Print ISSN: 2288-4637 / Online ISSN 2288-4645 doi:10.13106/jafeb.2021.vol8.no3.0683

Organizational Change Readiness, Service Innovation, and Corporate Image in Improving Competitiveness: A Case Study in Indonesia

John Gunung HUTAPEA¹, Umar NIMRAN², Mohammad IQBAL³, Kadarisman HIDAYAT⁴

Received: August 20, 2020 Revised: January 26, 2021 Accepted: February 03, 2021

Abstract

Shipping has become an important sector in supporting social, economic, government, defense, security, cultural and other sectors to unite separate islands and broad seas. Thus, ports automatically become an important facility in Indonesia. The purpose of this research is to test and explain the effect of Organizational readiness for change, Service Innovation, and Corporate Image on Perceived opportunity and challenge. The research model with inferential analysis uses Structural Equation Modeling (SEM) analysis with the WarpPLS approach, expected to answer the statements of problem and be able to test the desired hypothesis. The model development in this research was based on the background, statements of problem, conceptual framework and research hypotheses. The model referred to is "Complete and Comprehensive Port." Its development was carried out through studying and synthesizing various sources. The most important source is the results of literature review in the form of theoretical developments and research results, then continued with compilation. The use of Organizational Change Readiness, Service Innovation, and Corporate Image in improving Port Competitiveness is seen as one of the novelties of this research, specifically the use of the Organizational Change Readiness variable which is often used in high-flexibility companies but now used in port companies as well.

Keywords: Port Competitiveness, Organizational Change Readiness, Service Innovation, Corporate Image, Indonesia

JEL Classification Code: L10, L84, M10, O32

1. Introduction

As an archipelagic country, Indonesia has a great potential of shipping because it is located in the crossing of International trade routes. Shipping has become an important

sector in supporting social, economic, government, defense, security, cultural and other sectors to unite separate islands and broad seas. Thus, ports automatically become an important facility in Indonesia.

One of the port services available in Indonesia is PT. Pelabuhan Indonesia (Pelindo) I which is a State-Owned Enterprise (SOE). The work area of Pelindo I is the western region of Indonesia, which directly faces Malacca Strait – the busiest waters in the world, so that the presence of Pelindo I also has a strategic role in connecting the sea transportation-based international trade network in Indonesia. Therefore, to continue its sustainability to improve the economy, Pelindo I is necessary to increase its competitiveness (port competitiveness). Port competitiveness is closely related to the corporate sustainability of PT. Pelindo I, considering that the world transportation system will change soon, automatically has an impact on sea transportation in Indonesia.

The description above implies that port competitiveness issues of PT. Pelindo I is seen as urgent and very urgent. Thus, the researchers were interested and challenged to study on how to improve the port competitiveness of PT. Pelindo I.

Email: mountain@student.ub.ac.id

Email: umar.nimran.ub@gmail.com

Email: kadarismanhidayat@ub.ac.id

© Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (https://creativecommons.org/licenses/by-nc/4.0/) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

¹First Author and Corresponding Author. Business Administration, Faculty of Administrative Sciences, Brawijaya University, Indonesia [Postal Address: BSD BLK AB/20, Rawabuntu, Serpong, Tangerang Selatan, Banten, 15310, Indonesia]

²Lecturer, Business Administration, Faculty of Administrative Sciences, Brawijaya University, Indonesia.

³Lecturer, Business Administration, Faculty of Administrative Sciences, Brawijaya University, Indonesia. Email: iqbal07@ub.ac.id ⁴Lecturer, Business Administration, Faculty of Administrative Sciences, Brawijaya University, Indonesia.

Changes in the organization are unavoidable, both because of external and internal factors. Change is a process of transitioning the current state to the expected state in the future. Organizational change is a constant thing that can occur over time. Managing organizational change is largely about managing aspects of Human Resources in the process. Human Resources in an organization can be the biggest obstacle in achieving and sustaining change. The failure of individual employees to prepare themselves to deal with changes in the company causes managers spend significant time and energy with resistance to change.

In addition to organizational change, Service Innovation also becomes important for organizations. Aas et al. (2010) said that Service Innovation includes new ideas, practices or objects for relevant organizations and environments, becoming the reference group of innovators. In the broadest sense, service innovation refers to all innovation behavior and activity-related services. Service Innovation uses the opportunity to create a combination of new resources derived from established knowledge and existing technology, which occurs between many actors and actor networks. From the customer's perspective, how the combination of newly resources is developed is unimportant. The key is values created together through new services. In maintaining a competitive advantage, companies will make optimal efforts to manage capital costs in order to develop new service innovations (Hertog et al., 2010; Aujirpongpan & Hareebin, 2020), and must seek to understand behavioral and social elements. to classify SCO (supply chain orientation) as individuals and organizations so that companies can operate efficiently (Lee & Nam, 2016; Sillanpää, 2015; Muafi, 2020).

