

A STUDY OF DWELLING TIME AT TANJUNG PERAK HARBOR SURABAYA INDONESIA

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Abstrak

Bank Dunia menyatakan indeks kinerja logistic Indonesia pada tahun 2023 telah turun 17 peringkat menjadi ke-45. Kinerja logistik ini salah satunya dihitung berdasarkan waktu menunggu proses ekspor dan import di pelabuhan. Penelitian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi waktu tunggu (dwelling time) di Pelabuhan Tanjung Perak Indonesia sehingga pemerintah dapat mengambil kebijakan pengeluaran barang impor di pelabuhan dengan lebih cepat dan efisien. Penelitian ini menggunakan data sekunder yang diperoleh dari KPPBC TMP Tanjung Perak. Data kuantitatif berupa waktu pengerjaan pre-clearance bulanan, bea cukai, pasca-clearance, dan Dwelling time dari bulan Januari 2020 sampai dengan Desember 2022. Analisis statistik menggunakan metode regresi linier dengan menggunakan metode regresi linier berganda. aplikasi SPSS. Berdasarkan hasil analisis terhadap faktor-faktor yang mempengaruhi Dwelling Time, disimpulkan bahwa proses pre-clearance, customs clearance, dan post-clearance secara simultan mempunyai pengaruh terhadap Dwelling Time di Pelabuhan Tanjung Perak. Sedangkan uji parsial (t) terhadap ketiga variabel, variabel pre-clearance dan post-clearance menunjukkan pengaruh yang signifikan terhadap Dwelling Time, sedangkan proses Customs Clearance tidak berpengaruh terhadap Dwelling Time. Saat ini, proses Custom Clearance lebih cepat karena adanya kebijakan baru dan peningkatan fasilitas. Penelitian ini hanya membahas tentang pengelolaan barang impor, sehingga diperlukan penelitian lain yang menggunakan variabel ekspor untuk meningkatkan akurasi dan efisiensi kebijakan perdagangan pemerintah.

Kata Kunci: *customs clearance, dwelling time, post-clearance, pre-clearance*

Abstract

The World Bank stated that Indonesia's logistics performance index (LPI) in 2023 has fallen 17 places to 45th. One of the reasons for this logistics performance is calculated based on the waiting time for the export and import process at the port. The research aims to determine the factors influencing dwelling time at Tanjung Perak Indonesian ports so that the government can make policies for releasing imported goods at ports more quickly and efficiently. This study uses secondary data from KPPBC TMP (Medium Customs and Excise Service Office) Tanjung Perak quantitative data in monthly pre-clearance, customs clearance, post-clearance, and dwelling time processing times from January 2020 to December 2022. Statistical analysis using the linear regression method uses the application SPSS. Based on the analysis of the factors that influence dwelling time, it is concluded that the pre-clearance, customs clearance, and post-clearance processes simultaneously influence dwelling time at the port of Tanjung Perak.

Meanwhile, the partial test (t) results on the three variables, pre-clearance, and post-clearance variables, show a significant influence on Dwelling Time. At the same time, the customs clearance process does not affect Dwelling Time. Currently, the customs clearance process is faster due to new policies and improved facilities. This research only discusses the management of imported goods, so other research using export variables is needed to increase the accuracy and efficiency of government trade policies.

Keywords: *customs clearance, dwelling time, post-clearance, pre-clearance*

INTRODUCTION

As an open economy country, Indonesia conducts transactions and relations with other countries. An open economic system is a form of state that manages export and import activities of goods and services between countries, as well as obtaining and providing loans on the world capital market (Mankiw, 2020). According to Supardi (2022), International trade is essential because it expands markets, provides additional foreign exchange profits, meets domestic needs for goods and services, and builds friendships between countries. International trade includes import activities (buying goods from other countries) and exports (selling goods to other countries). The government regulates the flow of goods traffic entering and/or leaving its

territory. For example, the country sets stricter import policies to protect its domestic products (Kementerian Perdagangan Republik Indonesia, 2015).

Based on data from BPS Statistics Indonesia (BPS) regarding the Export-Import Value in Indonesia in 2021, Indonesia's export performance is higher than its import activities, resulting in a positive trade value of \$35.34 billion throughout 2021. The government is trying to encourage export performance by overcoming obstacles in international trade, such as overcoming the long processing time for goods entering and exiting ports, which can disrupt trade transactions. Hendartono's research (2020) stated that the factor influencing export and import activities is the length of dwelling time at the port. The level of dwelling time affects a country's competitiveness in terms of economic growth. The lower the dwelling time, the more advanced the nation's economy will be (Karyono, 2016).

In 2018, Singapore's exporters only needed half a day to complete the document, Malaysia 1.6 days, Thailand 2.3 days, and Indonesia up to 5.4 days (Sirajuddin, 2020). This causes high logistics costs in Indonesia. Nuyanto (2018) explains that the aim of cutting dwelling time is to reduce logistics costs and become more cost-efficient. During the inauguration of the Kalibaru Container Terminal at Tanjung Priok Main Port in 2016, the President of Indonesia asked the parties actively involved to continue reducing dwelling time at Indonesia's main ports (Sekretariat Kabinet Republik Indonesia, 2016). Indonesia's national logistics performance needs to be improved, including poor waiting times and congestion at ports to carry out exports and imports (Bahagia, Sandee & Meeuws, 2013). Based on references (Refas & Cantensk, 2011; Safira, Buchari & Kadarsah, 2020), dwelling time is the time a container requires from the storage process to leaving the port area. The dwelling time process at the port is divided into three stages: pre-clearance, customs clearance, and post-clearance. According to research by Ruwantono and Susatyo (2016), dwelling time is influenced by several internal and external factors at all stages. The World Bank provides Logistics Performance Index (LPI) data, which is measured based on six trade dimensions, including customs, infrastructure, international shipments, logistics competence and quality, timelines, and tracking and tracing.

