



Investigating the Role of Customer Value and Trust as Mediators in Flexibility's Effect on Customer Loyalty

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Abstract

Purpose: The purpose of this study is to apply SEM analysis to WarpPLS analysis and translate Customer Value and Customer Trust as Mediation, especially for PT. Nusa Prima Logistics.

Design / Method: This study was divided into 3: exploratory research, descriptive research, and explanatory research. The quantitative approach of this study uses a survey method by taking samples from the population. This is a latent variable that is measured using a survey tool in the form of a survey. The survey was conducted by distributing questionnaires to the respondents. This research was conducted at PT. Nusa Prima Logistics Terminal Teluk Lamong by taking primary data, in the form of assessments or perceptions from respondents, so a survey was conducted by submitting a questionnaire directly to PT. Nusa Prima Logistics Terminal Teluk Lamong as 194 respondents. Quantitative data analysis was performed using Structural Equation Modeling (SEM) to answer the research hypothesis.

Finding: Flexibility is very influential in increasing Customer Retention so to develop Customer Retention, it is necessary to increase Flexibility, Customer Value and Customer Trust

Originality: The novelty in this research lies not yet obtained about the role and position of Customer Value and Customer Trust as mediation that affect Customer Retention.

Keywords

Flexibility, Customer Value, Customer Trust, Customer Retention.

Introduction

PT. Nusa Prima Logistik is a combination of 3 (three) large commodity importers and animal feed producers, namely PT.FKS Multi Agro, Tbk, Pt. Charoen Pokhpan Indonesia, Tbk and PT. Japfa Comfeed Indonesia, Tbk. Those three companies agreed to run PT. Nusa Prima Logistik as a terminal manager and transit warehouse commodity grains and meals. Considering that animal feed is related to the availability and stability of the food, especially the availability of livestock meat, so diversity is seen as very strategic and essential.





PT. Nusa Prima Logistik in collaboration with PT. Teluk Lamong Terminal as a subsidiary of PT. Pelindo III is an alternative solution to the problems in the logistics world, especially the port. This becomes a particular concern because the existing port, especially Tanjung Perak, will lack capacity and result in cessation of sea traffic because all activities will pile up and become very ineffective and inefficient.

In 2018, Nusa Prima Logistics and the Teluk Lamong Terminal recorded 2.5 million MT of the commodity demolished from the total population of 3.5 million MT or 75% of the existing market share, while the other 25% was spread in 3 other ports such as Sinar Maspion Terminal, Manyar (JIPE), and Tanjung Perak. This number is a significant achievement from the 2018 projected target of 1.9 million MT or equivalent to 130% of the actual achievement of the target set. This is an outstanding achievement and needs to maintain. Therefore, attention to customer retention is critical.

Customer loyalty is a long-term relationship with the customer and a strategic objective of the company. The level of customer retention depends on the company's efforts. From the customer's side, the intention to survive or leave the company depends on various factors: service quality, satisfaction level, customer value, customer experience, commitment, trustworthiness, company image, company reputation and others (Boohene et al., 2013; Danesh et al., 2012; Edward and Sahadev, 2011; Cohen et al., 2007; Nguyen and Leblance, 2001). Relationship marketing is also an essential factor in increasing and maintaining customer retention.

Customer retention in marketing is critical, including marketing terminal logistics services. This study is one focus of the middle range for consumer behavior. According to Solomon (2002), consumer behavior is the study of the processes carried out by a person or group of people in choosing, buying, using or determining an item, service, idea or experience to satisfy their desires or fulfill their needs. Consumer behavior is the process

by which a person finds, buys, uses, evaluates and acts after consuming a product, service or idea that appears to meet their needs.

Flexibility is believed to relate to customer retention. Flexibility is the ability to adapt and function effectively in different situations, individuals or groups. Flexibility requires the ability to understand and appreciate differing perspectives on issues and to adapt one's approach to changing situations and to be receptive to changes in the organization.

