conclusions on the *Pearson* validity test, from which the results can be concluded that each item of each statement on the variable Operational Performance in PT. DHL Global Forwarding (X1), Use of *E-Bussines Technology* (X2), Implementation of *Supply Chain Management* (Y) and *Customer Loyalty* (Z) are all valid.

B. Reliability Test

The reliability test used in this study was *Alpha Cronbach*. This formula is used to see the extent to which measuring instruments can give relatively no different or consistent results when re-measuring a social phenomenon.

Variable	Nilai Alpha	Nilai Batas	Status
Kinerja Operasional (X1)	0.954	0.6	Reliable
Penggunaan E- Bussines Technology (X2)	0.829	0.6	Reliable
Implementasi Supply Chain Management (Y)	0.890	0.6	Reliable
Loyalty Customer (Z)	0.805	0.6	Reliable

Table 2: Reability Test Results

Source: processed primary data (SPSS 26.0)

The table above shows that each variable is *reliable* because the value of the *Cronbach Alpha coefficient* for all variables is greater than 0.60. Then it can be concluded that all items of statements on all variables show valid and reliable results, so that they can be used and distributed to a total of 75 respondents, which can later be further analyzed.

C. Partial and Simultaneous Tests

Model	Coefficients ^a		Standardized Coefficients Beta	t	Sig.	
	Unstandardized Coefficients B	Std. Error				
1	(Constant)	7.300	3.183		2.293	.025
	Kinerja Operasional	.139	.062	.219	2.237	.028
	Penggunaan E-Bussines Technology	.564	.108	.514	5.247	<.001

a. Dependent Variable: Implementasi Supply Chain Management

Table 3: Substructure Partial Test 1

Source: processed primary data (SPSS 26.0)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	525.056	2	262.528	22.886	<.001 ^b
	Residual	825.931	72	11.471		
	Total	1350.987	74			

a. Dependent Variable: Implementasi Supply Chain Management
 b. Predictors: (Constant), Penggunaan E-Bussines Technology, Kinerja Operasional

Table 4: Simultaneous Test of Sub Structure 1

Source: processed primary data (SPSS 26.0)

Here are the interpretations of the two tables above:

- Operational Performance at PT. DHL Global Forwarding Indonesia (X1) affects the Implementation of *Supply Chain Management* (Y). Table 4.16 also shows that the path analysis coefficient is significant, since the t/individual (partial) test test obtained a Sig value of 0.028 which is less than 0.05 or [0.028 < 0.05]. So that Operational Performance at PT. DHL Global Forwarding Indonesia has a positive and significant effect on the Implementation of *Supply Chain Management*. The direct influence of Operational Performance on the Implementation of *Supply Chain Management* is shown by a Beta value of 0.219 or 21.90%.
- Use of *E-Bussiness Technology* in PT. DHL Global Forwarding Indonesia (X2) influences the Implementation of *Supply Chain Management* (Y). Based on table 4.16, the t/individual (partial) test obtained a Sig value of <0.001 which is less than 0.05, so the path analysis coefficient is significant. So that the use of *E-Bussiness Technology* in PT. DHL Global Forwarding Indonesia has a significant positive effect on the Implementation of *Supply Chain Management*. The big influence of the use of *E-Bussiness Technology* in PT. DHL Global Forwarding Indonesia towards *Supply Chain Management* Implementation is indicated by a Beta value of 0.514 or 51.40%.
- Operational Performance at PT. DHL Global Forwarding Indonesia (X1) and the Use of *E-Bussiness Technology* in PT. DHL Global Forwarding Indonesia (X2) has a simultaneous/joint effect on the Implementation of *Supply Chain Management* (Y). Table 4.15 shows that the path analysis coefficient is significant, since the F/test together obtained a Sig value of <0.001, where the Sig value <0.001 is less than 0.05. So that Operational Performance at PT. DHL Global Forwarding Indonesia and the Use of *E-Bussiness Technology* in PT. DHL Global Forwarding Indonesia has a significant effect together on the Implementation of *Supply Chain Management*.

