

The Effect of Supply Chain Management and Port Management on Export Effectiveness at Port of Tanjung Priok

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Abstract: This research explores the complex relationship between exporters' supply chain management (SCM) practices and port management on export effectiveness at Tanjung Priok Port as one of Indonesia's main maritime gateways. To understand how SCM practices affect export performance. This research uses comprehensive analysis, which includes quantitative and qualitative methods in the form of interviews and questionnaires with export actors and related parties, to investigate the extent of the contribution of efficient SCM to the competitiveness of exporters who use ports. The aim of this research is to provide valuable insight into the symbiotic relationship between supply chain management and export effectiveness at Tanjung Priok Port. It is hoped that the results of this research can offer solutions with practical implications for policymakers, port authorities, and businesses that want to optimize their export operations in a dynamic global trade landscape. This highlights the importance of proactive SCM strategies, collaboration, and infrastructure development in encouraging a developing export ecosystem, towards Indonesia's sustainable economic growth. The result of this study is there is a positive and significant influence between the Influence of Supply Chain Management on Export Effectiveness, So, The research results show that supply chain management has an influence on export effectiveness, so it is necessary to implement supply chain management in every company starting from human resource management to the quality of raw materials. . Thus, predicts a positive and significant influence between the Port Management variable and the Export Effectiveness. This Port Management the Facilities and Policies owned by PT. Tanjung Priok influences export effectiveness.

Keywords: *Exports, Supply Chain Management, Port Activities, Port Management*

1. Introduction

Sea transportation is one of the keys that determines the performance and vulnerability of domestic supply chains. The sea transportation mode has its own attraction to be chosen as an export choice for exporters because the amount of cargo that can be handled is very large, and the price is also relative to the sea transportation mode. Export delays often occur due to inappropriate port management and exporter supply chain management. PT. Tanjung Priok Port (PTP) is a State-Owned enterprise company that operates in the transportation sector, especially in the field of port services and logistics. Activities at the port cannot be separated from export-import activities, in the process of this activity, because goods are sent or imported between countries, it often causes problems, one of which is document problems, this greatly affects dwelling time at the port (By: Rudy Sangian | Senior Consultant at Supply Chain Indonesia).

The design, operation, and improvement of systems that produce and distribute a company's main goods and services are referred to as supply chain management, in accordance with Robert Jacobs and Richard B. Chase. Supply Chain Management, like marketing and finance, is a core component of company with distinct line management responsibilities. The efficiency and effectiveness of port activities is still hampered by several existing problems. The port issues in question are matters relating to the relationship between ships, cargo and port services. While in port, ships need a location to dock and a variety of services. In order to

move cargo from ship transportation to land transportation, the port has to provide terminal services. In order to remove obstructions from the movement of products and passengers as well as ship navigation, ports offer services for ships and cargo. flow. Service activities at ports are supported by several infrastructures, including: docks, terminals, warehouses, storage yards, navigation and telecommunications, loading and unloading equipment, and offices (Nasution, 2004). Quantity and quality are often factors in the effectiveness of export activities through ports. So proper supply chain management is needed.

2. Literature Review

2.1 Supply Chain Management Theory

Supply chain management is the coordination of production, inventory, location, and transportation among participants in a supply chain to achieve the best mix of responsiveness and efficiency for the markets served (Hugos, 2003). Through Supply Chain Management, the supply chain is designed in such a way that it can be carried out most effectively and most efficiently. Effective supply chain management practices can increase competitiveness along the supply chain.

According to Turban, Rainer, Porter (2004), there are 3 types of supply chain components, namely:

1. Upstream Supply Chain Management (upstream)
2. Internal Supply Chain Management (Internal supply chain management)
3. Downstream Supply Chain management

2.2 Export Theory

Export is defined by the Government Regulation of the Republic of Indonesia Number 2 of 2009 as the activity of removing goods from the customs area, which is defined as the territory of the Republic of Indonesia, including land, water, and air space above it, as well as specific locations in the Exclusive Economic Zone and runway.

One element of total expenditures is exports. As a result, exports have a significant impact on the level of national income that will be generated. Increased exports will result in higher overall spending, which will raise national revenue. On the other hand, exports cannot be influenced by national wealth. As a result, exports serve the same purpose as government expenditure and take the same shape as investments (Ramadhani, 2018). The growth of exports in a nation can be influenced by a number of things. Some of these elements come from both domestic and foreign sources, such as:

1. Domestic and international government policies.
2. The state of international markets.
3. The adaptability of the exporter to seize market possibilities.