Customer retention, as described earlier, relates to the relationship marketing. Lupiyoadi (2013) stated that relationship marketing is an implementation of the customer orientation that enables





companies to retain customers through loyalty and commitment from consumer. The holistic marketing concept model also shows a shift in the marketing approach from transactional to relationship marketing, but it does not negate the transactional approach, especially the use of 4P as the primary marketing tool. As explained by Gummesson (1994), combined marketing is still needed, but it is no longer effective in creating long-term relationships with customers.

Based on the things that have been described, this in-depth research is for the purpose of PT. Nusa Prima Logistics' marketing conditions. The development of concepts and /or customer retention theories is through setting the conditions. This research needs to do as a continuation of various studies about flexibility, customer value, and customer trust because research gaps are still found. There have been many research results that prove a significant positive effect of flexibility on customer retention. However, it never obtained the role and position of the customer value and customer trust yet.

The theoretical benefit of this research is the development of science, namely the development of consumer behavior theory, precisely the customer retention concept or model. While the practical benefits of this research are information on seaport companies to formulate and implement marketing strategies and policies, especially strategies on how to retain customers.

Literature Review and Development of Conceptual Framework

Flexibility. Flexibility is the ability to adapt and function effectively in different situations, individuals or groups. Flexibility requires the ability to understand and appreciate conflicting perspectives on problems, adapt one's approach to changing circumstances, and be receptive to organizational change. Manufacturing flexibility is the company's ability to respond effectively to the changes in the current condition, both in the company's internal (operations) and in the company's external environment (Gerwin, 1993). Four areas of the company environment affect manufacturing flexibility: strategy, environmental factors, technology, and organizational attributes (Gerwin, 1987).

Customer Value. Nowadays, customer value occupies more attention, both among academics and researchers and business practitioners. One of the invoicing triggers is the smarter the customer, the easier the access to verify company's claims and look for superior alternatives. In making purchasing choices, customers are more value-oriented in consuming services because they have various choices (Slater, 1997; Woodruff, 1997). In defining customer value, Kotler and Keller (2009) compare the total benefits received and the total costs incurred by customers. Therefore, both





define the value perceived by the customer as the difference between all the benefits of the potential customer and the cost assessment of the alternative offer. Total customer benefit means the monetary value that is the set of economic, functional, and psychological benefits that a customer expects from a market offering that results from a product, service, person, and associated image.

Customer Trust. Consumer trust is a consumer's understanding of an object, its attributes and its benefits. Based on this concept, consumer knowledge is closely related to the aptitude debate, as it is the consumer's belief. Consumer trust or consumer knowledge refers to the belief that a product has different attributes and the benefits of those different attributes. In general, trust can be understood as trusting others because you can trust others. An individual or a company can be trusted because it has a high degree of integrity linked to qualities such as consistency, capacity, integrity, fairness, responsibility and kindness (person). According to Mowen and Miner, consumer trust is “all the knowledge that consumers have and all the conclusions that consumers draw about their purposes, characteristics and interests. Objects are products, people, companies, and anything in which a person has a belief or attitude. “Attributes are characteristics or characteristics that an object may or may not have. The benefits are well established for the consumer. This is a typical result.\

Customer Retention. Limitation on customer retention can be seen from two points of view, It is from the company's point of view and from the customer's point of view. From a company's perspective, Buttle (2004) defines customer retention as the number of customers doing business with a company at the end of the financial year and expressed as the percentage of active customers at the beginning of the financial year. The exact interval between storage periods shall be measured in one year. However, it also depends on the acquisition cycle in the industry. Kaplan and Norton (1996) define customer loyalty as an activity aimed at maintaining continuous interaction with customers through ongoing relationships, loyalty marketing, database marketing, and customer loyalty, marketing permission and more.