In summary, substructure 1 can be set forth in the following figure:

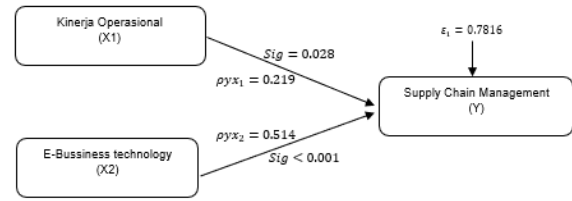


Fig. 1: Substructure Path Analysis Diagram 1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.966	2.310		4.746	<.001
	Kinerja Operasional	-.093	.045	-.229	-2.062	.043
	Penggunaan E-Bussines Technology	.191	.089	.272	2.156	.034
	Implementasi Supply Chain Management	.240	.083	.375	2.909	.005

a. Dependent Variable: Loyalitas Customer

Table 5: Sub Structure Partial Test 2

Source: processed primary data (SPSS 26.0)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	153.558	3	51.186	9.086	<.001 ^b
	Residual	399.962	71	5.633		
	Total	553.520	74			

a. Dependent Variable: Loyalitas Customer
 b. Predictors: (Constant), Implementasi Supply Chain Management, Kinerja Operasional, Penggunaan E-Bussines Technology

Table 6: Simultaneous Test of Sub Structure 2

Source: processed primary data (SPSS 26.0)

Here are the interpretations of the two tables above:

- Operational Performance at PT. DHL Global Forwarding Indonesia (X1), The Use of *E-Bussiness Technology* in PT. DHL Global Forwarding Indonesia (X2) and the Implementation of *Supply Chain Management* (Y) have a concurrent influence on *Customer Loyalty* (Z). Table 4.17 shows that the path analysis coefficient is significant because the F/test together obtained a Sig value of <0.001, where Sig <0.001 is less than 0.05. So that Operational Performance, Use of *E-Bussiness Technology* and Implementation of *Supply Chain Management* at PT. DHL Global Forwarding Indonesia has a significant effect together on *Customer Loyalty*.
- Operational Performance at PT. DHL Global Forwarding Indonesia (X1) affects *Customer Loyalty* (Z). The path analysis coefficient is declared significant because the individual (partial) t/test value is obtained by 0.043 which is less than 0.05 or [0.043 < 0.05]. So that Operational Performance at PT. DHL Global Forwarding Indonesia (X1) has a positive and significant effect on *Customer Loyalty*. The direct influence of Operational Performance in PT. DHL Global Forwarding Indonesia to *Customer Loyalty* as explained by the Beta value of -0.229 or 22.90%, which means Operational Performance at PT. DHL Global Forwarding Indonesia negatively influences *Customer Loyalty*.
- Use of *E-Bussiness Technology* in PT. DHL Global Forwarding Indonesia (X2) affects *Customer Loyalty* (Z).

The path analysis coefficient is declared significant because the individual (partial) t/test value is obtained by 0.034 which is less than 0.05 or $[0.034 < 0.05]$. So that the implementation of *Supply Chain Management* has a significant positive influence on *Customer Loyalty*. The big influence of *Supply Chain Management* Implementation in PT. DHL Global Forwarding Indonesia to *Customer Loyalty* as explained by the Beta value of 0.272 or 27.20%.

- The implementation of *Supply Chain Management* (Y) affects *Customer Loyalty* (Z). The path analysis coefficient is declared significant because the individual (partial) t/test value is obtained by 0.005 which is less than 0.05 or $[0.005 < 0.05]$. So that the implementation of *Supply Chain Management* has a significant positive influence on *Customer Loyalty*. The magnitude of the influence of *Supply Chain Management* Implementation on *Customer Loyalty* is explained by the Beta value of 0.375 or 37.50%.

In summary, substructure 2 can be set forth in the following figure:

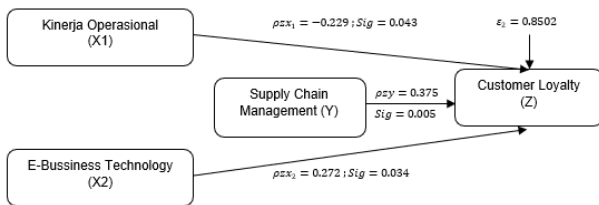


Fig. 2: Substructure Path Analysis Diagram 2

D. Sobel Test

A sobel test is a test used to determine whether a relationship through a mediating variable is significantly capable of functioning as a mediator in the relationship. To make it easier to calculate the z value of the sobel test, you can take advantage of the www.danielsoper.com online site with the *Statistics Calculator* → *Mediation Models* → *Sobel Test Calculator for Significance of Mediation* menu, with the following results:

- Mediation Test of the Effect of Operational Performance in PT. DHL Global Forwarding Indonesia towards *Customer Loyalty* through the Implementation of *Supply Chain Management*.

Input values:
 A: -0.093
 B: 0.24
 SE_A: 0.045
 SE_B: 0.083

Calculate!