2.3 Port Management Theory

International Maritime Organization (IMO) : According to IMO, port management is "the coordination and control of ports and the port facilities and services provided therein, to ensure safety, effectiveness and efficiency in port operations."

The facilitation and assistance of the exporting process are crucial functions of port administration. The coordination, control, infrastructure, and all other aspects of performance at the port, as well as the services offered there, can be concluded to be the definition of port management. This definition aims to ensure the security, safety, order, effectiveness, and operational efficiency of ships as well as fulfilling an important role as a hub for switching modes of transportation

2.4 Article Description

Reviewing journals for a thesis is an important step in the research process. The following are the procedures for conducting a journal review:

1. Journal Selection
 - Determine the research topic and identify related journals
 - Choose journals that are leading and recognized in the research field
2. Identify research objectives and problems
 - Review journal abstracts to understand the research objectives and problems addressed
3. Identify Research Methodology
 - Pay attention to the research methods used in the journal
 - Review whether the research method is in accordance with the method planned for the thesis
4. Review Data and Analysis
 - Check how data is collected, processed and analyzed
 - Review whether the data analysis approach is appropriate to the research objectives
5. Evaluation of Results and Findings
 - Evaluation of research results and findings produced
 - Compare the results with other literature and see if there are similarities or differences
6. Pay attention to Conclusions and Suggestions
 - Review the conclusions drawn by the researcher
 - Pay attention to suggestions or recommendations given by researchers for further research
7. Criticize Weaknesses and Strengths
 - Identify the weaknesses and strengths of research methodology
 - Review whether there are any avoidable weaknesses in the research
8. Pay Attention to References
 - Review the references used by the researcher
 - Check relevant literature and make sure to refer to it in the thesis
9. Note Bibliographic Information
 - Note the bibliographic information from the journal to refer to it in the thesis
10. Make a Summary or Notes
 - Create a brief summary or notes for each journal reviewed
 - Note important points that can help with writing a thesis
11. Comparison and Contrast
 - Compare reviewed journals to find similarities, differences, or developments in research.
12. Create a Synopsis
 - Create a synopsis or summary of the entire research process carried out in the journal
13. Discuss with the supervisor
 - Discuss the findings with your thesis supervisor to obtain additional views and suggestions

2.4.1 Table of Article Synthesis Results

Title, Researcher, Year of Publication	Variable	Research Methods	Result	Object
“Logistics and Supply Chain Management Efficiency Strategy for Ghana’s Mining Industry” Qu Yaping and Mary Bossman, 2023	Logistics and Supply Chain Management Efficiency Strategy	Ghanaian mining companies must employ effective service delivery and cost-saving transportation solutions in collaboration with local transportation service providers.	Newmont Gold Ghana limited prioritizes specialized services, it is number three on the list for suppliers while catering hits local supplier topmost priority with 42%.	Logistics Management, Supply Chain Management, Strategy, Efficiency, Mining.
“Dampak Dwelling Time Terhadap Layanan Ekspor Impor di Pelabuhan Tanjung Emas Semarang” Ario Hendartono, Christine Widilestari, 2020	Dwelling Time	The strategy in an effort to reduce dwelling time at TPKS is to coordinate with Customs and Excise to integrate the data needed to speed up the document process. Apart from that, it is necessary to inform service users (shipping agents)	Dwelling time at the Tanjung Emas Port TPKS can be reduced with modern equipment, namely ARTG (Automated Rubber Tyred Gantry), thus speeding up the container loading and unloading process.	customs clearance, dwelling time, pre-clearance, post-clearance

“STRATEGI PENINGKATAN EKSPOR PRODUK KELAUTAN DAN PERIKANAN KE PASAR EROPA” Ali Mursit, Agus Wahyono, Yuli Setiawan, 2022	Increasing Exports of Marine and Fishery Products	Optimizing marine resource potential to increase export activities; Increasing cooperation with both domestic and foreign parties and monitoring product quality with international quality standards; Increasing the role of government	The export commodity of the Indonesian fishing industry with the HS code 0303 has a comparative advantage. This is shown in fisheries statistics from 2016-2020 with the highest export volume and greatest value.	Exports, Quality, Sustainable Fisheries, Fish Resources, Strategy
“A Study on Supply Chain Management and Characteristics of Container Port Operation Efficiency in Vietnam by Emerging Measure Tools” Van Tai Pham, 2021	Supply Chain Management and Characteristics of Container Port Operation Efficiency	Create the best competitiveness- enhancing policies and actions, and aid in providing policymakers and port planning with a comprehensive picture so they can implement the plan.	The port runs more effectively. In the setting of intense rivalry in the seaport industry generally and container ports and container terminals in particular, the competitiveness is increased.	Port Characteristics , Port Operation Efficiency, Supply Chain Management, Emerging Measure Tools.

