Logistics Performance Dimensions of Customs Clearance Efficiency and Export in ASEAN Economy

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Abstract

One of the dimensions of logistics performance is the efficiency of customs that evaluate the speed and ease of resolving customs affairs. It can be measured from service time and determined by human resources supported by internet utilization. This study analyzed the role of the efficiency of customs and export activities in supporting the economies of the Association of South East Asian Nations (ASEAN) by analyzing relevant variables such as export time, number of customs staff, internet users and export value. The research data used is secondary data from various sources starting from 2014 to 2019 which was analyzed with the Fixed Effect Model approach panel data regression method using E-Views 10. The results showed simultaneously export time, number of customs staff, internet users and export values had a significant effect on the ASEAN economy. Partially, the internet users and export values have a positive and significant effect while export time and the number of customs staff have a negative and significant effect. ASEAN governments should focus on accelerating the customs clearance process towards digitalization through application development by utilizing the internet rather than increasing the number of human resources to support exports and improve the ASEAN economy.

I. Introduction

A country that implements an open economy must conduct international trade as a form of effort to meet the need for goods and services both to meet its domestic needs and to meet the needs of international markets. When a country has been able to produce goods and services in quantities that exceed its domestic needs, it will carry out export activities to supply these goods and services to consumers abroad. Increased productivity of goods and services and export activities can support the increase in Gross Domestic Product (GDP) to improve the country's economy. Exportation activities are largely determined by logistics management which is an international trade chain that includes planning, implementing and controlling the flow of goods and services effectively and efficiently, including transportation, storage, distribution, regulatory affairs and exchange of information ranging from producers to the hands of consumers (Willem Siahaya in Utami, N., & Sitorus, 2015).

Logistics performance is a benchmark of the success of logistics management that plays a role in facilitating and facilitating the inflow of goods and services. The logistics performance of a country is indicated by an indicator value called Logistics Performance Index (LPI) which includes several dimensions, one of which is the efficiency of the performance of customs agencies in this case Customs Efficiency. LPI values issued by the World Development Indicator are displayed in the form of index scores 1-5 where the higher the LPI value, the better the country's logistics performance. If we look at the LPI data of

ASEAN countries based on 6 dimensions as an example in 2018 the majority of customs efficiency dimension values are still relatively low because they are still below 3.00. Only Singapore and Thailand have customs efficiency dimension values above 3.00 (see table 1).

Table 1. ASEAN Country LPI Value Based on 6 Dimensions of 2018

Dimension \ Countries	Customs Efficiency	Infrastructure	International shipment	Logistics quality & competence	Tracking and Tracing	Timeliness
Singapore	3.89	4.06	3.58	4.10	4.08	4.32
Thailand	3.14	3.14	3.46	3.41	3.47	3.81
Vietnam	**2.95**	3.01	3.16	3.40	3.45	3.67
Malaysia	**2.90**	3.15	3.35	3.30	3.15	3.46
Indonesia	**2.67**	2.90	3.23	3.10	3.30	3.67
Philippines	**2.53**	2.73	3.29	2.78	3.06	2.98
Brunei	**2.62**	2.46	2.51	2.71	2.75	3.17
Lao PDR	**2.61**	2.44	2.72	2.65	2.91	2.84
Cambodia	**2.37**	2.14	2.79	2.41	2.52	3.16
Myanmar	**2.17**	1.99	2.20	2.28	2.20	2.91

Source : World Development Indicator (Processed by Author, 2021)