This research analyzes the factors that influence dwelling time at these three stages. Information about the causes of dwelling time at these three stages will be used to provide considerations in making policies regarding the management of imported goods at ports so that they are processed more quickly and efficiently.

One of the largest ports in Indonesia is Tanjung Perak Port, Surabaya, a logistics goods distributor in the eastern region of Indonesia. This port is the largest port, with 951 hectares under Soekarno-Hatta Airport (997 hectares) and a capacity of 9 million twenty-foot equivalent units (TEUs) under Tanjung Priok port (11.5 million TEUs). Based on the port capacity, Tanjung Perak Port has an average capacity level between Indonesia's largest ports, Soekarno-Hatta Airport and Tanjung Priok Port. Thus, the dwelling time data for Tanjung Perak Surabaya Port can provide analysis results that can represent the average condition of port dwelling time in Indonesia.

Based on customs regulations in Indonesia, the procedure for releasing imported goods consists of three stages: pre-clearance, customs clearance, and post-clearance. These three stages contribute to different waiting times for the goods release process. Following the problem of waiting for a long time for release goods, which goes through three stages, the research question is: What is the effect of pre-clearance, customs clearance, and post-clearance on dwelling time and find out which stage has the most influence on dwelling time at the port of Tanjung Priok Indonesia. By knowing the effect of dwelling time, policymakers can create customs regulations that speed up services such as easy and straightforward procedures. Port

facilities must also be equipped with modern facilities to speed up the movement of goods because the number of exports and imports is increasing in Indonesia.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

International trade

Mankiw (2020) explains that trade occurs between countries in the world based on the comparative advantage of one country over other countries to obtain optimal benefits. Nopirin explained that international trade is caused by different prices of goods, income, and consumer tastes in various countries (Radifan, 2014). International trade is an agreement between two parties to carry out the buying and selling of goods/services by domestic residents with residents abroad to make a profit by complying with all applicable regulations in the two countries involved in the transaction (Susilo, 2008; Supardi, 2021). The reasons for carrying out international trade activities are to expand markets and earn foreign exchange, meet the demand for goods and services, especially those that cannot be produced domestically, cooperation between countries, exchange of technology, specialization, expertise, natural resources, and other things that are not owned by another country. In practice, international trade is often referred to as export and import trade. So far, it has been understood that only the export side can encourage increased state income. Imports also do the same if imported goods and services are used to encourage domestic investment and production (Supartini et al., 2022).

For this reason, reducing import barriers, such as reducing dwelling time, can increase domestic production's efficiency and competitiveness. Import is the activity of bringing in goods from abroad (Tandjung, 2011). The government regulates the trade system for imported goods to make monitoring easier at the post-border customs area (Fadilah, 2023). Customs Area is the territory of the Republic of Indonesia covering land, water, and air space above it, as well as specific places in the Exclusive Economic Zone and continental shelf.

Dwelling time

Dwelling time is defined as the amount of time required from the container being unloaded and lifted from the ship/transport facility until the container leaves the port through the main door of the port (Refas & Cantensk, 2011; Safira, Buchari & Kadarsah, 2020). Based on DJBC regulations (2017), the division of processes in dwelling time based on the flow of goods and documents consists of pre-clearance, customs clearance, and post-clearance.

Pre-customs clearance, or pre-clearance, is the time required from the time the container is unloaded from the ship until the importer submits the Goods Import Notification (PIB) to Customs (DJBC, 2019). This stage processes permits related to imported goods, especially certain goods regulated in statutory regulations.

Customs clearance is the time required from receipt of the PIB, document, and physical inspection until the Goods Release Approval Letter (SPPB) is issued by customs. Some of the activities at this stage are creating and notifying the PIB, paying import duties and import taxes, physically checking goods and documents, testing goods for specific criteria in the laboratory, and issuing SPPB. At this stage, there are three service lines based on the flow of goods and documents: red, yellow, and green. However, based on DJBC Regulation No. PER-02/BC/2022, dated 21 April 2022, the yellow line is eliminated.

Post-customs clearance or post-clearance is the time required from the issuance of the SPPB until the release of imported goods from the Temporary Storage Place (TPS). In this process, there are audit activities or re-examination of customs documents. The next process is to issue a customs determination letter, namely a Customs Tariff and Value Determination Letter (SPTNP), a Customs Determination Letter (SPP), or an Administrative Sanction

Determination Letter (SPSA), based on the inspection results. The importing company must pay the bill based on the customs determination.