“Supply Chain Performance of Logistic Business Using SCOR Model in Tg.Priok Port Jakarta” Abdul Rachman, Sindu Rahayu, Budi Sambarani, Dodi Sugianto, Agung Kwartama,2022	Supply Chain Performance of Logistic Business	Planning, controlling, and scheduling processes that go from product acquisition to consumer distribution. The supply chain is created through supply chain management so that it may be operated as effectively and efficiently as possible.	This in-depth interview process is used to gather information on the port manager, who acts as both the operator and the executor at multiple ports in Jakarta. Academics are involved in port management through activities connected to port operations that include stakeholders.	Supply Chain Management, Logistic, SCOR, Port
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“The efficiency of a supply chain with the use of maritime transport on the example of the apparel industry” Dariusz Milewski, Beata Milewska, 2018	Efficiency Of a Supply Chain	Simulations of the profitability of the sourcing in low-costs countries.	manufacturing in Poland will be as lucrative as in low-cost nations with an increase of just 8% in global suppliers' manufacturing costs. This is - 13% for the lowest products. However, these price increases are still far less than the increases in freight charges in all three scenarios.	Supply Chain, Maritime Transport
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“Managing Supply Chain Disruptions in Nigerian Seaport Companies” Henry Oguche, 2023	Supply Chain Disruption	We employed successful strategies to address supply chain disruptions, conducting a thematic analysis of company documents to identify five primary themes: corruption, seaport congestion, bureaucratic bottlenecks, equipment failures, and employee disputes.	Some business leaders and successful seaport firms adopt a few important tactics to deal with issues including employee conflicts, equipment breakdowns, corruption, and traffic jams at Nigerian ports.	Nigeria; Supply chain disruptions; Seaport companies; Corruption; Seaport congestion; Organizational output.
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“The central tendency of the seaport-fulcrum supply chain risk in Indonesia using a rough set” Muhammad Reza Do. Bagusa, Shinya Hanaoka,2022	Central Tendency of The Seaport-Fulcrum Supply Chain Risk	We used a genetic algorithm to analyze seaport risk related to supply chain threats via a questionnaire evaluation. Our risk score indicates that lower scores suggest a higher likelihood of seaport risk causing supply chain disruption.	These risk characteristics are not only helpful to seaport managers in identifying possible risks related to supply chain interruption, but they also improve their capacity to assess resilience to handle supply chain issues.	Seaport-fulcrum supply chain risk Risk assessment Rough set theory Genetic algorithm Central tendency analysis
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“Sustainable port management in Kuwait: Shuwaikh port system” Fahad AlRukaibi, Sharaf AlKheder, Nourah AlMashan, 2022	Port Management	The proposed solution was to create a logistics city near Shuwaikh port connected by a tunnel.	Reduce traffic on public streets by building special highways, shorten handling times, and creating an international logistics hub. Increase port efficiency, trade mobility, storage capacity, and competitiveness. Additionally, this would assist Kuwait Ports Authority in managing the existing port-related challenges and issues.	Port Management Logistics Traffic Kuwait
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“Impact of Seaport Infrastructure, Logistics Performance, and Shipping Connectivity on Merchandise Exports “ Tahar Ammar Jouili, 2019	Seaport Infrastructure, Logistics Performance, and Shipping Connectivity	Our paper offers new empirical evidence by including additional variables like seaport infrastructure quality, liner shipping connectivity, customs efficiency, and export processing time alongside traditional determinants of merchandise exports.	Results provided a relatively empirical framework that supports the view that the quality of logistics performance, the quality of seaport and infrastructure related and maritime connectivity are essential to the development of merchandise exports.	Seaports infrastructures, logistics performance, shipping connectivity, customs clearance processes, time to export, Merchandise exports.
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Based on the synthesis table of the articles collected, it can be summarized that there are articles with prospective methods and randomized control trials. A total of 10 articles collected and analyzed were sourced from several international journal search sites. The research articles collected range from 2019 to the most recent 2023.