Corporate Image is a stakeholder perception of the actions, activities, and achievements of an organization. Each stakeholder class deals differently with the organization and, thus, has different perceptions about the organization (Fatt et al., 2000). The factors making up Corporate Image can be grouped into three categories of mixed identities as suggested by Chattananon et al. (2007), namely behaviors (employee behavior, director's reputation and employee roles), symbolism (visual identity and other physical evidence such as products, service quality, and history), and communication (advertisement and promotion). Strategic orientation as an organizational principle that can be used to drive and control organizational activities that are strongly correlated with the allocation of resources and business opportunities facing the company (Huang & Ngoc, 2019).

Organizational Change Readiness, Service Innovation, and Corporate Image can be important keys in a company to identify and provide direct responses regarding perceived environmental setting. As the times passes by, competition among companies in various sectors is also getting higher.

One sector that has become important in recent years is ports. According to Government Regulation No.69 of 2001 Article 1 Paragraph 1 on Port Affairs, a port shall be a place consisting of land and waters with certain borders as a place of administration and management activities, used as a place where ships berth, embark and disembark passengers and/ or load and unload goods, in the form of terminal and berthing place of ships equipped by navigation safety and security facilities and seaport supporting activities as well as a place for the change in intra- and inter-transportation modes. Organizations that are always innovative will be able to produce good organizational performance (Lee & Xuan, 2019). In international competition, there are three aspects that need to be considered, namely price, product quality, and delivery time

The use of Organizational Change Readiness, Service Innovation, and Corporate Image in improving Port Competitiveness is seen as one of the novelties in this research, specifically the use of the Organizational Change Readiness variable which is often used in high-flexibility companies but now used in port companies as well. The purpose of this research is to test and explain the effect of Organizational readiness for change, Service Innovation, and Corporate Image on Perceived opportunity and challenge.

2. Literature Review

2.1. The Effect of Organizational Change Readiness and Port Competitiveness

Cetinkaya et al. (2019) examined the impact of organizational changes on the competitive advantage and finding out whether the size of the company mitigates the relationship between organizational changes and competitive advantages. Data was obtained from employees working in the Chabahar industrial zone in Iran. A total of 233 valid questionnaires were received from companies operating in this zone. The data was then analyzed using descriptive statistics, exploration factor analysis (EFA), confirmation factor analysis (CFA) and linear regression techniques. The results showed that organizational changes have a positive impact on the competitive advantage. In addition, the size of the company plays a moderate role in the relationship between organizational changes and competitive advantages.

Weeks et al. (2004) examined perceived organizational willingness to change and individual fear of changes related to individual performance. A total of 343 sales managers from various industries participated in this study. A significant positive correlation was found between the professional perception of the sales manager regarding his organizational

willingness to change and his own work performance. Given the manager's fear of change, the relationship between the perceived organizational willingness to change and the work of the sales manager is improved. Implications for academics and practitioners are given along with instructions for future research.

Timmor and Zif (2010) examined Change readiness (CR) is viewed as multi-dimensional behavior that reflects a company's ability to do three things to respond to environmental opportunities and threats in its industry: triggering identification; Preparation for measures (preparation); and take new levels of action. The main goal of this research is to propose and test alternative conceptualizations for CR. Data was collected from 217 organizations in 14 countries. All respondents were responsible for or involved in the strategic decisions and implementation of their companies and filled out a structured questionnaire. It was found that CR is influenced by both internal and external variables, including management orientation (entrepreneurship, centralization), environmental barriers and the role of technology and innovation in corporate strategies. In addition, higher CR values correlate with better performance and a higher management rating of success in combating environmental triggers.

Based on the description above, the first hypothesis in this research is stated as follows:

H1: Organizational Change Readiness has a significant effect on Port Competitiveness.

2.2. The Effect of Service Innovation and Port Competitiveness

Doğan (2016) examined the factors that determine innovation for the competitiveness of the Member States and candidate countries of the European Union. The analysis used in this study was a panel data analysis. The empirical results showed that there are two determinants of innovation that have a positive impact on competitiveness, namely knowledge and technological and creative results.

Tongzon (2004) examined various variables of the port service, including the efficiency of the terminal port, the cost of cargo handling, the reliability, the preference for port selection and the depth of the ship channel. Tongzon used several variables that determined the competitiveness of the port, namely efficiency, frequency of port visits, completeness of infrastructure, location, port costs, quick response to customers and improvement of the reputation of product defects. In order to determine attributes in the dimension of the port service, the characteristics of the port service activities must be understood. The main function of port services is to smoothen the movement of modes

of transport within and between modes of transport as the center of maritime transport services and the center of goods distribution and consolidation. Therefore, ports offer various services for these functions.

Yap and Zahraei (2018) examined the impact of this development on countries. The shipping connectivity of the main container hub in Southeast Asia is Port Klang, Singapore, and Tanjung Pelepas. The rationalization of services was significant during the period when the number of shipping services in the port decreased by 38%. Participation in the alliance is important so that the shipping channel in the Asian-European trading channel can successfully exist in the new shipping landscape. The terminal operator should expect a further rationalization of the service if excess capacity remains. Maintaining hub status requires the ability to meet the strategic, operational, and commercial needs of all alliances, rather than just focusing on the main shipping lane.