Table 1. Literature review of previous research

No.	Title	Research Objective	Conclusion
1.	Dwelling time management. <i>Jurnal Manajemen Bisnis Transportasi Dan Logistik</i> . Rafi, S., & Purwanto, B. (2016).	to get the solutions of dwelling time using research and development analysis and quantitative methods.	Dwelling time management requires synchronization between agencies, computer systems, technological rejuvenation, and leadership as change agents.
2.	Dynamic-inventory ship routing problem (D-ISRP) model considering port dwelling time information. Nurminarsih, S., Rusdiansyah, A., Siswanto, N., & Gani, A. Z. (2015).	to minimize the total cost while avoiding the inventory stock out.	When dwelling time does not change significantly, <i>the</i> speed change option will be better than <i>the</i> route visiting sequence option. The cost of changing <i>the</i> route sequence is high; it includes the cost of changing the shipping permit. So, if the dwelling time <i>does not change</i> significantly, the lateness cost will be smaller than the other cost <i>that</i> occurred by changing the route sequence.
3.	Dampak Dwelling Time Terhadap Layanan Ekspor Impor di Pelabuhan Tanjung Emas Semarang. Hendartono, A., & Widilestari, C. (2020).	To find out what factors cause the duration of dwelling time, we need to know the impact and the mitigation action taken by the Port of Tanjung Emas Semarang to reduce dwelling time at Tanjung Emas Port.	The factors causing dwelling time include data on PIB and SPPB dates that are often not detailed, the duration of time for container processing at TPKS that is often unknown, and service users not completing the document. Dwelling time occurs because the documents and containers must be inspected by quarantine and customs. To reduce dwelling time, the service delivers integration arrangements between TPKS and Customs through INSW facilities, a 24-hour online facility equipped with modern equipment called ARTG (Automated Rubber Tired Gantry), and gate automation.
4.	Analisis Faktor-Faktor yang Mempengaruhi Dwelling Time Peti Kemas di Pelabuhan Tanjung Priok. Listiawati, R., Fauzan, T. M., & Ansori. (2021).	To find out the impact of pre-clearance, custom clearance, and post-clearance on Container Dwelling Time at Tanjung Priok port and to find out which factor is the most dominant in influencing Container Dwelling Time at Tanjung Priok port.	Factors such as pre-clearance, custom clearance, and post-clearance have a significant effect partially or simultaneously on Container Dwelling Time at Tanjung Priok port. Of the three factors tested, the most dominant factor affecting container dwelling time at Tanjung Priok port is the pre-clearance factor.
5.	Why Does Cargo Spend Weeks in African Ports? The Case of Douala, Cameroon. Refas, S., & Cantens, T. (2011).	To investigate the main factors explaining long container dwell times in African Ports.	It demonstrates the interrelationships that exists between the logistics performance of consignees, port operators' operational performance, and customs clearance operations' efficiency. External factors, such as the performance of clearing and forwarding agents, shippers, and shipping line strategies, also play an essential role in determining long dwell times.

Source: The Author processed.

The variables used in this analysis are the number of days in the pre-clearance, customs clearance, and post-clearance processes as the independent variable and dwelling time as the dependent variable. The research model is as follows:

$$DT = \alpha + \beta_1 PC + \beta_2 CC + \beta_3 POC$$

DT = dwelling time

PC = pre-clearance

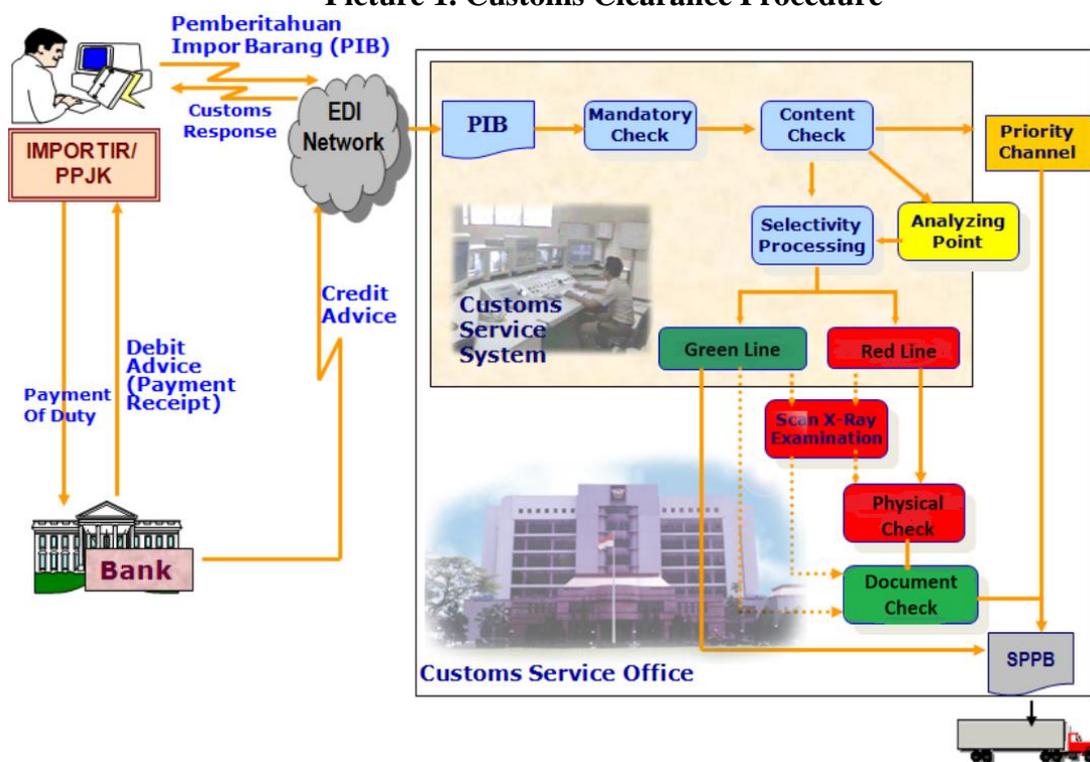
CC = customs clearance

POC = post-clearance

α = constant

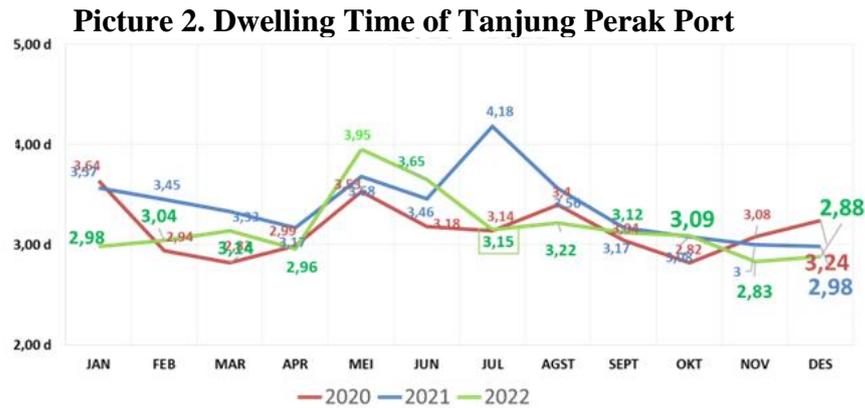
β = coefficient of each independent variable

Picture 1. Customs Clearance Procedure



Source: Indonesian Customs Presentation

Based on data regarding the dwelling time figures at each stage at the Tanjung Perak port for the period 2020 to 2022 from the Tanjung Perak Medium Customs and Excise Service Office, the average dwelling time in that period is 3.24 days. Picture 1 shows monthly dwelling time in 2020 – 2022 which shows fluctuations in the performance of imports of goods at ports.