3. Research Method

This research will use mixed methods, namely using quantitative and qualitative. The time period for this research is calculated from the date of granting the study permit with a period of approximately 1 (one) month, 15 days of data collection and 15 days of data processing which includes presentation in the form of a thesis and the ongoing guidance process. The place where this research was carried out was in the Tanjung Priok port area, Jakarta. Sample data was obtained through answers to a questionnaire distributed via Google Form. There were 50 questionnaire answers and then the researchers processed the data using SPSS version 25 software. Apart from that, purposive sampling was also used. Researchers collected 50 previous research journals to serve as references for this research.

3.1 Place and time of research

The time period for this research is from the date of granting the study permit with a period of approximately 1 (one) months, 15 days of data collection and 15 days of data processing which includes presentation in the form of a thesis and the ongoing guidance process. The place where this research was carried out was in the Tanjung Priok port area, Jakarta.

3.2 Population

According to Sugiyono (2017:215), population is the area of generalization made up of items or individuals that exhibit specific qualities and attributes chosen by the researcher, after which deductions are made. Along with people, the population also includes inanimate items and other natural objects. Additionally, population comprises all of the traits or qualities of the topic or object, not just the quantity of things or objects researched.

3.3 Sample

According to Sugiyono (2018, p. 81) a sample is the number and characteristics of a portion of the population; samples taken from the population must be truly representative or representative of the population being examined. This research will involve all export actors and managers with the following conditions:

- a. Indonesian Export Players
- b. All export management managers of Tanjung Priok Port
- c. Freight Forwarder Manager

3.4 Operational Definition

Variable	Dimension	Indicator	Statement
Supply Chain Management	transportation	Delivery efficiency	The process of sending goods from suppliers to warehouses or from warehouses to customers can be very efficient.
		Transportation costs	Total costs incurred for transportation in the supply chain.
	Distribution Management	Customer Service Levels	The level of customer satisfaction with distribution services is what we want to know.
		Distribution Efficiency	The costs incurred for distribution operations are what need to be calculated.
Port Management	Governance and operations management	Operational Efficiency	Ship waiting times at ports have been optimized.
			The average loading and unloading time at the port is something that can be calculated.

			Import and export document processing times vary depending on various factors such as document type, shipping complexity, destination country, and applicable customs procedures.
		Availability of Equipment and Facilities	Heavy equipment such as cranes and forklifts is not available in sufficient quantities.
			The condition of docks, warehouses and other facilities needs to be evaluated.
		Ship Traffic Management	The process of scheduling and managing ship traffic is regulated through various steps and regulations that regulate the movement of ships in certain waters.
			There are procedures in place to deal with operational disruptions such as bad weather or security incidents.
	Licensing and regulations	Regulatory compliance	Obtaining permits The port complies with all government regulations and regulations related to international trade.
			Management of permits and operating permits can be carried out with various steps and procedures that need to be followed.

		Obtaining permits	Many permits are required for port operations, and these permits are obtained at varying degrees of speed.
Export Effectiveness	Export Value	Export Composition	The composition of the product or goods being exported is something that needs to be considered. Product diversification may be necessary.
			There is a dependency on certain export products or sectors that can be risky.
		Total Export Value	The total export value of products or goods produced by the company is what you want to know.
			The value of this export has grown from year to year
	Document Management	Information Accuracy	It is necessary to evaluate the extent to which the information in export documents is accurate and does not contain errors.
		Accuracy and completeness of documents	The documents required for export have been prepared correctly and completely.

4. Results and Discussion

3.1 Results of Quantitative Data Analysis

3.1.1 Respondent Profile

50 respondents who met the minimum requirements for age, gender, and employment served as the study's sample. In order to collect data from respondents who fit the requirements, a Google Form questionnaire was published online and shared on social media sites including Twitter, Instagram, and WhatsApp. A 1 to 5 Likert scale is used to measure data.

1. Age

The age characteristics of respondents are divided into four categories, namely 20-25 years, 26-30 years, and 31-35 years and 36-40 years. The following are the results of respondent data based on age characteristics.

Table 3.1 Respondent Data By Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-25 year	10	20,0	20,0	20,0
	26-30 year	17	34,0	34,0	54,0
	31-35 year	13	26,0	26,0	80,0
	36-40 year	10	20,0	20,0	100,0
	Total	50	100,0	100,0	

Based on the data obtained, it shows that respondents aged 26-30 years dominate with a percentage of 34%, while those aged 31-35 years are 26%, those aged 20-25 years and those aged 36->45 years are 24%. From these data it can be concluded that those who dominate are those aged 26-30 years.