Sun and Pang (2017) examined the relationship between service quality and global competitiveness of companies in the service industry. A number of moderation effects have been formulated to further demonstrate how the relationship changes under different circumstances. In this article, the model was examined using data from various sources such as the world's most admired company and COMPUSTAT. Service quality has been found to significantly increase global competitiveness. In particular, the impact for large service companies is stronger, and if the global environment is characterized by low ammunition, high dynamics or high complexity.

Based on the explanation above, the second hypothesis proposed in this research is as follows

H2: Service Innovation has a significant effect on Port Competitiveness.

2.3. The Effect of Corporate Image and Port Competitiveness

Hamid (2018) examined the factor analysis for the Balanced Score Card (BSC) to measure the competitive advantage of the Indonesian port infrastructure: Pelindo IV, Makassar, Indonesia. Pelindo IV's competitive advantage depends on 81.2% of the financial, customer, internal process and learning perspective, while the rest of 18.8% depends on other factors. The results of the measurement model for the competitive advantage in Figure 2 are significant (*p*-value <0.05), measured on the basis of the financial perspective, the customer perspective, the internal process perspective and the performance of the learning perspective. Using the highest coefficient load factor, it can be shown that the competitive advantage is measured most from the learning perspective.

The high value of Pelindo IV's competitive advantage, Makassar, Indonesia, is seen primarily from a learning perspective. The BSC sequence for measuring competitive advantage is as follows: learning perspective performance, financial perspective performance, customer perspective performance and internal process perspective performance.

Barnet et al. (2000) examined many critical questions about how a company's reputation can contribute to corporate performance. Several presentations were discussed in this paper to illustrate the general theme of the papers in this conference. After identifying the general topic, a unified framework was offered to bring together different areas that contribute to a general topic, namely corporate reputation. Establishing a general framework is very important in order to develop the study of company reputation and its impact on company performance. Being socially responsible can signal to a responsible corporate image on the outside, helping to win support from stakeholders and the resources they control.

Kyurova and Yaneva (2017) examined the size of the company image, the competitiveness of the company and the relationship between the two. This study used a statistical method (analysis of variance, regression and correlation) to examine the impact of corporate image on the competitiveness of companies in the field of interior design. In summary, the corporate image is an important tool for realizing a sustainable market and achieving a strong competitive advantage.

Based on the description above, the third hypothesis proposed in this research is as follows:

H3: Corporate Image has a significant effect on Port Competitiveness.

3. Research Methods and Materials

This research examined the effect of Organizational Change Readiness, Service Innovation, and Corporate Image as independent variables on Port Competitiveness as the only dependent variable.

This research was conducted with a quantitative approach and included in the type of confirmatory research. Morphirmatory means are verification or testing of research hypotheses. The research hypothesis in this study was prepared using the basis and perspective of theories and concepts in the form of the results of previous studies. The theoretical framework used starts from grand theory, middle range of theory, to applied theory.

The grand theory underlying this research is Strategic Management Theory (Goodstein et al., 1992). Middle range of theory is used and becomes Resource Based View (RBV) Theory (Wernerfelt, 1984). While the applied theory used is Organizational readiness for change (Elias, 2009; Holt et al., 1993), Service Innovation (Aas et al., 2010), Corporate Image (Fatt et al., 2000), and Theory of Port competitiveness (Hales et al., 2016). The objective of this research is to model the port competitiveness that is expected to be implemented in Indonesia, especially at PT Pelindo 1.

This research variable is a latent variable measured using a research instrument in the form of questionnaires. The variables used were Organizational Change Readiness, Service Innovation, Corporate Image, and Port Competitiveness. Data analysis was performed using a statistical method. The data was collected using a survey method by providing questionnaires to respondents.

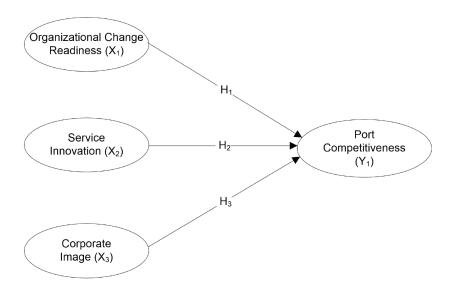


Figure 1: Conceptual Framework

The population in this research were all Transportation Management Service Business (*UJPT*) companies, shipping companies, and Loading and Unloading Companies (*PBM*) under PT. *Pelindo 1* Belawan, amounted to 259 companies (N). The sample size in this research was 175 companies. The sampling was performed using a Proportional Random Sampling technique at each layer. The sample came from each type of company, namely UJPT, Shipping Company, and *PBM*. The sampling of each type of company was done randomly. The sample distribution was 80/259 or 38.98% proportional to the type of company. In collecting the data, surveys were conducted directly and indirectly by distributing questionnaires to the respondents through online media.