The role of logistics performance in the economy has been recognized by some researchers before such as Demilie & Meron (2016) in their research using panel data in sub-Saharan African countries concluded that improving logistics performance can have a tremendous influence on economic development. Countries with low logistics efficiency tend to have low GDP, this shows the implementation of effective logistics systems through increasing the value of LPI dimensions including customs clearance efficiency to determine sustainable economic growth (K. Sharipbekova, 2012). However, if we observe the comparison of logistics performance dimensions of Customs efficiency and GDP from year to year, it will be obtained the fact that the increase in logistics performance of Customs efficiency dimensions is not always followed by an increase in GDP.
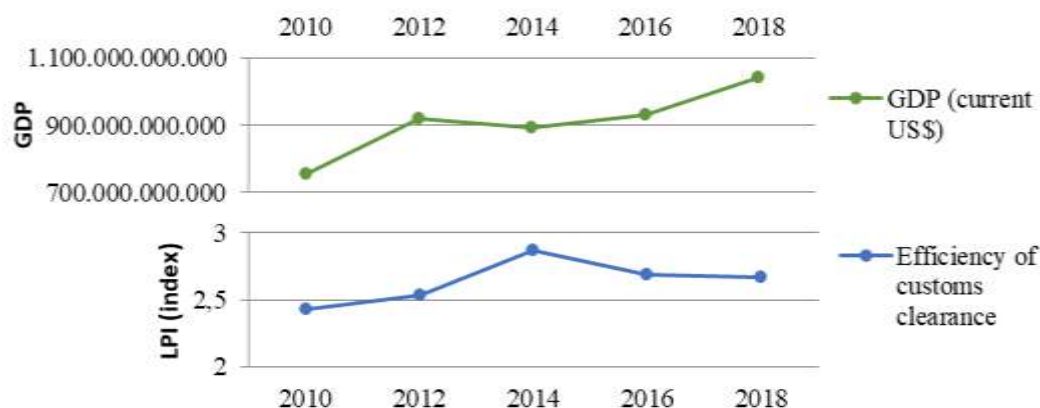
Figure 1. *Comparison of GDP and LPI Efficiency of Customs Indonesia*
Source : World Development Indicator (Processed by Author, 2021)

Figure 1 shows the increase in the efficiency of Indonesian Customs from 2012 to 2014 followed by a decrease in GDP in the same year period. While the decrease in the efficiency of Indonesian Customs from 2014 to 2016 was followed by an increase in GDP in the same year period and the same in the period 2016 - 2018. The condition of the relationship that

seems to be contrary between GDP and customs efficiency also occurs in several other ASEAN countries such as Cambodia, Myanmar, Singapore, Thailand and Vietnam.

The efficiency of Customs performance can be seen from the ease and speed of customs service. The Directorate General of Customs and Excise as the government agency responsible for customs affairs is required to be able to provide effective and efficient services with the benchmark of success that can be seen from the time of export services. The faster the timing of export services has an impact on the timeliness of delivery, low transportation costs and export costs to increase productivity and the economy. But the fact that the acceleration of export time did not directly increase GDP in some conditions showed the opposite impact, for example, in the period that occurred in Brunei Darussalam in the period 2015 - 2016 there was an acceleration in export time from 120 hours to 117 hours but precisely in the same period there was a decrease in GDP from 12.9 billion US$ to 11.4 billion US$.

Some factors that determine the speed and ease of customs processes include human resources and the utilization of the internet network. Reporting from World Customs Organization data until 2020 the number of customs and excise staff in some ASEAN countries is still small when compared to developed countries in Asia, America and Europe. Countries with the largest number of customs staff in ASEAN, namely Indonesia and Malaysia only have 16,375 and 13,367 customs officers while China has 70,549 customs officers, Germany 39,712 and the United States 63,650 customs officers. Although the area and population also affect but along with the increase in the volume and flow of trade in goods and services and efforts to control dangerous goods and smuggling of goods through the borders of the region, the need for sufficient numbers of customs staff cannot be ruled out. According to Roberts et al. (2014), the time of customs inspections has the effect of other additional costs such as the cost of inspection facilities, fuel costs and other transportation costs due to delays in the flow of goods distribution. Therefore, reducing the time of customs inspection is very important and can be done with the addition of the number of customs officers so that the inspection process is more effective and efficient.

Another factor that also affects especially in the era of Industry 4.0 and the era of "new normal" with the Covid-19 Pandemic is digitalization by utilizing the internet network. Digitalization has been shown to provide technological efficiency, cost efficiency and also increase productivity and competitiveness in Uzbekistan (Saparbaevna, 2021). ASEAN countries have innovated by building a digital logistics platform nationwide to improve their logistics performance. For example, the Indonesian state has built an Indonesian National Single Window (INSW) system managed by the Ministry of Finance, National Logistics Ecosystem (NLE) and Customs Excise Information System and Automation (CEISA) managed by customs. This led to an increase in the need for computers, mobile phones and the internet from year to year which also shows the increasing use of the internet in the community. Internet networks can be a solution to infrastructure weaknesses, expand markets and economies of scale, provide the effect of overflowing technology and knowledge, optimize capital allocation, accelerate the exchange of information data and improve the country's economy in the Belt and Road region (Li, 2019). It is interesting to research whether the use of this internet network can encourage improved logistics performance, especially customs services and improve the ASEAN economy.