2. Gender

The gender characteristics of respondents are divided into two categories, namely men and women. Following are the results of respondent data based on gender characteristics.

Table 3.2 Respondent Data By Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Men	16	32,0	32,0	32,0
	Women	34	68,0	68,0	100,0
	Total	50	100,0	100,0	

The table above shows that the respondents in this study were dominated by women at 68%, while the respondents were men at 32%.

3. Job

Respondents' jobs were divided into 4 types of work, namely students, private employees, civil servants, and others. Below is a table of respondents' employment data.

Table 3.3 Respondent Data By Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	College student	12	24,0	24,0	24,0
	Worker	7	14,0	14,0	38,0

Civil servants	13	26,0	26,0	64,0
Others	18	36,0	36,0	100,0
Total	50	100,0	100,0	

Based on the data obtained, it shows that the respondents' jobs are dominated by other jobs.

3.1.2 Testing Research Instruments

1. Validity Test

By examining the Pearson Product Moment Coefficient from 50 samples, the validity of the questionnaire questions in this study was evaluated. The r product moment correlation table is $= 0.278$ with 50 responders overall. $R_{count} > R_{table}$ is a criterion for validity. The questionnaire questions must be discarded and not utilized again in future analysis if these conditions are not met. Each question item from the variables Export Effectiveness (Y), Supply Chain Management (X1), and Port Management (X2) underwent validity testing. By calculating the degree of correlation between each question and each variable, you may evaluate the validity of this study.

A. Supply Chain Management (X1)

Table 3.4 Supply Chain Management Validity Test (X1)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Question X1 no 1	37,64	12,317	,442	,596
Question X1 no 2	37,66	12,882	,423	,604
Question X1 no 3	37,58	13,187	,361	,615
Question X1 no 4	38,26	15,380	-,086	,717
Question X1 no 5	37,62	14,200	,114	,667
Question X1 no 6	37,72	12,124	,553	,575
Question X1 no 7	37,52	13,316	,346	,619
Question X1 no 8	37,64	12,398	,491	,588
Question X1 no 9	37,62	12,975	,319	,623
Question X1 no 10	37,66	13,004	,356	,616

The 10 instrument items are deemed valid based on the outcomes of the data processing discussed above, the measurement findings from the study, and a comparison of the validity coefficients (rcount) and criteria validity coefficients (criterion = 0.278).

B. Port Management (X2)

Tabel 3.5 Port Management Validity Test (X2)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Question X2 no 1	38,04	10,937	,276	,538
Question X2 no 2	37,88	12,720	,089	,587
Question X2 no 3	37,68	10,875	,486	,480
Question X2 no 4	37,48	12,336	,194	,557
Question X2 no 5	37,72	11,920	,305	,530
Question X2 no 6	37,48	11,398	,395	,506
Question X2 no 7	37,78	12,624	,197	,555
Question X2 no 8	37,70	11,847	,263	,539
Question X2 no 9	37,48	11,969	,263	,539
Question X2 no 10	37,50	12,908	,102	,578

Based on the data processing results above, the measurement results in the research and after comparing the validity coefficient (rcount) and the criterion validity coefficient (criterion = 0.278), show that the 10 instrument items are declared valid.

C. Export Effectiveness (Y)

Table 3.6 Effectiveness of Export Validity Test (Y)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Question Y no 1	35,62	18,240	,471	,764
Question Y no 2	35,66	17,698	,573	,751
Question Y no 3	35,46	18,090	,522	,758

Question Y no 4	35,18	18,355	,458	,766
Question Y no 5	35,28	17,716	,539	,755
Question Y no 6	35,36	19,133	,324	,783
Question Y no 7	35,32	18,467	,441	,768
Question Y no 8	35,38	18,934	,398	,773
Question Y no 9	35,36	18,562	,408	,772
Question Y no 10	35,26	18,768	,405	,772

Based on the results of the data processing above, the measurement results in the research and after comparing the validity coefficient (rcount) and the criterion validity coefficient (criterion = 0.278), show that the 10 instrument items are declared valid.

3.1.3 Reliability Tests

Table. 3.7 Reliability Test Tabel

Reliability calculations using SPSS as stated above show that the level of reliability of each variable is quite high. For the export effectiveness variable (Y), $\alpha = 0.785$, Supply Chain Management (X1) $\alpha = 0.568$, and Port Management (X2) $\alpha = 0.707$. Thus α of the three variables is $> r$ (0.278).