The data collection used the principle of single blind, in which the researcher knows who their respondents are while the respondents do not know who is doing the research. This is done to ensure the objectivity of respondents in filling out the questionnaire so that valid data can be obtained. Respondents in this research are corporate leaders, so their activities are spread in several areas. Therefore, the survey was conducted in accordance with the company's long-term plan discussion activity. This activity is usually carried out in early April, but this year, it is postponed at an undetermined time due to the Covid outbreak. In this activity, all leaders are invited to attend this activity. All respondents gathered at this event because they are obliged to be present. In this event, one agenda was inserted, namely the survey on Organizational Change Readiness, Service Innovation, Corporate Image, and Port Competitiveness in PT. Pelindo I. Using the principle of single blind, the surveyor (researcher) collected data in the event.

The instrument in this research was in the form of questionnaires contained a number of statements developed from the instrument grid. The scale used is a Likert Scale. Inferential analysis is used to analyze sample data and the results are applied to the population. The research model with inferential analysis uses a Structural Equation Modeling (SEM) analysis with the WarpPLS approach, expected to answer the statements of problem and be able to test the desired hypothesis.

WarpPLS is a powerful analysis method because it is not based on many assumptions, such as variables. According to Solimun et al. (2017), WarpPLS measures of fit can be done on the measurement model, structural model and overall model. The measure of fit in the structural model aims to find out how much information can be explained by the structural model of the WarpPLS analysis results. Meanwhile, the measure of fit in the overall model is a measure of the combined goodness of fit between the measuring model and the structural model. This can be done on the overall model whose all variables have reflexive indicators.

4. Results and Discussion

The Structural Equation Modeling (SEM) model is an appropriate analysis tool to test the simultaneous relationship between exogenous and endogenous variables with many indicators. This research used a research instrument in the form of questionnaires containing three exogenous variables and three endogenous variables. In prior, each variable of the questionnaire needed to be tested for its validity (Validity Testing) to determine the questionnaire accuracy. In addition, the reliability of each research variable needs to be tested to know the consistency of the research instrument. Validity testing was performed for each item with the help of SPSS software. The validity of questionnaire items can be seen from the corrected item-total correlation (r). A questionnaire is said to be valid if the corrected item-total correlation (r) is at least 0.3 (Solimun et al., 2017). If the r-value is greater than 0.3 (the critical r), the research instrument is said to be valid.

Similarly, reliability testing in this research was carried out for each variable with the help of SPSS software. Reliability testing is done by looking at the Cronbach's Alpha coefficient value for each variable. Question or statement items can be said to be reliable if the Cronbach's Alpha coefficient value (α) reaches >0.60 (Solimun et al., 2017). To test the reliability, the researcher used the Cronbach's Alpha statistical test through SPSS for Windows.

WarpPLS is a powerful analysis method because it is not based on many assumptions, such as variables. It does not have to be multivariate normally distributed (indicators with a scale of category, ordinal, interval, to ratio can be used on the same model). Besides, the amount of data used does not have to be large (the recommended minimum amount of data ranges 30 to 100 cases). According to Solimun et al. (2017), the use of WarpPLS is to obtain a powerful structural model for predictive purposes. If the structural model is designed without basing on strong theories and research findings, the application of WarpPLS is in the framework of building models. The analysis result model is preferred for predictive purposes.

In this section, the weight of each indicator is shown by loading factors. If the indicator has a positive and significant loading factor value, the indicator can be used to form a latent variable. Conversely, if the indicator has a negative and insignificant loading factor, the indicator will be excluded from forming latent variables so that the interpretation of the relationship between variables can be easier. The summarized results of exploration are presented in detail in Table 1 below:

See Table 1 below:

Table 1: Loading Factor Indicators

Variables	Indicators	Loading Factor	Conclusion
Organizational Change Boodings (V1)	Readiness for Dealing with Change (X11)	0.891	Significant
Organizational Change Readiness (X1)	Effectiveness of Change (X12)	0.891	Significant
Service Innovation (V2)	Innovation in service (X21)	0.887	Significant
Service Innovation (X2)	Technology Development (X22)	0.888	Significant
	Personality (X31)	0.624	Significant
Corporate Image (V2)	Reputation (X32)	0.715	Significant
Corporate Image (X3)	Value (X33)	0.771	Significant
	Corporate Characteristic (X34)	0.802	Significant
	Port Location (Y31)	0.592	Significant
	Port Facility (Y32)	0.761	Significant
Port Competitiveness	Cargo Volume (Y33)	0.678	Significant
	Service Level (Y34)	0.649	Significant
	Port Fees (Y35)	0.793	Significant