Methodology

Based on the degree of scientific depth, this study was an explanatory research. The purpose of this study was to give explanations to increase customer retention. This research was conducted at PT. Nusa Prima Logistics Terminal Teluk Lamong. The unit of analysis of this study was a customer of PT Nusa Prima Logistik. The manufacturer has three departments, and the trading company has two departments that interact with PT Nusa Prima Logistik. Accordingly, the population size in this study was $N = (3 \times 27) + (2 \times 8) = 97$ departments. The respondents of this study were personnel from each department who understand the variables being studied and recognized the company's





condition thoroughly. Therefore, every department sent two respondents. Thus the respondents in this study were 194 people. Data were analyzed using PLS (Partial Least Square) analysis model through the WarpPLS computer program package (Solimun et al., 2017). The reasons are explained as follows (1). The analysis model is tiered, and the structural equation model meets the recursive model. (2) The measurement of latent variables means any variable that cannot be measured directly.

The conceptual framework of this study is to link the relationships between the variables. Here, flexibility affects customer loyalty, providing value and trust to the customer as an intermediary.

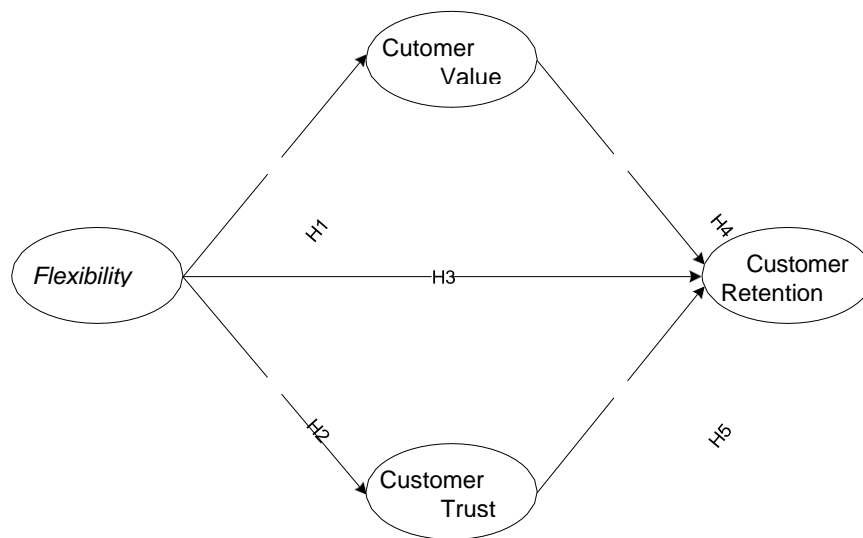


Figure 1 Conceptual Framework

With reference to the conceptual framework and the hypothetical model of the study above, the theoretical impact between the variables of the study can be explained as follows.

Effect of flexibility on customer value. Brozović et al. (2016) conducted a survey titled "Service Flexibility: Conceptualizing Value Creation in Services". The aim of this study was to analyze the specific service and flexibility literature to gain a concept of the relationship between supplier flexibility and customer value creation. The author analyzes existing views on service and flexibility and proposes a relationship between supplier flexibility and customer value creation. This article documents service logic and uses real-world examples to provide conceptual hints and models for how flexibility can help create value.



(H1) Flexibility had a significant effect on customer value.

The effect of flexibility on customer trust. Guzman et al. (2017) conducted a study entitled “Logistics Flexibility and Customer Satisfaction in Spain's Furniture Industry.” Flexibility has been analyzed and discussed in the literature for decades as a strategy to create competitive advantage and essential resources for a business. However, logistics flexibility is a relatively new structure and is a variable that can also be seen as a business strategy that enhances competitive advantage and customer satisfaction. While logistics flexibility offers many business benefits, many organizations still ignore the impact of logistics flexibility on customer satisfaction. Therefore, the main purpose of this empirical study was to analyze the impact of logistics flexibility on logistics related to customer satisfaction using samples from 322 companies in this sector. The results obtained provide empirical evidence that logistics flexibility has a significant positive impact on logistics with respect to customer satisfaction.

(H2) Flexibility marketing had a significant effect on customer trust.