From the description of the background above, it is very interesting to focus on discussing more in the role of logistics performance dimensions of Customs performance efficiency and internet utilization in export activities to improve the ASEAN economy. This is supported by the fact that there are differences in customs rules, differences in the resources of the number of Customs staff, the potential utilization of the internet in pandemic times and efforts to increase border surveillance and increase export competitiveness in

ASEAN countries. The purpose of this research is to add references, provide recommendations and consideration materials for stakeholders and policymakers in ASEAN countries in implementing policies related to the efficiency of Customs performance to improve ASEAN exports and economy.

II. Review of Literatures

2.1 Economic Development Theory

The economic theory on which this research is based on the Endogenous theory developed by Paul Romer. This theory states that economic improvement is determined by variables in the system that regulate the production process (endogenous) or variables in an economic system and not by variables from outside the system (Romer, 1997). Variables derived from the (endogenous) economic system such as factors of production, labor, investment and technological development that can affect economic growth (Wijayanto, 2019). This theory focuses on the increased and expanded return on capital not only on physical capital but also intellectually derived from the exchange of ideas and knowledge through economic activities that can increase productivity such as international trade and investment. Factors that are considered to be determinants of economic growth in ASEAN regional countries according to Alekhina & Ganelli, (2020) among others, are domestic productivity, foreign investment flows and trade in goods and services. In addition, capital accumulation, population growth and technological advances also play a role in increasing the pace of ASEAN economic growth (Hariyanti, 2014).

2.2 Logistics Performance

According to the United States Logistics Management Board, 1991, logistics is the process of planning, implementing, and controlling the efficient and effective flow and storage of goods, services, and information from the point of origin to the point of consumption to meet the needs of customers (Ballou, 1997). Logistics performance is a benchmark indicator of the quality of logistics systems and the successful implementation of logistics activities which is reviewed from several dimensions including the efficiency of customs clearance (customs), ease of preparing shipping and efficiency of freight costs (international shipment), quality of infrastructure, especially roads, transportation, ports, communication and technology (infrastructure), the competence of logistics services (logistics quality and competence), ease of tracking and tracing goods delivery (tracking and tracing), as well as the timeliness of delivery of goods ranging from exporters / producers to the hands of consumers (timeliness) (Kwok, 2019).

The efficiency of the Customs and Excise clearance process evaluates the speed and ease of customs service processes both export and import and can be measured through service time. In the case of CIS countries, logistics efficiency not only affects economic growth, but also the further development of a country in the global world (K. Sharipbekova, 2012). According to Martincus & Graziano (2013), delays time in the customs clearance process have a significant negative impact on exports. In particular, an increase of delay time spent in customs causes a decrease in the growth rate of exports and of course, it can lower GDP. Reducing the time of the customs process is very important and can be done with the addition of the number of customs staff or digitalization by internet utilization so that the customs process is more effective and efficient.

2.3 Internet

The Internet is an 'interconnected system' forming a network that connects computers around the world that allows users on one device, if they have the authorization, to obtain information from another computer and communicate directly with the user of another device (Khan et al., 2013). However, the existence of the Internet public sphere tends to be seen as a contestation space where corporate and state forces try with various ways to control and dominate it (Bo'do, 2019). In social media, individuals and groups interact with each other online through the internet network (Indriyani, 2020). With the internet, citizen media is able to disseminate information in the form of text, audio, video, photos, comments and analysis (Saragih, 2020). Currently, the internet has become an important need in the community to find information, communicate, build social networks, educational and entertainment facilities, do business online to find a job. The Internet is thought to contribute to the spillover effect of cross-border science. Research by Y. Li (2019), shows that the internet can bring information and technology to Belt and Road countries, optimize capital allocation, labor, technology, and other resources, increase labor productivity, and drive economic growth. Widagdo. B & Rofik. M, (2019) observing the development of the internet in Indonesia, the e-commerce sector that relies on internet access can be a hope as a driver of Indonesia's economic growth in the future. Although some studies show the positive impact of the internet on economic growth, in reality, the internet also has a negative impact on economic growth in North Africa due to its use that is not for productive activities and does not produce an abundance of knowledge (Bakari & Tiba, 2019). For example, excessive internet use for social media will waste free internet access costs and reduce worker productivity (Dell'Anno et al., 2016).