Table 2: Model Feasibility and Quality Index

No.	Suitability of the Model and Quality Index	Criteria	Result
1	Average path coefficient (APC)	Significant if <i>p</i> < 0.05	0,257 p-values = 0,004
2	Average R-squared (ARS)	Significant if <i>p</i> < 0.05	0,269 p-values = 0,003
3	Average adjusted <i>R</i> -squared (AARS)	Significant if <i>p</i> < 0.05	0,242 p-values = 0,006
4	Average block VIF (AVIF)	Accept if ≤ 5 Ideal if ≤ 3.3	1,123
5	Average full collinearity VIF (AFVIF)	Accept if ≤ 5 Ideal if ≤ 3.3	1,420
6	Tenenhaus GoF (GoF)	Small ≥ 0.1 Medium ≥ 0.25 Large ≥ 0.36	0,424
7	Sympson's paradox ratio (SPR)	Accept if ≥ 0.7 Ideal if = 1	1,000
8	R-squared contribution ratio (RSCR)	Accept if ≥ 0.9 Ideal if = 1	9,977
9	Statistical suppression ratio (SSR)	Accept if ≥ 0.7	1,000
10	Nonlinear bivariate causality direction ratio (NLBCDR)	Accept if ≥ 0.7	9,950

Based on Table 1, it can be seen that all indicators have a positive loading factor with a *p*-value of less than 0.05 (significant). This indicates that SEM analysis can be done by involving all indicators as forming latent variables.

The research model was obtained through SEM analysis with the WarpPLS approach. The research model can be seen for its feasibility and quality by using several fit criteria as presented in Table 2 below. See Table 2 below:

Based on Table 2, the test of APC, ARS, and AARS resulted in a *p*-value of less than 0.05 (significant). Besides, AVIF and AFVIF values are ideal because they are less than 3.3. Also, the SPR, RSCR, SSR, and NLBCDR values have met the acceptable criteria. The GoF value reached 0.424, included in the large category. Thus, all fit test results are concluded to meet the criteria.

The inner model explains the causal relationship between research variables, both directly and indirectly. The level of causal relationship is indicated by the path coefficient value. The greater the path coefficient is, the closer the causal relationship will be. Meanwhile, the direction of the causal relationship is indicated by the sign of the path coefficient, which can be either positive or negative. The significance of the causal relationship is shown by the *p*-value. A variable is said to significantly affect other variables if the *p*-value is less than the error level (0.05). Table 3 below explains the hypothesis testing of this research. See Table 3 below:

Table 3 can be depicted in a graphical form as in Figure 2 below.

Table 3: Path Coefficient of Direct and Indirect Effect of Moderation Variable

Hypothesis	Relations	Path coefficient	P-values	Information
H1	X1 toward Y1	0.174 ^{ns}	0.087	Not significant
H2	X2 toward Y1	0.496**	<0.001	Significant
H3	X3 toward Y1	0.208*	0.026	Signficant

Source: Research Data Processed (2020). Description: Port Competitiveness (Y_1) , Organizational Change Readiness (X_1) , Service Innovation (X_2) , Corporate Image (X_3) , *significant at $\alpha = 5\%$, ** significant at $\alpha = 1\%$, ns = not significant.

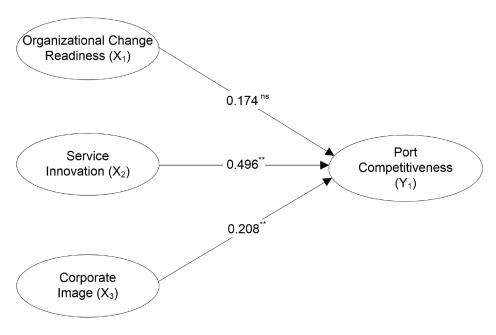


Figure 2: Conceptual Framework

5. Conclusions

This research found that Organizational Change Readiness had no significant and positive effect on Port Competitiveness. The analysis results showed a coefficient value of 0.174 and *p*-value of <0.087. This means that the higher Organizational Change Readiness does not result in a higher Port Competitiveness. However, there is an indirect effect of Organizational Change Readiness on Port Competitiveness through the Perceived Opportunity Challenge. The positive marked coefficient indicates that the higher the Organizational Change Readiness is, the higher the Port Competitiveness will be.

Therefore, the increased readiness to change employee cognition in facilitating organizational change, especially at *PT. Pelindo I* cannot improve the functional activities carried out at *PT. Pelindo I*, from the perspective of the logistics chain to port competitiveness significantly.

This research extends several previous studies, one of which by Cetinkaya et al. (2019) who argues that the organizational changes has a positive impact on competitive advantage. In addition, the size of the company plays a moderate role in the relationship between organizational change and PT's competitive advantage. Pelindo I for information retrieval and next steps. This research also expands the research results of Weeks et al. (2004) showing that perceived organizational readiness has a significant and positive effect on change and individual's fear of change related to individual performance. During the period of January to March 2020, the loading and unloading of traffic at Belawan Container Terminal tends to increase for the domestic terminal and slightly decrease for the international terminal in February but begins to increase again in March. Therefore, we are optimistic that transportation and traffic unloading at Belawan Container Terminal will show a positive trend in the future.