Source: KPPBC TMP Tanjung Perak

Based on the dwelling time flow details at the Port of Tanjung Perak, the average time in the pre-clearance process from 2020 to 2022 at the Port of Tanjung Perak is 1.3 days. Factors that influence the length of time in this process are the importer's quick response in submitting the PIB and the processing time for permits for prohibited and/or restricted goods. At this stage, the time required from when the container is placed at the Temporary Storage Place (TPS) until the importer/forwarder notifies the PIB is divided into two types of flow: goods flow and document flow.

The next stage in dwelling time is checking the conformity of customs documents and permits to release goods from the customs area. At this stage, the flow of goods and documents is divided into four lines. The Red Line is a service and supervision process that physically inspects imported goods and researches documents before issuing SPPB. The Yellow Line is a service and supervision process that does not involve physical inspections of imported goods and only examining documents before issuing the SPPB. However, since the enactment of DJBC Regulation Number PER-2/BC/2022, the yellow line has been removed to speed up the inspection process. The Green Line is a process of servicing and monitoring imported goods without carrying out document research and physical inspection of imported goods before issuing SPPB. The MITA (Main Partner of Customs) Line is a service and supervision process for imported goods without physical inspection and document research and can directly issue SPBB. Importers who are allowed to use the MITA Line are determined by the government if they have met the requirements under Minister of Finance Regulation Number 229/PMK.04/2015.

The release flow for imported goods is determined based on economic operator profiles, commodity profiles, customs notifications, random methods, and intelligence information. One factor that influences the customs clearance time is the physical inspection of goods processed via the red line because it takes time to withdraw the container from the storage yard to the inspection site. The average time for customs clearance at the port of Tanjung Perak from 2020 to 2022 is 0.3 days.

The post-clearance process is the final stage in dwelling time, starting from the PIB receiving the SPPB until the release of imported goods from the TPS. The process of releasing the goods depends on the importer/forwarder's initiative to remove the goods from the customs area immediately. There are many cases of importers deliberately leaving their goods piled up at TPS line 1 of the port. One of the reasons is that TPS charges warehouse rental fees are cheaper than warehouse rentals outside the customs area. This can be detrimental to other importers who do not have access to the land for storage and disrupt the process of unloading goods from transport facilities. The average time for this process at the port of Tanjung Perak is 1,625 days.

Hypothesis Development

Research findings of Utami (2018), Listiawati et al. (2021), and Ruwantono and Susatyo (2016) showed that the pre-clearance, customs clearance, and post-clearance stages simultaneously influence dwelling time. The sum of the total time for the three stages is accumulated in dwelling time. Based on this, the research hypothesis is:

H1: Pre-clearance, customs clearance, and post-clearance processes simultaneously influence dwelling time at the port of Tanjung Perak.

Research conducted by Listiawati et al. (2021), Tarigan and Surbakti (2019), Ruwantono and Susatyo (2016), Safira, Buchari & Kadarsah (2020) stated that there is a positive influence of pre-clearance on dwelling time at ports. The results of the previous analysis show that the importer's alertness in processing documents is a factor that influences the length of time for the pre-clearance process. This is also in line with the research results of Ningsih et al. (2022). Based on this, the research hypothesis is:

H2: The pre-clearance process affects dwelling time at the port of Tanjung Perak

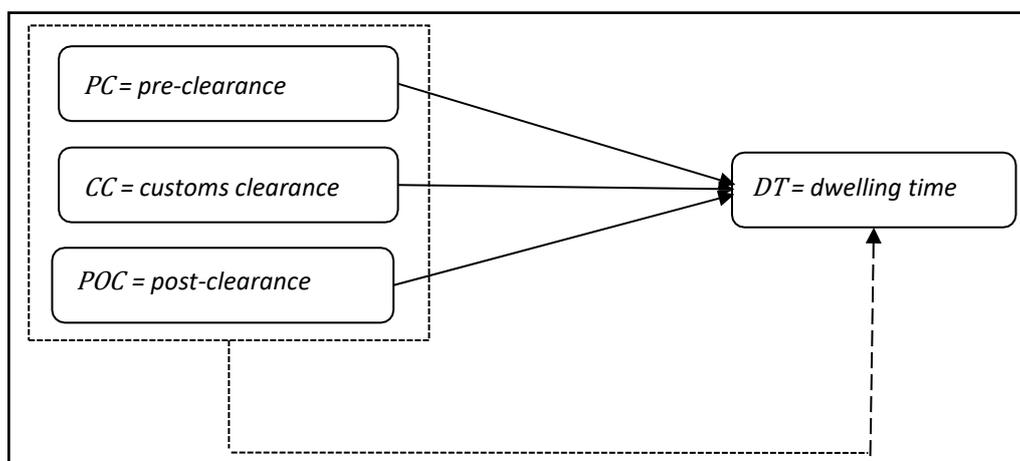
Research findings of Tarigan and Surbakti (2019), Rusmiyanto and Sumardiatna (2021), Listiawati et al. (2021), and Sunarmin et al. (2018) stated that the customs clearance process has a positive effect on dwelling time. The time required to inspect documents and physical goods during customs clearance influences the follow-up to process the release of imported goods (Sanjaya et al., 2017). Based on this, the research hypothesis is:

H3: The customs clearance process affects dwelling time at Tanjung Perak port

Research conducted by Listiawati et al. (2021), Tarigan and Surbakti (2019), and Ruwantono and Susatyo (2016) stated that post-clearance affects dwelling time. Some importers who do not immediately remove their goods from the port after post-clearance cause problems with accumulating goods in the customs area even though the importer already has an SPPB (Yuliani, 2016). Sudarsono (2022) stated that container owners piled their goods at the port because renting warehouses outside customs was more expensive. Apart from that, the TPS and other parties involved were less responsive in facilitating the release of goods (Ruwantono & Susatyo, 2016). Based on this, the research hypothesis is:

H4: The post-clearance process affects dwelling time at Tanjung Perak port.