The effect of flexibility on customer retention. Vidal et al. (2016) conducted a study entitled “Flexibility of Benefit Systems and Firms' Attraction and Retention Capacities.” This research focuses on the specific design variable of the benefit system: its level of flexibility. For this job, benefit flexibility refers to the level of freedom employees in choosing their benefits. In this paper, we pay special attention to the Spanish context. In particular, although Spain’s benefits system has increased their level of flexibility in recent years, the empirical studies analyze some of these effects do not exist. In testing the hypotheses, data were collected through a self-structured questionnaire design about the characteristics and effectiveness of a company's benefits system. Edenred S.A sent an email to 13,522 Spanish companies to request a visit to the website to participate in this research. A total of 429 managers answered the questionnaire. The hypothesis was tested by OLS regression analysis. We can see that the estimated coefficients for flexible benefits systems and flexible plans are definite and statically significant. Our results show that only companies with a very flexible social benefits system are reported to have a higher retention capacity than companies that offer a fixed benefit system.

(H3) Flexibility had a significant effect on customer retention.

The effect of customer value on customer retention. El-Adly (2019) conducted research entitled “Modeling the relationship between hotels perceived value, customer satisfaction, and customer loyalty.” This study used structural equation modeling (SEM) to examine the relationship between





the perceived value of customers, customer satisfaction, and customer loyalty in hotel services. The results of this study showed that the value of customer perception does not have a direct significant positive effect both on customer satisfaction and customer loyalty.

(H4) Customer value had a significant effect on customer retention.

The effect of customer trust on customer retention. Anggasta (2014) conducted a study entitled “The Effect of Customer Trust, Perceived Value, and Barriers on Customer Retention of Apple iPhone Users in Surabaya.” The purpose of this study was to determine the effect of customer trust, perceived value, and switching barriers. The design of this study used convenience sampling. Data were collected using a questionnaire. The analytical method used was multiple linear regression. The results of this study were customer trust, and the influence of perceived value variables is insignificant, and the switching barriers variables significantly influence customer retention.

(H5) Customer trust had a significant effect on customer retention.

Result and Discussion

Analysis

This study used the SEM Warppls approach to estimate the parameters of the model. Before estimating the parameters, it is necessary to check the validity and reliability of each questionnaire item on each variable. Validity testing is needed to ensure that the data

is correct, while reliability is used to ensure that the instruments used are correct in measuring variables.

Table 1 The Results of Validity and Reliability Test

Variable	Indicator	Item	Correlation	Conclusion	Cronbach Alpha	Conclusion
Flexibility (X1)	X11	X111	0.545	Valid	0.803	Reliable
		X121	0.502	Valid		
	X12	X122	0.449	Valid		
		X131	0.411	Valid		
	X13	X132	0.417	Valid		
		X133	0.583	Valid		
		X134	0.465	Valid		
	X14	X141	0.614	Valid		
		X142	0.486	Valid		
	Y11	Y11	Y111	0.317		
Y112			0.513	Valid		
Y113			0.419	Valid		





Customer Value (Y1)	Y12	Y114	0.375	Valid	0.822	Reliable
		Y121	0.423	Valid		
		Y122	0.377	Valid		
		Y123	0.499	Valid		
	Y13	Y124	0.368	Valid		
		Y131	0.337	Valid		
		Y132	0.403	Valid		
		Y133	0.601	Valid		
	Y14	Y134	0.711	Valid		
		Y141	0.460	Valid		
		Y142	0.403	Valid		
		Y143	0.308	Valid		
		Y144	0.308	Valid		
Customer Trust (Y2)	Y21	Y211	0.585	Valid	0.681	Reliable
		Y212	0.324	Valid		
	Y22	Y221	0.341	Valid		
		Y222	0.534	Valid		
	Y23	Y231	0.326	Valid		
		Y232	0.371	Valid		
Customer Retention (Y3)	Y31	Y311	0.338	Valid	0.791	Reliable
		Y312	0.342	Valid		
		Y313	0.350	Valid		
	Y32	Y321	0.485	Valid		
		Y322	0.425	Valid		
		Y323	0.319	Valid		
	Y33	Y331	0.543	Valid		
		Y332	0.324	Valid		
		Y333	0.413	Valid		
	Y34	Y341	0.425	Valid		
		Y342	0.321	Valid		
		Y343	0.460	Valid		
		Y344	0.501	Valid		
		Y345	0.447	Valid		

All variables have been analyzed for validity and reliability, and it can be concluded that flexibility (X1), customer value (Y1), customer trust (Y2) and customer retention (Y3) are valid and reliable.