Results:
 Sobel test statistic: -1.68136864
 One-tailed probability: 0.04634567
 Two-tailed probability: 0.09269133

Fig. 3: Sobel Test Model 1

Based on figure 3 above, it shows a *one-tailed probability* of $0.04634567 < 0.05$, so it can be concluded that the *Supply Chain Management* Implementation variable can function as a mediator or be able to mediate the indirect influence of Operational Performance in PT. DHL Global Forwarding Indonesia towards *Customer Loyalty*.

- Mediation Test of the Effect of *Using E-Business Technology* in PT. DHL Global Forwarding Indonesia towards *Customer Loyalty* through the Implementation of *Supply Chain Management*.

Input values:
 A: 0.191
 B: 0.24
 SE_A: 0.089
 SE_B: 0.083

Calculate!

Results:
 Sobel test statistic: 1.72329949
 One-tailed probability: 0.04241719
 Two-tailed probability: 0.08483438

Fig. 4: Sobel Test Model 2

Based on figure 4 above, it shows a *one-tailed probability* of $0.04241719 < 0.05$, so it can be concluded that the *Supply Chain Management* Implementation variable can function as a mediator or be able to mediate the indirect influence of the use of *E-Business Technology* in PT. DHL Global Forwarding Indonesia towards *Customer Loyalty*.

E. Model Conformity Test

This test serves to see if the proposed model has a fit with the data or not.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.623 ^a	.389	.372	3.387

a. Predictors: (Constant), Penggunaan E-Bussines Technology, Kinerja Operasional

Table 7: R-Square Sub Structure 1

Source: processed primary data (SPSS 26.0)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.527 ^a	.277	.247	2.373

a. Predictors: (Constant), Implementasi Supply Chain Management, Kinerja Operasional, Penggunaan E-Bussines Technology

Table 8: R-Square Sub Structure 2

Source: processed primary data (SPSS 26.0)

So that the calculation of the value of the diversity of data studied is as follows:

$$R_m^2 = 1 - (1 - R_1^2) \cdot (1 - R_2^2) \dots (1 - R_p^2)$$

$$R_m^2 = 1 - (0.389) \times (0.277)$$

$$R_m^2 = 0.892247$$

A figure of 0.892247 was obtained in the calculation so that it can be concluded that the diversity of data indicated by the model is 89.22%, while the other 10.78% is explained by variables that are not studied. Thus the research model has a high predictive ability over the behavior of dependent variables characterized by a high coefficient of determination above 50%. R_m^2

VI. DISCUSSION

- Operational Performance at PT. DHL Global Forwarding Indonesia has a significant positive influence on the Implementation of *Supply Chain Management*. Based on the results of the analysis, the value of the path coefficient of the Operational Performance variable to the *Supply Chain Management* Implementation variable was obtained by 0.219 or 21.90% with a significance value of 0.028. So that H0 is accepted, meaning that the better the Operational Performance at PT. DHL Global Forwarding Indonesia, the Implementation of *Supply Chain Management* will be more effective and maximum.
- Use of *E-business Technology* in PT. DHL Global Forwarding Indonesia has a positive and significant effect on the Implementation of *Supply Chain Management*. From the results of the analysis, the value of the variable path coefficient of the Use of *E-business Technology* to the *Supply Chain Management* Implementation variable was 0.514 or 51.40% with a significance value of <0.001. So that H0 is accepted, which means that the more effective and efficient the use of *E-business Technology*, namely the InforNexus system, the more effective and maximum the Implementation of *Supply Chain Management* will be.
- Operational Performance at PT. DHL Global Forwarding Indonesia has a significant negative effect on *Customer Loyalty*. From the results of the analysis, the value of the path coefficient of the Operational Performance variable in PT. DHL Global Forwarding Indonesia against the *Customer Loyalty* variable of -0.229 or 22.90% with a significance value of 0.067. So that the decision taken is that H0 is rejected and H1 is accepted, which means that the more effective and efficient Operational Performance in PT. DHL Global Forwarding Indonesia then has a negative influence on the level of *Customer Loyalty*.
- Use of *E-business Technology* in PT. DHL Global Forwarding Indonesia has a significant positive influence on *Customer Loyalty*. The results of data analysis obtained the value of the variable path coefficient of *E-business Technology* use against the *Customer Loyalty* variable of 0.272 or 27.20% with a significance value of 0.034. So that H0 is accepted, which means that the more effective and efficient the use of *E-business Technology*, customer loyalty can also be maintained properly.