Variable	Amoun Statemer	Cronbach Aplie	formation
Supply Chain Management (X1)	10	0,622	reliable
Port Management (X2)	10	0.568	reliable
Export Effectiveness (Y)	10	0.785	reliable

3.1.4 Statistical Data Analysis

A. Results of Supply Chain Management Analysis (X1) on the Effectiveness of Tanjung Priok Port Exports (Y)

Tabel 3.8 Result of simple regression analysis between variable X1 and Y variable

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	33,506	7,347		4,560	,000
Supply Chain Management	,145	,174	,119	,833	,409

a. Dependent Variable: Export Effectiveness

According to this straightforward linear regression equation, an increase in Y (Export Effectiveness) of 0.145 will occur for every unit rise in the value of the variable X1 (Supply Chain Management), whose value is 33,504. From the results of processing using SPSS, the functional relationship between Supply Chain Management (X1) and the Export Effectiveness variable (Y) can be obtained as shown by the linear regression equation, namely as follows $\hat{Y} = 33,506 + 0.145 X1$

Tabel 3.9 Result of Correlation Coefficient Analysis Between Variable X1 and Y Variable

Correlations

		Efektivitas Ekspor	Supply Chain Management
Export Effectiveness	Pearson Correlation	1	,119
	Sig. (2-tailed)		,409
	N	50	50
Supply Chain Management	Pearson Correlation	,119	1

	Sig. (2-tailed)	,409	
	N	50	50

Thus, it can be concluded that the correlation figure of 0.119 is a positive relationship between Supply Chain Management (X1) and Export Effectiveness (Y) with a strong relationship level.

Table 3.10 Result of Correlation of Determination Analysis Between Variable X1 and Y Variable
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,119 ^a	,014	-,006	4,581

a. Predictors: (Constant), Supply Chain Management

The correlation between the Supply Chain Management variable (X1) and the Export Effectiveness variable (Y) is 0.119. Thus the coefficient of determination is $r^2 = 0.119^2 = 0.014 \times 100 = 14\%$. Meanwhile, the other 86% is determined by other factors.

Table 3.11 Partially Significant Test Result (T Test)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	33,506	7,347		4,560	,000
	Supply Chain Management	,145	,174	,119	,833	,409

a. Dependent Variable: Tanjung Priok Harbour

From the table above, the T-calculated value for the Supply Chain Management influence variable (X1) is 7.347. Meanwhile, the T-table value is 1.675. So it can be seen that the t-count is $7.347 > t\text{-table } 1.675$ and the significance value is 0.000 which is smaller than 0.05. The conclusion drawn from this is that H_0 is refused and H_a is accepted, indicating a positive and considerable influence of port management on export effectiveness.

B. Results of Port Management Analysis (X2) on the Effectiveness of Tanjung Priok Port Exports (Y)

Table 3.12 Result of simple regression analysis between variable X2 and Y variable

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23,461	6,538		3,588	,001
	Port Management	,392	,158	,337	2,480	,017

a. Dependent Variable: Export Effectiveness

This simple linear regression equation means that every 1 unit increase in the value of the variable X2 (Port Management) of 23,461 will be followed by an increase in Y (Export Effectiveness) of 0.392. The Simple Regression Equation reveals that from the results of processing using SPSS the functional relationship. Thus it can be concluded that the correlation figure of 0.337 is a positive relationship between Port Management (X2) and Export Effectiveness (Y) with a strong level of relationship. Between Port Management (X2) and the Export Effectiveness variable (Y) can be obtained as shown by the linear regression equation, namely as follows $\hat{Y} = 23,461 + 0.392 X_2$

Table 3.13 Result of Correlation Coefficient Analysis Between Variable X2 and Y Variable

Correlations		Efektivitas Ekspor	Port Management
Export Effectiveness	Pearson Correlation	1	,337*
	Sig. (2-tailed)		,017
	N	50	50
Port Management	Pearson Correlation	,337*	1
	Sig. (2-tailed)	,017	
	N	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3.14 Result of Correlation of Determination Analysis Between Variable X1 and Y Variable
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,337 ^a	,114	,095	4,344

a. Predictors: (Constant), Port Management

The export effectiveness variable (Y) and the port management variable (X2) have a 0.337 association. Thus, $r_{y12} = 0.1142 = 0.114 \times 100 = 14\%$ is the coefficient of determination. The remaining 86%, meanwhile, is influenced by other variables.