In addition, this study extends the research results of Timmor and Zif (2010), which show that willingness to change is influenced by internal and external variables, including management orientation (entrepreneurship, centralization), environmental barriers and the role of technology and innovation in business strategies . In addition, a higher willingness to change correlates with better performance and a higher management rating of success in overcoming environmental triggers. Since January 2020, the management of Pelindo I has combined the management of its two container terminals (BICT and TPKDB) to become Belawan Container Terminal (Belawan TPK), which is one of the company's efforts and strategies to provide better, more reliable, and more efficient services to meet customer (service user) satisfaction.

This research revealed that the Organizational Change Readiness variable did not significantly influence the Port Competitiveness, contributing to previous studies conducted by Cetinkaya et al. (2019), Weeks et al. (2004) and Timmor and Zif (2010). These empirical studies have discussed the context of Organizational Change Readiness complexly. Thus, this research is able to deny empirically that the readiness to change the organization has a more concrete meaning in its efforts to improve the competitiveness of an organization.

Furthermore, this research found that Service Innovation had a significant and positive effect on Port Competitiveness, seen from the analysis results of the coefficient value of 0.496 and *p*-value of <0.001. This indicates that the higher Service Innovation will lead to higher Port Competitiveness. In other words, the increase in all innovative behaviors and activities related to services at the port can also increase the functional activities carried out at *PT. Pelindo I*, from the perspective of the logistics chain to port competitiveness both directly and indirectly through the process of concluding a message or information to prepare the next steps taken or through corporate identity mediation.

This research findings support the results of several previous studies, one of which was conducted by Doğan (2016) arguing that two determinants of innovation (knowledge and technological and creative outputs) positively influence competitiveness. At present, in an effort to continuously improve service productivity, Pelindo I has innovated by adding equipment and expanding dock facilities to increase productivity more efficiently and effectively. This ongoing development also supports the success of government programs to accelerate national development and support government policies, especially in the highway program to strengthen national connectivity and create national logistics costs efficiently and effectively and increase national competitiveness. This research is also consistent with the research results of Tongzon (2004) explaining that the main function of port services is to facilitate intra and inter modes of transportation, as a center for sea transportation service activities and a center for goods distribution and consolidation. Therefore, for these functions, the port provides a variety of services. Pelindo I continuous to optimize business services in port management, including running the liquid bulk terminal at the port, especially by Belawan and Dumai. In optimizing the loading and unloading facilities for the liquid bulk of Crude Palm Oil (CPO) and its derivative instruments, Pelindo I believes that CPO exports through the port it manages are increasing with the support from the inland industry and CPO in the environment of the Pelindo I operational area. In addition, this research supports the results of Yap and Zahraei (2018) which explains that the terminal operators should expect further rationalization of services if overcapacity persists. Maintaining hub status requires the ability to meet the strategic, operational, and commercial needs of the entire alliance, rather than just focusing on the main shipping lane. In addition, these studies are consistent with the results of Sun and Pang (2017), which show that the quality of service significantly increases global competitiveness. In particular, the impact for large service companies is stronger, and if the global environment is characterized by low ammunition, high dynamics or high complexity. PT. Pelindo I as a service provider definitely wants a high level of competitiveness in the port. To do this, the port must have something better than its competitors. Providing better services will certainly add value to the port. Service innovation is also required so that ports can deliver better and unique services compared to their competitors.

In this case, based on the results of research on Service Innovation in *PT. Pelindo I*, there is a significant contribution from each indicator as shown by descriptive statistics and outer model testing. Furthermore, indicators of the service innovation variable are innovation in services development of new technologies that satisfy customer desires. Both ideas have almost the same degree of power in reflecting these variables, indicated by the outer loading of 0887 for Service Innovation and 0.888 for technological development. That is, *PT. Pelindo I* must strengthen the factors increasing service innovation and technology development satisfying customer desires, for example, by dedicating human and natural resources to develop new services at *PT. Pelindo I*.

The implementation of Service Innovation must be oriented to innovations satisfying customer desires and technology development so as to encourage and improve the competitiveness of *PT. Pelindo I* to sell and supply goods and services in the market, both directly and indirectly through the process of concluding a message or information to prepare the next step taken or through corporate identity mediation. This is based on the research results suggesting that the effect of Service Innovation on Port Competitiveness is positively significant.

This research found that Corporate Image had a significant effect on Port Competitiveness, seen from the analysis results of the coefficient value of 0.208 and p-value of 0.026. That is, the level of Port Corporate Image will affect the level of Port Competitiveness. However, there is an indirect effect of Corporate Image on Port Competitiveness through Corporate Identity. The positive-marked coefficient means that the higher the Corporate image is, the higher the Port Competitiveness will be.