Picture 3. Hypothesis Thinking Framework



Source: The Author processed.

RESEARCH METHODS

Researchers observed dwelling time flows through a real-time integrated system with related officers at KPPBC TMP Tanjung Perak. Data collection comes from secondary data contained on the official website of the National Single Window Institute and performance data from KPPBC TMP Tanjung Perak. Quantitative data from this source includes monthly pre-clearance, customs clearance, post-clearance, and dwelling time processes from January 2020 to December 2022. According to Sugiyono (2017), the appropriate number of data samples is recommended to be between 30 and 500. The time series data in this research consists of four dwelling time groups for 36 months, so the total data is 144.

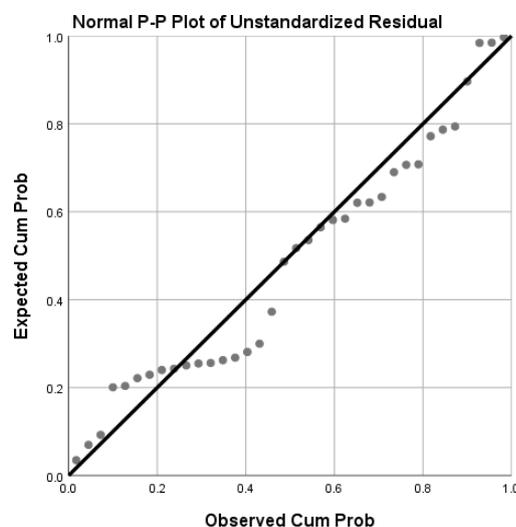
The quantitative data was analyzed statistically using the Ordinary Least Square (OLS) method with multiple linear regression. OLS is a common technique for estimating coefficients of linear regression equations, which describe the relationship between one or more independent quantitative variables and a dependent variable. This research uses quantitative methods, and the data processing uses the SPSS version 25 application. Ghazali (2017) used several tests to measure the influence of independent variables. The research instrument consists of validity, reliability, and normality tests. Next, a classical assumption test was carried out, which consisted of autocorrelation, heteroscedasticity, and multicollinearity tests. Hypothesis testing uses the F-test (simultaneous) and t-test (partial) to determine the influence of independent factors on the dependent variable. Lastly, the Determinant Coefficient Test (R^2) was carried out to measure how well the model used was to explain the research questions. Statistical analysis results are interpreted based on theories and regulations applicable in Indonesia. Researchers also compared it with the results of other studies and field observations.

ANALYSIS AND DISCUSSION

Statistical Test Results

It is necessary to test assumptions to produce a regression model that meets the BLUE (Best Linear Unbiased Estimator) criteria. The assumption test is a statistical test requirement in linear regression analysis to ensure that the regression model provides the best results, including estimation accuracy, no bias, and consistency (Juliandi et al., 2014). The classical assumption test consists of the normality, multicollinearity, heteroscedasticity, and autocorrelation tests. The normality test is used to assess whether the variables used in the analysis are normally distributed (Sugiyono, 2017).

Picture 4. Normal Probability Plot Graph



Source: Data processed using SPSS V. 25

Based on Picture 3, the normal P-P Plot of a Regression Standardized Residual graph depicts points in the form of data reflections that spread around and follow the direction of the diagonal line. Therefore, it can be concluded that the dependent and independent variables used are typically distributed, so the linear regression model is appropriate and can be used for further data testing. Researchers also carried out a normality test using the Kolmogorov–Smirnov test with a significance value of test results > 0.05 to ensure better estimation accuracy. The significance value (Asymp. sig 2-tailed) in Table 1 shows a figure of 0.055. These results show that the research data is usually distributed (fails to reject H_0).

Table 2. One-Sample Kolmogorov-Smirnov Test

N		36
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.00693912
Most Extreme Differences	Absolute	.145
	Positive	.145
	Negative	-.117
Test Statistic		.145
Asymp. Sig. (2-tailed)		.055 ^c

Source: Data processed using SPSS V. 25

The multicollinearity test was carried out to ensure that there was no correlation between the independent variables used in the regression analysis (Ghazali, 2016). The results of the multicollinearity test for the three independent variables in Table 2 have a Tolerance value of more than 0.1. If the Tolerance test result value is > 0.1 , then multicollinearity does not occur (fails to reject H_0). The same test can be done by looking at the VIF value. The three independent variables have a VIF value of less than 10, and it is concluded that there is no multicollinearity between the independent variables in this research data.

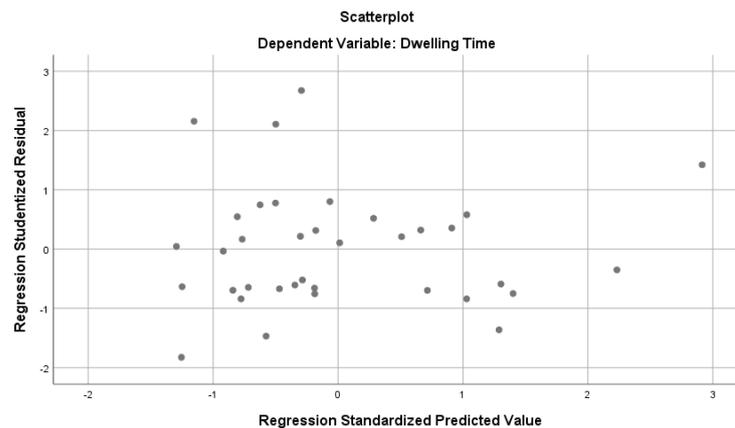
Table 3. Multicollinearity Test Results

	Tolerance	VIF
1 Pre Clearance	.817	1.224
Customs Clearance	.827	1.209
Post Clearance	.805	1.242

Source: Data processed using SPSS V. 25

According to Ghazali (2016), this heteroscedasticity test aims to determine whether there are differences in variance and residuals in the regression model from one observation to another. Based on the Scatterplot Graph, the distribution of predicted data points for level variables and residual values in Picture 4 spreads above and below the 0 line on the Y axis and forms a random pattern. The point distribution shows that the independent and dependent variables in the regression model are not heteroscedastic.