Table 3.15 Partially Significant Test Result (T Test)

Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23,461	6,538		3,588	,001
	Port Management	,392	,158	,337	2,480	,017

a. Dependent Variable: Export Effectiveness

From the table above, the T-calculated value for the Port Management influence variable (X2) is 23,461. Meanwhile, the T-table value is 1.675. So it can be seen that the t-count is $23,461 > t\text{-table } 1.675$ and the significance value is 0.017 which is smaller than 0.05. So that the resulting hypothesis can be concluded that H_0 is rejected and H_a is accepted, which means there is a positive and significant influence between the influence of port management on export effectiveness.

3.2 Results of Qualitative Data Analysis

3.2.1 Article Selection Resultz

This research uses the PICOS framework method to search for articles by selecting and collecting articles based on five components of suitability to the research topic. These components are as follows:

1. Population, namely the population or subject that is targeted is Tanjung Priok Port
2. Intervention, namely intervention in the form of implementing supply chain management on export effectiveness
3. Comparative is a comparison which in this case compares with other interventions or conditions before and after the implementation of supply chain management characteristics and strategies on export effectiveness
4. The outcome is the result obtained from the intervention in the form of a fast export process at the Tanjung Priok port
5. Study Design is a research method and design that focuses on intervention research design.

5. Conclusion

From all the research results that the author has researched and compiled, several points can be concluded:

- a. Quantitative research analysis shows that supply chain management has a positive and significant influence on export effectiveness at Tanjung Priok Port by obtaining a correlation value of 0.119. From these results, for every 1 unit increase in the value of the Supply Chain Management coefficient (X1) of 33,504, it will be followed by an increase in Export Effectiveness (Y) of 0.145 for one unit of the variable X1. The T-calculated value for the Supply Chain Management influence variable (X1) is 7.347. Meanwhile, the T-table value is 1.675. So it can be seen that the t-count is $7.347 > t\text{-table } 1.675$ and the significance value of 0.000 is smaller than 0.05. The conclusion drawn from this is that H_0 is refused and H_a is accepted, indicating a positive and considerable influence of port management on export effectiveness. The export effectiveness variable and the supply chain management variable are expected to have a positive and considerable influence on one another, according to Hypothesis H1. The research results show that supply chain management has an influence on export effectiveness, and the journal said it is necessary to implement supply chain management in every company starting from human resource management to the quality of raw materials.
- b. From the quantitative research analysis, it shows that port management has a positive and significant influence on export effectiveness at Tanjung Priok Port by getting a correlation value of 0.337. From these results, every 1 unit increase in the value of the Port Management variable (X2) of 23,461 will be followed by an increase in Export Effectiveness (Y) of 0.392. The T-calculated value for the Port Management influence variable (X2) is 23,461. Meanwhile, the T-table value is 1.675. So it can be seen that the t-count is $23,461 > t\text{-table } 1.675$ and the significance value is 0.017 which is smaller than 0.05. So the conclusion can be drawn from the hypothesis that H_0 is rejected and H_a is accepted which means there is a positive and significant influence between the Influence of Port Management on Export Effectiveness . Thus, Hypothesis H2 which predicts a positive and significant influence between the port management variable and the export effectiveness variable is accepted, and the journal said in

this port management the facilities and policies owned by the company influences export effectiveness.

- c. From the journals we searched using the PICO framework method. Many companies, especially those involved in exports, believe that supply chain management is needed in carrying out business activities.

6. Implications

From the several conclusions that have been obtained, we, the authors, will provide suggestions according to the data and analysis of related journals as follows:

- a. Port management has a strong positive influence on export effectiveness, especially at the Tanjung Priok port. So ports must improve the management of their port activities starting from more effective and efficient services and policies.
- b. Port facilities and technology must be checked and developed periodically in accordance with existing export developments in order to support smooth export delivery processes.
- c. This research emphasizes the importance of Government Policy providing convenience to exporters, encouraging exporters to increase exports. Some of these conveniences include simplifying export procedures, providing production facilities for export goods, eliminating various export costs, and providing export facilities.
- d. Increasing production quality to achieve quality standards for foreign countries.