Therefore, increasing public perception of corporate identity can also enhance the functional activities at *PT. Pelindo I*, from the perspective of the logistics chain to port competitiveness both directly and indirectly through

corporate identity mediation. This research supports the results of Hamid (2018) states that the competitive advantage, based on the highest coefficient load factor, is measured most from the learning perspective. The high value of the competitive advantage of Pelindo IV, Makassar, Indonesia, especially from the learning perspective, financial perspective, customer perspective and internal process perspective. This research is also in line with the results of Barnett et al. (2000) which shows that several presentations were discussed in this paper to illustrate the general topic of the papers in this conference. After identifying the general theme, a unifying framework was offered to bring together different fields contributing to one general topic, namely corporate reputation. The creation of a general framework is very important to develop the study of corporate reputation and its effect on corporate performance. This research strengthens the results of Kyurova and Yaneva (2017) showing a strong correlation between corporate image and corporate competitiveness. In conclusion, corporate image is an important tool for realizing a sustainable market and achieving strong competitive advantage. The development and restructuring of Batuampar Port, Batam, are considered as the ability to improve the competitiveness of port services, so they must be simultaneously supported to encourage national economic growth. Batuampar Port restructuring will benefit the country's economy. Batuampar, a port bordering Singapore, has high economic potential.

The implementation of Corporate Image at *PT. Pelindo I* must be oriented to the innovative service delivery (service innovation) satisfying customers so as to encourage and improve Port Competitiveness. This is based on the research results suggesting that the effect of Corporate Image on Port Competitiveness is positively significant.

The model development in this research was based on the background, statements of problem, conceptual framework and research hypotheses. The model referred to as "Complete and Comprehensive Port." Its development was carried out through studying and synthesizing various sources. The most important source is the results of literature review in the form of theoretical developments and research results, then continued with compilation.

On the other hand, the model development also takes into account the empirical conditions in the research object, namely *PT. Pelindo I.* The development of the corporate competitiveness concept is an effort to consider (distribute) various textbooks and journals to be then integrated into the occurring conditions and plans in *PT. Pelindo I.* Meanwhile, the development of the Port Competitiveness concept resulted from this research indicates that Service Innovation is the most important and dominant exogenous variable in shaping Port Competitiveness.

References

- Aas, T. H. (2010). Implementing a value assessment tool for service innovation ideas. *International Journal of Innovation Management*, 14(06), 1149–1167. https://doi.org/10.1142/ S1363919610003045.
- Aronietis, R., Markianidou, P., Meersman, H., Pauwels, T., Pirenne, M., Van de Voorde, E., & Verhetsel, A. (2010). Some effects of hinterland infrastructure pricing on port competitiveness: case of Antwerp. *Proceedings of the 12th World Conference on Transport Research (WCTR)* (pp.1–23). Lisbon, Portugal, July 11–15.
- Aujirpongpan, S., & Hareebin, Y. (2020). The Effect of Strategic Intuition, Business Analytic, Networking Capabilities and Dynamic Strategy onInnovation Performance: The Empirical Study Thai Processed Food Exporters. *Journal of Asian Finance, Economics and Business*, 7(1), 259–268. https://doi. org/10.13106/jafeb.2020.vol7.no1.259
- Barnett, M. L., Boyle, E., & Gardberg, N. A. (2000). Towards One Vision, One Voice: A Review Essay of the 3rd International Conference on Corporate Reputation, Image and Competitiveness. Corporate Reputation Review. 3(2), 101–111. https://doi.org/10.1057/palgrave.crr.1540105
- Çetinkaya, A. Ş., Niavand, A., & Rashid, M. (2019). Organizational Change And Competitive Advantage: Business Size Matters. Business & Management Studies: An International Journal, 7(3), 40–67. https://doi.org/10.15295/BMIJ.V7I3.1230.
- Chandler, G. N., & Hanks, S. H. (1994). Market attractiveness, resource-based capabilities, venture strategies, and venture performance. *Journal of business venturing*, *9*(4), 331–349. https://doi.org/10.1016/0883-9026(94)90011-6.
- Chattananon, A., Lawley, M., Trimetsoontorn, J., Supparerkchaisakul, N., & Leelayouthayothin, L. (2007). Building Corporate Image through societal marketing programs. Society and Business Review, 2(3), 230–253. https://doi. org/10.1108/17465680710825442
- Doğan, E. (2016). The effect of innovation on competitiveness. *Ekonometri ve İstatistik e-Dergisi*, (24), 60–81.
- Den Hertog, P., van der Aa, W., & de Jong, M. W. (2010). Capabilities for managing service innovation: towards a conceptual framework. *Journal of Service Management*, 21(4), 490–514. doi:10.1108/09564231011066123
- Fatt, P. T., Wei, J., Yuen, M., S., & Suan, W. (2000). Enhancing Corporate Image in organizations. Management Research News, 23(5/6), 28–54. https://doi. org/10.1108/01409170010782037.
- Hales, D., Lee L. J. S., & Chang, Y. T. (2016). The balanced theory of port competitiveness. *Transportation Journal*, 55(2), 168–189. https://doi.org/10.5325/transportationj.55.2.0168.
- Hamid, N. (2018). Factor analysis for balanced scorecard as measuring competitive advantage of infrastructure assets of owned state ports in Indonesia: Pelindo IV, Makassar,