Picture 5. Scatterplot graph of heteroscedasticity test results



Source: Data processed using SPSS V. 25

The heteroscedasticity test can be carried out using the Glejser test. The results of the Glejser test on the independent variable and dependent variable in Table 3 show a significance value of more than 0.05. The conclusion is that there is no heteroscedasticity in the regression model.

Table 4. Glejser Test Results (Heteroscedasticity)

	Standardized Coefficients Beta	t	Sig.
1 (Constant)		1.010	.320
Pre Clearance	-.145	-.766	.449
Customs Clearance	-.199	-1.058	.298
Post Clearance	.059	.308	.760

Source: Data processed using SPSS V. 25

According to Ghazali (2013), the autocorrelation test is carried out to find out whether, in a linear regression model, there is a correlation between the residual error in a certain period and the previous period. The method used to test autocorrelation in this regression model is to carry out the Durbin–Watson test. If the d value (Durbin Watson) lies between dU and (4-dU), the result means there is no autocorrelation in the regression model. The dU value can be seen in the Durbin Watson K=3 (3 Factors) table with a significance level of 5% and a total of 36 data is dU = 1.6539. Test results in Table 4 value dU (1.6539) < d (1.959) < 4- dU (2.3461)

Table 5. Durbin – Watson Test Results (Autocorrelation)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	.999	.00726	1.959

a. Predictors: (Constant), Post Clearance, Customs Clearance, Pre Clearance

b. Dependent Variable: Dwelling Time

Source: Data processed using SPSS V. 25

Based on Table 5, the multiple linear regression model produces a research equation written as follows: $DT = -0.002 + 0.995PC + 1.008CC + 1.006POC$

Table 6. Multiple Linear Regression Test Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.002	.013		-.143	.888
	Pre Clearance	.995	.004	.970	229.721	.000
	Customs Clearance	1.008	.007	.601	143.140	.000
	Post Clearance	1.006	.005	.830	195.063	.000

a. Dependent Variable: Dwelling Time

Source: Data processed using SPSS V. 25

This test concludes that the pre-clearance, customs clearance, and post-clearance variables simultaneously influence dwelling time.

Table 7. F Test Results – Simultaneous ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.611	3	1.204	22855.005	.000 ^b
	Residual	.002	32	.000		
	Total	3.613	35			

a. Dependent Variable: Dwelling Time

b. Predictors: (Constant), Post Clearance, Customs Clearance, Pre Clearance

Source: Data processed using SPSS V. 25

However, based on the partial test (t) on three variables, the pre-clearance and post-clearance variables show a significance value of less than 0.05, which concludes that hypothesis *H2* is accepted, the pre-clearance variable has a significant effect on dwelling time at Tanjung Perak port and hypothesis *H4* accepted, the post-clearance variable has a significant effect on dwelling time at the port of Tanjung Perak. Meanwhile, the customs clearance variable shows a significance value greater than 0.05, which concludes that hypothesis *H3* is rejected. The customs clearance variable has no significant effect on dwelling time at the port of Tanjung Perak.

Table 8. Partial Test Results (t) Variables pre-clearance, customs clearance and post-clearance Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.442	.189		12.904	.000
	Pre-Clearance	.609	.141	.594	4.307	.000
1	(Constant)	2.452	.314		7.812	.000
	Post-Clearance	.482	.191	.398	2.526	.016
1	(Constant)	3.156	.102		30.980	.000
	Custom Clearance	.260	.284	.155	.914	.367

Dependent Variable: Dwelling Time

Source: Data processed using SPSS V. 25

Discussion

Based on the profile of Tanjung Perak Port, Surabaya, the primary container terminals at Tanjung Perak Port consist of the Surabaya Container Terminal and Teluk Lamong Terminal. PT Terminal Petikemas Surabaya (TPS) is a subsidiary of PT Pelindo Terminal Petikemas (SPTP). This terminal is located on Jl. Tanjung Mutiara 1 West Perak, Krembangan District, Surabaya City. PT TPS has a total area of 35 hectares for international storage with a container capacity of 31,654 TEUs, plus a domestic storage yard of 4.7 hectares with a capacity of 3,689 TEUs. PT TPS has a pier 1000 meters long and 13 meters deep for its international pier and 450 meters long and 8 meters deep for its domestic pier. Referring to PT TPS's official website, several facilities in the form of equipment provided by PT TPS to support operational activities at the container terminal are 12 units of container cranes, 30 units of rubber tired gantry cranes (RTG), seven units of reach stackers, three units of sky stackers, 1,434 reefer plug units, 29 forklift units, 63 dolly system units, 157 head truck units, 194 chassis units, three low bed chassis units, 90 cassette units, seven translifter units, and port gates with an auto gate system.