Table 2 Measurement Model Evaluation

Variabel	Indikator	Bobot	P Value	Keterangan
Flexibility (X1)	(X11)	0.710	<0.001	Significant
	(X12)	0.736	<0.001	Significant
	(X13)	0.746	<0.001	Significant
	(X14)	0.808	<0.001	Significant
Customer Value (Y1)	(Y11)	0.708	<0.001	Significant
	(Y12)	0.659	<0.001	Significant
	(Y13)	0.777	<0.001	Significant
	(Y14)	0.765	<0.001	Significant
Customer Trust (Y2)	(Y21)	0.810	<0.001	Significant
	(Y22)	0.783	<0.001	Significant
	(Y23)	0.781	<0.001	Significant





Customer Retention (Y3)	(Y31)	0.676	<0.001	Significant
	(Y32)	0.755	<0.001	Significant
	(Y33)	0.750	<0.001	Significant
	(Y34)	0.778	<0.001	Significant

Table 2 indicates that all latent variables have excellent and decent indicators. Thoroughly, it aims to find out the most dominant indicators in contributing. The worst indicator for creating the flexibility variable is X11, having the smallest loading factor of 0.710. The best indicator for creating the customer value variable is Y13, with the most significant loading factor of 0.777. The best indicator for creating the customer Trust variable is Y21, with the most significant loading factor of 0.810. The worst indicator for creating the customer retention variable is Y31, with the smallest loading factor of 0.676. Parameters evaluation indicates a causal relationship to other latent variables. A causal relationship is declared insignificant if the p-value is <0.05. Table 3 is a summary of the coefficient calculation results in SEM Warppls analysis.

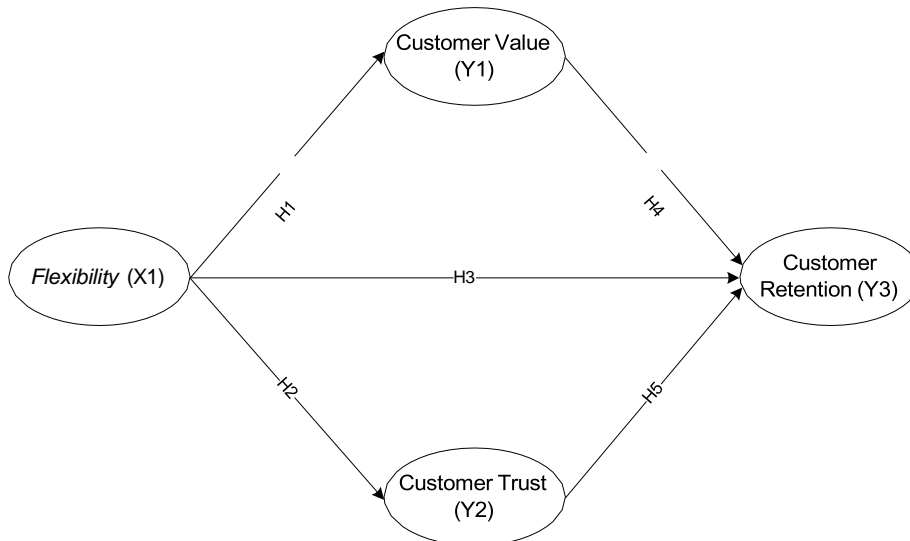


Figure 2 Direct Effect

Table 3 The Result of Estimation and Direct Effect Testing

Hypothesis	Effect between Latent variables			Coefficient	p-value	Conclusion
	exogenous variable	→	endogenous variable			
H1	Flexibility (X1)	→	Customer Value (Y1)	0.279	0.002	Significant
H2	Flexibility (X1)	→	Customer Trust (Y2)	0.300	<0.001	Significant