- Indonesia. *International Journal of Law and Management*, 60(2), 386–401. https://doi.org/10.1108/IJLMA-12-2016-0178.
- Huang, C. C., & Ngoc, B. H. (2019). The Relationship between Innovation Capability and Firm's Performance in Electronic Companies, Vietnam. *Journal of Asian Finance, Economics* and Business, 6(3), 295–304. https://doi.org/10.13106/jafeb. 2019.vol6.no3.295.
- Kyurova, V., & Yaneva, D. (2017). Research on the Impact of the Corporate Image on the Competitiveness of Interior Design Enterprises. International Conference on Innovations In Science And Education. Vol 5, 495–498. https://doi.org/10.12955/cbup. v5.973.
- Lee, J. W., & Xuan, Y. (2019). Effects of Technology and Innovation Management and Total Factor Productivity on the Economic Growth of China. *Journal of Asian Finance, Economics and Business*, 6(2), 63–73. https://doi.org/10.13106/jafeb.2019.vol6.no2.63
- Lee, T., & Nam, H. (2016). An Empirical Study on the Impact of Individual and Organizational Supply Chain Orientation on Supply Chain Management. *The Asian Journal of Shipping* and Logistics, 32(4), 249–255. https://doi.org/10.1016/j.ajsl. 2016.12.009
- Muafi, M. (2020). A nexus among strategic orientation, social network, knowledge sharing, organizational innovation, and MSMEs performance. *The Journal of Asian Finance, Economics, and Business*, 7(6), 327–338. doi:10.13106/jafeb. 2020.vol7.no6.327.
- Nova, S. P. D. C. C., Lourenço, I. C., & LeitãoAzevedo, R. F. (2018). The misalignment between accounting faculty perceptions of success and organizational image during a process of institutional change. *International Journal of Organizational Analysis*. 26(5), 812–841. https://doi.org/10.1108/IJOA-08-2017–1216.
- Scaramelli, S. (2010). *The Determinants of Port competitiveness:* The case of Valencia. Erasmus University.
- Sillanpää, I. (2015). Empirical *study* of measuring supply chain performance, *Benchmarking: An International Journal*, 22(2), 290–308. http://dx.doi.org/10.1108/BIJ-01-2013-0009
- Solimun, Fernandes, A. A. R., & Nurjannah. (2017). *Multivariate Statistical Methods for Structural Equation Modeling (SEM) WarpPLS Approach*. Malang, Indonesia: UB Press.
- Sun, W., & Pang, J. (2017). Service quality and global competitiveness: Evidence from global service firms. *Journal* of Service Theory and Practice. 27(6), 1058–1080. https://doi. org/10.1108/JSTP-12-2016-0225.
- Timmor, Y., & Zif, J. (2010). Change readiness: an alternative conceptualization and an exploratory investigation. *EuroMed Journal of Business*. *5*(2), 138–165. https://doi.org/10.1108/14502191011065482.
- Tongzon, J. (2007). Determinants of competitiveness in logistics: implications for the ASEAN region. *Maritime Economics & Logistics*, *9*(1), 67–83. https://doi.org/10.1057/palgrave.mel.9100172

- Weeks, W. A., Roberts, J., Chonko, L. B. & Jones, E. (2013).
 Organizational Readiness for Change, Individual Fear of Change, and Sales Manager Performance: An Empirical Investigation. *Journal of Personal Selling & Sales Management*. 24(1), 7–17. https://doi.org/10.1080/08853134.2004.10749012.
- Wernerfelt, B. (1984). Consumers with differing reaction speeds, scale advantages and industry structure. *European Economic Review*, 24(2), pp.257–270. http://dx.doi.org/10.1016/0014-2921(84)90112-0.
- Wijaya, A., Ilmi, Z., & Darma, D. C. (2020). Economic performance: leading sector, economic structure and competitiveness of export commodities. *The Journal of Business Economics and Environmental Studies*, 10(3), 23–33. https://doi.org/10.13106/jbees.2020.vol10.no3.23.
- Yalcin, M. G., Chakravorty, S. S., & Yun, G. (2019). Informing the Balanced Theory of *Port competitiveness* Using Ambidextrous Supply Chain Strategy. *Transportation Journal*, 58(1), 21–37. https://doi.org/10.5325/transportationj.58.1.0021.
- Yap, W. Y., & Zahraei, S. M. (2018). Liner shipping alliances and their impact on shipping connectivity in Southeast Asia. *Maritime Business Review*, 3(3), 243–255. https://doi. org/10.1108/MABR-05-2018-0018.
- Yin, H. (2020). Do Firms with Historical Loss Disclose Less Social Responsibility Information?. *The Journal of Industrial Distribution & Business*, 11(1), 19–28. https://doi.org/10.13106/jidb.2020.vol11.no1.19.