Teluk Lamong Terminal (TTL) is a logistics port owned by PT Pelabuhan Indonesia III (Persero), which is located on Jalan Raya Tambak Osowilangon KM 12, Tambak Osowilangon Village, Benowo District, Surabaya. At the start of construction, this terminal was planned to support the dense flow of logistics traffic at PT TPS, which had exceeded its maximum capacity. As a modern port, PT TTL has various superior facilities to support its operational activities, such as a dock supported by five domestic cranes and five international cranes (twin lift), a stacking yard supported by 20 ASC (Automatic Stacking Cranes), which are operated centrally. Loading activities are supported by reach stacker and straddle carrier facilities with RFID (Radio Frequency Identification) technology to support automatic identification of trucks and containers, a long room as a place for physical inspection of goods for Customs and Excise officers, and several trucks and forklifts used for support loading activities.

This data analysis shows that the pre-clearance, customs clearance, and post-clearance stages influence dwelling time. These results are the same as research conducted by Utami (2018), Listiawati et al. (2021), and Ruwantono and Susatyo (2016). Dwelling time is the sum of the total time for the pre-clearance, customs clearance, and post-clearance stages. The results of statistical tests show that three variables have a positive value on dwelling time. If these independent variables increase, dwelling time will also increase, and vice versa.

Meanwhile, based on the partial test, the results showed that only the pre-clearance and post-clearance variables significantly affected dwelling time. Research conducted by Listiawati et al. (2021), Tarigan and Surbakti (2019), Ruwantono and Susatyo (2016), Safira, Buchari & Kadarsah (2020) stated that the pre-clearance factor has a positive and significant effect on dwelling time. Several factors influence pre-clearance time at the port. Listiawati et al. (2021) stated that importer awareness in processing documents affects pre-clearance time. The research results of Ningsih et al. (2022) stated that administrative completeness is an important influence in reducing the time for unloading goods. Safira, Buchari, and Kadarsah (2020) stated that the factors in the pre-clearance stage that can affect total dwelling time are the time for licensing prohibited and restricted goods from the relevant agencies, the quarantine process, and the time for preparing PIB supporting documents. Another factor presented by Rusmiyanto and Sumardiatna (2021) is the loading and unloading factor, which consists of facilities, the number of personnel, and adequate transportation access.

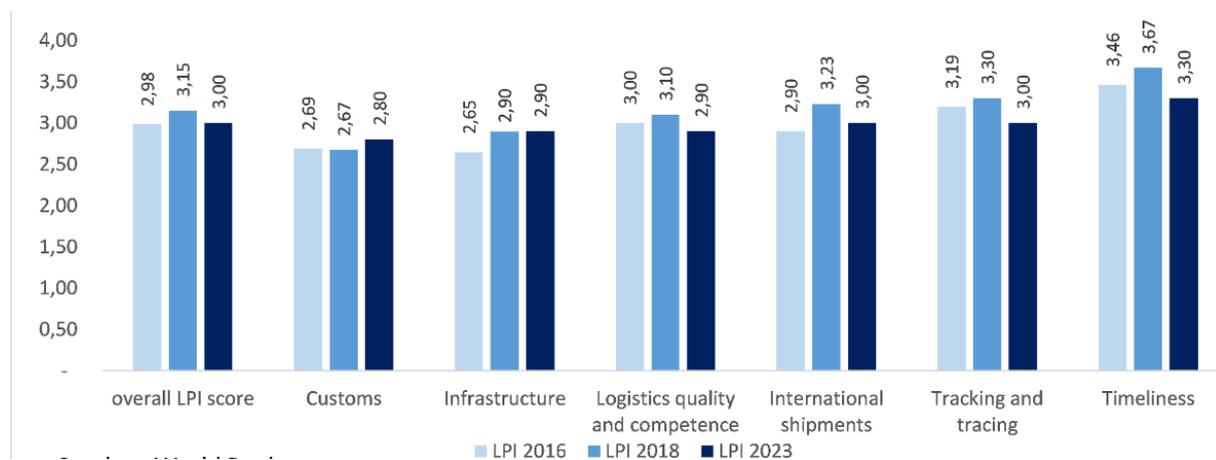
Based on observations of the pre-clearance process in the field show that importer/forwarder delays in completing their obligations have an impact on the issuance of the required licensing documents. Dwelling time data at the Tanjung Perak port shows that the average notification process for importing goods (pre-clearance) during 2020-2022 is 1.3 days. The importer/forwarder sometimes only submits the PIB one day after the goods arrive at the

container terminal. However, this data shows progress, considering that in the previous period, the average pre-clearance process was three days, as per the research results of Ruwantono and Susatyo (2016).

Another problem in releasing imported goods is the process of issuing permits for prohibited/restricted goods from the relevant agencies/institutions. Without these licensing documents, the PIB cannot be issued, and customs clearance cannot be carried out. However, since 15 November 2021, this problem has begun to be resolved gradually with the implementation of an integrated licensing system in the customs process called single submission. This system was developed by the National Single Window Institute (LNSW) to create a National Logistic Ecosystem (NLE). NLE is a logistics ecosystem relationship that harmonizes the flow of international goods and documents traffic from the arrival of the goods being transported until the goods arrive at the warehouse.

The Indonesian government optimized the acceleration of logistics time and costs through NLE and succeeded in reducing dwelling time. The Logistic Performance Index (LPI) index for this category in 2023 is an average of 3.2 days, more than in 2018 (average of 4 days). LPI is an index that evaluates the efficiency and sustainability of a country or region's logistics system. The World Bank publishes this method. The LPI component consists of two classifications: the input group includes customs, infrastructure, and service quality, and the outcomes group includes delivery service performance (delivery time, international delivery, and tracking and tracing). Indonesia's customs components are currently increasing compared to the 2018 LPI due to customs efficiency, transparency of customs policies, ease of customs processes, and customs cooperation.