2.4 Export

Exports are part of international trade where goods and services sold from domestic producers cross national borders to consumers in other countries that generate foreign exchange for exporters. Export activities can reflect the competitiveness and ability of a country in the global trade market in processing its domestic resources into a value-added product of goods and services. Pradini (2017) stated that exports play an important role in the stability of a country's economy because it will directly affect the amount of foreign exchange of a country. Export activities carried out are also related to customs regulations between countries and require good cooperation to facilitate the flow of export trade. Exports have not only been used as a driver of national income but have also been used as a means of expanding markets, expanding employment opportunities, increasing foreign exchange receipts and an overflow of technology and science.

Bakari (2017) analyzed the influence of exports on economic development in Gabon resulting in the result that export activities have a positive and significant impact on economic growth in the short term but in the long term negative impact on economic growth. According to Sultanuzzaman et al. (2019) analyzing several countries in Asia shows that export activities have a very decisive impact on sustainable economic growth. Countries that increase exports and technology development will be able to optimize their economic growth. The expansion of export portfolios for trade expansion to global markets can also boost the economy. The relationship between exports and economic growth will produce high export values even without outward-oriented policies, i.e. export promotion (Tampubolon et al., 2021).

III. Research Methods

3.1 Types of Research and Data Sources

This research is quantitative research with the data used is secondary data taken from several sources including the World Development Indicator, World Customs Organization and ICT ITU-Eye. The time observed between 2014 - 2019. The sampling technique in this study is purposive sampling which is a sampling technique that uses certain criteria. The criteria applied to the sample of countries in the study are that they must be official ASEAN members. Thus there are 10 official ASEAN member states observed in this study.

3.2 Operational Definition of Variables

In this study, economic development is projected with Gross Domestic Product (current US$) as a dependent variable, while the independent variables include the efficiency of Customs and Excise projected with export time (time to export, border compliance, hours) and the number of Customs staff (peoples), the utilization of technology projected with internet users (% population using internet) and export value (current US$). The operational definition of variables in this study is presented more clearly in Table 2 below:

Table 2. Operational Definition of Variables

Variable	Unit	Symbol	Data Source	Measurement
Dependent Variable				
Gross Domestic Product	US$	GDP	World Development Indicator	Total of gross value added produced in the economy.
Independent Variable				
Time to export, border compliance	Hours	Export_Time	World Development Indicator	Time of customs inspection and other regulations
Number of Customs Staff	Peoples	Customs_Staff	World Customs Organization	Approximately number of customs staff by countries
Internet Users	%	Internet	ICT ITU-Eye, WDI	$\frac{\text{Internet User}}{\text{Total population}} \times 100\%$
Export Value	US$	Export_Value	World Development Indicator	Total amount of export value in a year

Source : Various Source (Processed by Author, 2021)

3.3 Methods of Analysis

The analysis method in this study uses panel data regression techniques with data processing using E-Views 10, then continued with a series of tests that include model selection tests, classical assumption tests and hypothesis tests F and T. To equalize data units and improve data distribution, all variable data is changed to natural logarithm. Based on reference to the study of the literature and theory of economic growth in this study, all variables are assumed to influence ASEAN economy together, so that the theoretical equation model can be expressed as follows :

$$\text{Ln GDP}_{it} = \beta_0 + \beta_1 \text{ Ln Export\_Time}_{it} + \beta_2 \text{ Ln Customs\_Staff}_{it} + \beta_3 \text{ Ln Internet}_{it} +$$
$$\beta_4 \text{ Ln Export\_Value}_{it} + e \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

Where :

GDP_{it}	= Gross Domestic Product (US\$) country i, year t
$Export\_Time_{it}$	= Customs Process Export Time (Hours) country i, year t
$Customs\_Staff_{it}$	= Number of Customs Officers (Peoples) country i, year t
$Internet_{it}$	= Internet Users in a Population (%) country i, year t
$Export\_Value_{it}$	= Total Export Value in a Year (US\$) country i, year t
β_0	= Constanta
$\beta_1 - \beta_4$	= Regression coefficient of each existing independent variable
e	= Error Factor