H3	Flexibility (X1)	→	Customer Retention (Y3)	0.190	0.025	Significant
H4	Customer Value (Y1)	→	Customer Retention (Y3)	0.365	<0.001	Significant
H5	Customer Trust (Y2)	→	Customer Retention (Y3)	0.425	<0.001	Significant

The Effect of Flexibility on Customer Retention. Due to the p-value is <0.005, so H0 is rejected, meaning that the flexibility (X1) had a significant effect on the customer value (Y1). Therefore, the higher the flexibility, the higher the customer value. It can be seen from the path coefficient by 0.279 with a p-value of 0.002. **The Effect of Flexibility on Customer Trust.** Due to the p-value is <0.005, so the H0 is rejected, meaning that the flexibility (X1) had a significant effect on customer trust (Y2). Therefore, the higher the flexibility, the higher the customer trust. It can be seen from the value of the path coefficient by 0.300 with a p-value <0.001. **The Effect of Flexibility on Customer Retention.** Due to the p-value is <0.005, so the H0 is rejected, meaning that the flexibility (X1) had a significant effect on the customer retention (Y3). Therefore, the higher flexibility, the higher the customer retention. It can be seen from the path coefficient value by 0.145 with a p-value of 0.025. **The Effect of Customer Value on Customer Retention.** Due to the p-value is <0.005, so the H0 is rejected, meaning that the customer value (Y1) had a significant effect on the customer retention (Y3). Therefore, the higher the customer value, the higher the customer retention. It can be seen from the path coefficient value by 0.365 with p-value <0.001. **The Effect of Customer Trust on Customer Retention.** Due to the p-value is <0.005, so the H0 is rejected, meaning that the customer trust (Y2) had a significant effect on the customer retention (Y3). Therefore, the higher the customer, the higher the customer retention. It can be seen from the value of the path coefficient by 0.425 with a p-value <0.001.

Table 4 The Result of Estimation and Indirect Effect Testing

Mediation Effect	Coefficient	p-value
Flexibility (X1) → Customer Value (Y1) → Customer Retention (Y3)	0.101	0.009
Flexibility (X1) → Customer Trust (Y2) → Customer Retention (Y3)	0.123	



The Indirect Effect of Flexibility on Customer Retention and Customer Value Mediation.

Table above indicates that the flexibility (X1) had a significant effect on the customer retention (Y3) with mediated customer value (Y1). Since the p-value is > 0.05 , so H_0 is accepted, meaning that the customer value (Y1) is able to mediate the flexibility (X1) and the customer retention (Y3) score is 0.101. **The Indirect Effect of Flexibility on Customer Retention and Customer Trust**

Mediation. Table above indicates that flexibility (X1) had a significant effect on the customer retention (Y3) mediated by customer trust (Y1). Since the p-value is > 0.05 , so H_0 is accepted, meaning that the customer trust (Y1) is able to mediate the flexibility (X1) and the customer retention (Y3) score is 0.123.

Discussion

Flexibility has four indicators: temporal (X21), range (X22), focus (X23) and intention (X24). Among the four indicators, the intention (X24) variable, as the most dominant one, has a score of 0.808. The flexibility variable measured by two indicators has an average total score of 3.34 categorized as medium (average score around 2.50-3.50). This shows that in general, according to consumers of PT Nusa Prima Logistik, the flexibility is in a moderate condition, but is approaching the high category. This is because there are still consumers who disagree. For example, there are 30 people (31.96%) who disagree about the indicator of focus (X23) is for item X232 (working process in the company can keep up with the changing times), and there are 30 people (31.96%) who disagree about the intention (X24) indicator is for item X241 (companies can take an establishment to survive). For the flexibility variable, there are no consumers who strongly disagree. The results revealed that PT Nusa Prima Logistik can give more serious attention that the focus (X23) indicator is for item X232 (working process in the company can keep up with changing times) and the intention (X24) indicator is for item X241 (companies can take an establishment to survive). Some consumers judge that the flexibility of the company is less than optimal. PT Nusa Prima Logistik should have good flexibility and can have an impact on customer value, customer trust, and customer retention.