Table 8. Development of the Indonesian Logistic Performance Index 2016-2023



Source: World Bank on Ministry of Finance official website (2023)

The results of research conducted by Listiawati et al. (2021), Tarigan and Surbakti (2019), and Ruwantono and Susatyo (2016) stated that post-clearance has a positive and significant effect on dwelling time. According to Sanjaya et al. (2017), one factor that influences this process is the initiative of importers because they have control over releasing goods from TPS. According to Yuliani (2016), the obstacle in post-clearance is that several importers use stockpiling fields as their storage warehouses. Some importers allow their imported goods to be stockpiled in the customs area even though they already have SPPB. Sudarsono (2022) stated that the post-clearance problem at the Tanjung Perak port is that container owners tend to leave their containers at the port because the cost of renting an external warehouse is more expensive than storing them at the port. According to Ruwantono and Susatyo (2016), the main factor in post-clearance problems is the readiness and activeness of

importers to immediately release goods and the lack of alertness of TPS officers and other parties involved in facilitating the release of goods that already have SPPB. Listiawati et al. (2021) stated that TPS service and the speed of goods owners in removing goods after SPPB are determining factors in reducing post-clearance numbers.

Based on dwelling time data at the Tanjung Perak port during 2020-2022, the average post-clearance time is 1,625 days. This indicates that most importers removed their imported goods from TPS in more than 1.5 days, as the government's target. This additional time will impact logistics costs and the prices of goods to be produced or resold domestically.

Partial tests on custom clearance show that this variable does not affect dwelling time. The results of this research are different from the conclusions of Tarigan and Surbakti (2019), Rusmiyanto and Sumardiatna (2021), Listiawati et al. (2021), and Sunarmin et al. (2018), which state that customs clearance has a positive and significant effect on dwelling time. Sanjaya et al. (2017) stated that document and physical inspection during the customs clearance stage determine whether imported goods can be processed further. Listiawati et al. (2021) stated that speed in submitting documents and withdrawing containers when they are about to be inspected is a determining factor in reducing customs clearance figures. Ruwantono and Susatyo (2016) also stated in their research that the root of the problems in the customs clearance process includes unpreparedness for withdrawing containers from the storage area to the inspection site (red line), availability of physical inspection facilities and locations by other entities, application speed and network constraints in the process of customs clearance.

Based on analysis and observation, the results of this research are different from previous research due to policy changes, acceleration of the goods flow process, and improvement of supporting facilities at the Tanjung Perak port. When imported goods arrive and are unloaded at TPS Line 1, the importer must immediately notify the PIB. Importers who have notified PIB will continue to store imported goods at TPS line 1. This aims to simplify the process of completing customs obligations and removing these goods from the customs area. Meanwhile, for importers who have yet to submit a PIB within three days, the imported goods will be moved from TPS line 1 to line 2 with a request from the TPS. Based on the previous policy, imported goods at TPS line 1, notified by PIB, cannot be moved to the storage location until customs obligations are completed. The problem in the field is that there is often a buildup of goods at TPS line 1 due to customs obligations not being resolved immediately because the importer has not submitted a hard copy of the PIB to Customs and Excise officers, so the physical inspection cannot be carried out on the red line. Moving the storage location for imported goods to TPS line 2 can be carried out even though the importer has submitted a PIB if there is stagnation at TPS line 1 based on the considerations of the TPS entrepreneur and the Head of the Customs Office. This increases the efficiency of using container storage yards on line 1 and avoids delays in unloading goods from transport facilities. The impact of this policy is to increase the speed of loading and unloading, facilitate the process of physical inspection of goods, and reduce dwelling time.

The customs clearance time at KPPBC TMP Tanjung Perak during 2020-2022 averaged 0.3 days or 7.2 hours. If this time is compared with the average total dwelling time of 3.24 days, then the effect of customs clearance on dwelling time is not significant. The time for customs clearance is also smaller than the average time for the last three months in 2019, which was 2.92 days (DJBC, 2019).

In terms of accelerating the goods flow process, in the last three years up to December 2022, the portion of PIB via the green line and MITA line at KPPBC TMP Tanjung Perak reached 88%. This process is faster than before because now it does not require the submission of hardcopy documents, and there is no need for a physical examination. The flow of goods that go through this process will immediately receive SPPB as soon as the importer or forwarder

notifies the PIB through the system and customs clearance ends. This will shorten customs clearance time. One of the reasons for the increasing number of PIBs going through the green line and MITA line is the increase in importers/forwarders registered in the database, who are recorded as having good performance and track records and are compliant. This shows that many importers previously categorized as high or medium-risk are now categorized as low-risk. The remaining 2% of the yellow line and 10% of the red line still require physical inspection of goods and documents. Another factor that speeds up this process is the increase in supporting facilities. Modernization of services at the Tanjung Perak Port TPS has been carried out by improving the infrastructure for moving and checking goods. For example, the release of goods through the main port gate, which previously had to be recorded manually by officers, now uses an automatic system (auto gate). This helps speed up goods traffic at the port.

CONCLUSION

Based on the analysis of the factors that influence dwelling time, it is concluded that the pre-clearance, customs clearance, and post-clearance processes simultaneously influence dwelling time at the port of Tanjung Perak. The longer these three stages are processed, the greater the dwelling time, which can hamper the speed of releasing imported goods from the port. Data for 2020-2022 at the port of Tanjung Perak shows an average of 3.24 days needed to release imported goods from the port.

In line with previous research, the pre-clearance and post-clearance processes partially have a positive and significant effect on dwelling time at the port of Tanjung Perak. Meanwhile, the customs clearance process does not affect dwelling time at the Tanjung Perak port. This result is different from previous research due to policy changes that occurred during the research. Currently, the customs clearance process is faster due to new policies regarding moving stockpiling locations, accelerating the flow of goods, and increasing supporting facilities provided by TPS.

LIMITATIONS AND SUGGESTIONS

This research helps evaluate government policies and the services of Customs and Excise officers in handling imported goods at ports. Simplification of bureaucracy and ease of service are crucial to encouraging competition and progress in the country's economy to achieve prosperity. International trade involves two sides: exports and imports. This research only discusses the management of imported goods, so other research is still needed using export variables to increase the accuracy and efficiency of government trade policies.

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