7. Research limitations

The initial idea for this research originated from observations regarding the problem of Export Effectiveness. The problem is then developed into a dependent variable and also an objective function. As an objective function, this dependent variable is thought to be influenced by other variables or is defined as an independent variable. However, due to limited research resources, the independent variables which were thought to influence the effectiveness of exports were then limited, so that only two independent variables were thought to strongly influence the dependent variable. As a result, the results obtained in the form of determining factors for the dependent variable are still very limited. Several limitations that were felt during this research were as follows:

a. Limited Understanding of Respondents

In fact, the limitations of these demographic factors can influence respondents' answers to the questionnaire submitted to be answered, which influences the research results. Instrument testing, however, was carried out in accordance with research procedures

b. Limited time

Data collection was carried out during working days by meeting respondents one by one or in groups and distributing questionnaires at that time, but it is still possible that there are some human limitations due to work factors so that time constraints are still an influential factor. This fact can affect the seriousness of respondents in answering the questionnaire, because they have to fill in the answers to the questionnaire in the middle of their work activities. It is possible that this fact will influence the quality of respondents' answers to the research questionnaire.

References

- Ali Mursit, Agus Wahyono, & Yuli Setiawan. (2022). Strategi Peningkatan Ekspor Produk Kelautan Dan Perikanan Ke Pasar Eropa. *Jurnal Manajemen*, 6(2), 9–24. <https://doi.org/10.54964/manajemen.v6i2.200>
- AlRukaibi, F., AlKheder, S., & AlMashan, N. (2020). Sustainable port management in Kuwait: Shuwaikh port system. *Asian Journal of Shipping and Logistics*, 36(1), 20–33. <https://doi.org/10.1016/j.ajsl.2019.10.002>
- Amin, C., Mulyati, H., Anggraini, E., & Kusumastanto, T. (2021). Impact of maritime logistics on archipelagic economic development in eastern Indonesia. *Asian Journal of Shipping and Logistics*, 37(2), 157–164. <https://doi.org/10.1016/j.ajsl.2021.01.004>
- Fadillah Soraya Batubara, U., Ricardianto, P., Pahala, Y., Malisan, J., Institut Transportasi dan Logistik Trisakti, bcd, IPN No, J., Besar Selatan, C., & Timur, J. (2022). Loyalitas dan Kepuasan Pelanggan Kapal pada Perusahaan Peti Kemas di Indonesia Customers' Loyalty and Satisfaction of Container's Company in Indonesia. *Jurnal Manajemen Transportasi & Logistik (JMTRANSLOG)*, 09(02), 151–162.
- Faradilah, C., & Bahar, H. (2022). *SUPPLY CHAIN CONTINUITY MANAGEMENT PADA PELABUHAN MAKASSAR UENA TERMINAL UNTUK PENDEKATAN QUALITY FUNCTIONS (QFD)*. November, 1–5.
- Hendartono, A., & Widilestari, C. (2020). Dampak Dwelling Time Terhadap Layanan Ekspor Impor di Pelabuhan Tanjung Emas Semarang. *Jurnal Maritim Polimarin*, 6(2), 42–48. <https://doi.org/10.52492/jmp.v6i2.12>
- Jouili, T. A. (2019). Impact of Seaport Infrastructure, Logistics Performance, and Shipping Connectivity on Merchandise Exports. *IJCSNS International Journal of Computer Science and Network Security*, 19(5), 259.
- Milewski, D., & Milewska, B. (2018). The efficiency of a supply chain with the use of maritime transport on the example of the apparel industry. *SHS Web of Conferences*, 58, 01019. <https://doi.org/10.1051/shsconf/20185801019>
- Muhammad, M. R., & Hanaoka, S. (2022). The central tendency of the seaport-fulcrum supply chain risk in Indonesia using a rough set. *Asian Journal of Shipping and Logistics*, 38(4), 222–233. <https://doi.org/10.1016/j.ajsl.2022.08.003>
- Oguche, H. (2023). Managing Supply Chain Disruptions in Nigerian Seaport Companies. *Asian Journal of Basic Science & Research*, 05(03), 21–33. <https://doi.org/10.38177/ajbsr.2023.5302>
- Pham, V. T. (2021). A Study on Supply Chain Management and Characteristics of Container Port Operation Efficiency in Vietnam by Emerging Measure Tools. *Webology*, 18(Special Issue), 182–205. <https://doi.org/10.14704/WEB/V18SI04/WEB18122>
- Rachman, A., Rahayu, S., Sambarani, B., Sugianto, D., & Kwartama, A. (2022). Supply Chain Performance of Logistic Business Using SCOR Model in Tg.Priok Port Jakarta. *IOP Conference Series: Earth and Environmental Science*, 1081(1). <https://doi.org/10.1088/1755-1315/1081/1/012059>
- Talukder, B., & Tripathi, S. (2021). Impact of Supply Chain Performance on Firms' Export Capability: Development of a Statistical Model. *Global Business Review*, October. <https://doi.org/10.1177/09721509211044303>