- Implementation of *Supply Chain Management* in PT. DHL Global Forwarding Indonesia has a significant positive influence on *Customer Loyalty*. The results of the data analysis obtained the value of the path coefficient of the *Supply Chain Management* Implementation variable against the *Customer Loyalty* variable of 0.375 or 37.50% with a significance value of 0.005. So that H0 is accepted, which means that the implementation of *Supply Chain Management* is more effective and efficient, then *Customer Loyalty* in PT. DHL Global Forwarding Indonesia can be maintained consistently.
- The implementation of *Supply Chain Management* is unable to function as a mediator or mediate the influence of Operational Performance in PT. DHL Global Forwarding Indonesia towards *Customer Loyalty*. This is indicated by the significance value of $0.04634567 < 0.05$ which means the Implementation of *Supply Chain Management* that has been carried out at PT. DHL Global Forwarding Indonesia is in accordance with the Operational Performance that has been provided by the company in increasing the level of *Customer Loyalty*, so that the Implementation of *Supply Chain Management* as an intervening variable is proven to have a great impact on *Customer Loyalty* in PT. DHL Global Forwarding Indonesia.
- The results of this study show that the Implementation of *Supply Chain Management* is able to function as a mediator or mediate the influence of the use of *E-business Technology* on *Customer Loyalty* in PT. DHL Global Forwarding Indonesia. This is indicated by the significance value of $0.04241719 < 0.05$ which means the Implementation of *Supply Chain Management* that has been carried out at PT. DHL Global Forwarding Indonesia is in accordance with the use of *E-business Technology* that has been provided by the company in increasing the level of *Customer Loyalty*, so that the Implementation of *Supply Chain Management* as an intervening variable is proven to influence and strengthen the use of *E-business Technology* to *Customer Loyalty* in PT. DHL Global Forwarding Indonesia.

VII. CONCLUSION

Based on the results of the study and the analysis as a whole, the following conclusions can be drawn:

- Operational Performance at PT. DHL Global Forwarding Indonesia has a significant positive influence on the Implementation of *Supply Chain Management*.
- Use of *E-business Technology* in PT. DHL Global Forwarding Indonesia has a significant positive influence on the Implementation of *Supply Chain Management*.
- Operational Performance at PT. DHL Global Forwarding Indonesia has a significant negative influence on *Customer Loyalty*.
- Use of *E-business Technology* in PT. DHL Global Forwarding Indonesia has a significant positive influence on *Customer Loyalty*.
- Implementation of *Supply Chain Management* in PT. DHL Global Forwarding Indonesia has a significant positive impact on *Customer Loyalty*.

- The implementation of *Supply Chain Management* cannot function as a mediator or mediate the influence of Operational Performance in PT. DHL Global Forwarding Indonesia towards *Customer Loyalty*.
- The implementation of *Supply Chain Management* is able to function as a mediator or mediate the influence of the use of *E-business Technology* on *Customer Loyalty* at PT. DHL Global Forwarding Indonesia.

VIII. RECOMMENDATION

Based on the conclusions that have been described above, the recommendations that can be given are as follows:

- To increase and maintain the level of *Customer Loyalty* in PT. DHL Global Forwarding Indonesia, as well as so that the company does not experience losses or margin decreases that can result from *customer distrust* to be able to continue to use the services of PT. DHL Global Forwarding Indonesia, it is necessary to review what kind of Operational Performance is not expected or even expected by customers who are already owned by the company, then PT. DHL Global Forwarding Indonesia needs to optimize operational performance because the Operational *team* is directly dealing with *customers* every day, and periodically evaluates the implementation of *Supply Chain Management* so that the ISC department can work optimally and in accordance with expectations. The company also needs to review the prices offered to *customers* so that PT. DHL Global Forwarding Indonesia is still able to compete with competitive prices but still with maximum service.
- For other researchers who will conduct research on operational performance, the use of *e-business technology*, the implementation of *supply chain management*, and *customer loyalty*, it is recommended to examine other variables that also have a significant influence. So it is hoped that these researches can be useful in providing input and recommendations to companies and the academic world.

IX. IMPLICATION

Based on the conclusions of the research results and recommendations described above, the implications are that the performance of the operation a l is getting more optimal, the use of *e-business technology* becomes easier, more effective, and efficient, the implementation of *supply chain management* can be in line optimally, and the company is able to get *rewards* with the level of *customer loyalty* which is increasing. Of course, there needs to be *synergy* from all layers of employees so that the company's operations can run in accordance with the company's goal of becoming a leading forwarder company but still relying on company operational standards, government regulations, and ethics in doing business correctly.

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