The customer value variable has four indicators namely perceived service usefulness (Y11), perceived strategic usefulness (Y12), personal benefit (Y13), and perception about the sacrifice provided (Y14). Among the four indicators, the usefulness (Y13), as the most dominant one, has a score of 0.777. The customer value variable measured by two indicators has an average total score of 3.35 categorized as the medium but approaches the high category (average score around 2.50-3.50). This matter showed that, according to the consumers of PT Nusa Prima Logistik, the customer value variable is quite good.





However, there are still consumers who disagree. There are 31 people who disagree (31.96%) about the perceived strategic usefulness (Y12) indicator is for item Y121 (the company has expertise in accordance with customer desires) and personal benefit (Y13) indicator is for item Y133 (customers assess that products/services are good). The results revealed that PT. Nusa Prima Logistik is expected to give more serious attention that the perceived strategic usefulness (Y12) indicators is for item Y121 (the company had expertise in accordance with customer desires) and that the indicators of personal benefit (Y13) is for item Y133 (customers assess good product/service). Some consumers judged that the services provided are less than optimal. PT Nusa Prima Logistik should be able to provide good service and can have an impact on customer retention.

The customer trust variable has three indicators namely integrity (Y21), goodness (Y22), and competence (Y23). Among the three indicators, integrity (Y21), as the most dominant one, has a score of 0.810. The customer trust variable measured by three indicators has an average total score of 3.37 categorized as medium but approaches the high category (average score around 2.50-3.50). This shows that, according to the consumers of PT Nusa Prima Logistik, customer trust variable is in good condition. However, there are still consumers who disagree. There are 29 people who disagree about the goodness indicator (Y22) is for item Y221 (the company pays special attention to consumers). The results revealed that PT Nusa Prima Logistik is expected to give more serious attention that the goodness (Y22) is for item Y221 (the company pays special attention to consumers). According to some consumers, the attention is not good. PT Nusa Prima Logistik should be able to increase customer trust in order to have an impact on customer retention.

Customer retention has four indicators, namely the strength of the relationship between someone's relative attitude (Y31), customer satisfaction (Y32), customer value (Y33), and brand image (Y34). Among the four indicators, brand image, as the most dominant one, has a score of 0.778. The customer retention variable measured by four indicators has an average total score of 3.36 categorized as medium but approaches the high category (average score around 2.50-3.50). The results revealed that, according to the customers of PT Nusa Prima Logistik, the customer retention is in good condition. However, there are still consumers who disagree. There are 29 people who disagree (29.90%) and there is no consumer who disagree that the customer value indicator (Y33) is for item Y331 (the suitability of products/services bringing pleasure). The results revealed that PT Nusa Prima Logistik is expected to give more serious attention that the customer value (Y33) is for item Y331 (the suitability of products/services that bring pleasure). Some consumers feel that the suitability of the services is not satisfying.





Research Limitation

The measurement of flexibility as a dynamic construct cause one respondent with another will catch a different point of view. It is possible that the applicable flexibility is confusion in the interpretation of respondents when viewing PT Nusa Logistik as a unit of organizational entity with the condition of the company. Therefore, it is prone to have misunderstandings in the acceptance and interpretation of each statement in the questionnaire, even though validity and reliability have been checked.

Conclusion

According to the previous results and discussion, it is concluded that “This research produces a more integrated and simultaneous customer retention model, the elaboration of the concept into a flexibility variable results in that the variable is a driver of customer value and customer trust. Customer value and customer trust play a central role in the model (concept), namely as an attractor of flexibility and driving of customer retention.

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