IV. Discussion

4.1 Results

If we look at descriptive statistics of research data of 10 ASEAN countries analyzed, the average Gross Domestic Product of 276.7 billion US\$, the average export time for customs processing is 58 hours, the number of Customs employees is 5,502 people with an average internet user of 53% of the population and an average export value of 176.1 billion US\$. The highest GDP value obtained by Indonesia in 2019 amounted to 1.2 trillion US\$ while the lowest obtained by Brunei Darussalam in 2016 amounted to 11.4 billion US\$. Meanwhile, the longest export time was recorded by the country of Myanmar in 2014-2016 for 144 hours while the fastest export time was recorded by the country of Laos in 2018-2019 for only 9 hours. The largest number of customs employees owned by the Indonesian state in 2018-2019 amounted to 16,812 people while the number of customs employees was at least owned by the state of Brunei Darussalam as many as 425 people. The largest percentage of the internet user population was owned by Brunei Darussalam in 2018-2019 at 95% of the population while the lowest percentage was recorded by Myanmar in 2014 at 11.52%. The last highest export value obtained by Singapore in 2018 amounted to 665.7 billion US\$ and the lowest obtained by Laos in 2015 amounted to 4.88 billion US\$. All variables have a very large deviation that indicates the inequality of data distribution and specifically for the observation of internet user variables and export values are not fully obtained due to the unavailability of data from laos in the period 2017-2019.

Table 3. Descriptive Statistics of 10 ASEAN Countries

Statistics	Variable				
	GDP (US\$)	Export_Time (Hours)	Customs_Staff (People)	Internet User (%)	Export_Value (US\$)
Mean	276689901631	58	5502	53	176105427352
Max	1119091259075	144	16812	95	665717971530
Min	11400854268	9	425	12	4885880000
Deviation	284404515702	40	5320	25	180875107276
Observation	60	60	60	58	57

Source : Various Source (Processed by Author, 2021)

a. Model Selection Test

The selection of panel data regression models is done to determine the best model between common effect model (CEM), fixed effect model (FEM) or random effect model (REM). Chow Test results obtained FEM model better than CEM characterized by a probability value of chow test results of 0.0000 (Table 4) or less than the α value of 0.05 (5%) used in this study.

Table 4. Chow Test Results

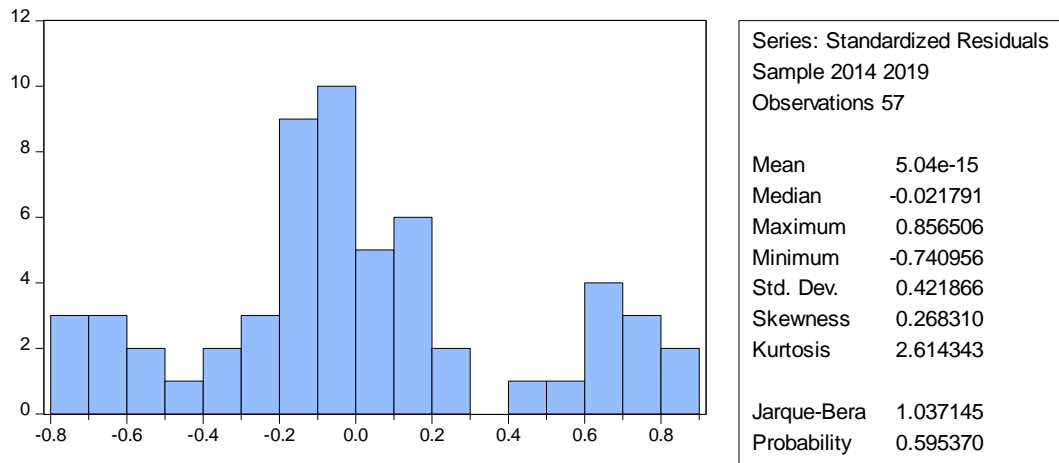| Effects Test	Statistic	d.f.	Prob.
Redundant Fixed Effects Tests			
Test cross-section fixed effects			
Cross-section F	506.510471	(9,43)	0.0000
Cross-section Chi-square	266.358605	9	0.0000

Furthermore, the Hausman test results to determine which FEM or REM model were better selected showed a probability value of 0.0002 (Table 5) or less than the α value of 0.05 (5%) used in the study. This means that the FEM model is better chosen than the REM model.

Table 5. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Correlated Random Effects - Hausman Test			
Test cross-section random effects			
Cross-section random	22.585455	4	0.0002

b. Classic Assumption Test

This test is done to ensure the selected model meets the classic assumptions and rules of BLUE. The normality test results show a Jarque-Bera probability value of 0.59 or above the α value of 0.05 (5%) so that the data is normally distributed.

Series: Standardized Residuals	
Sample 2014 2019	
Observations 57	
Mean	5.04e-15
Median	-0.021791
Maximum	0.856506
Minimum	-0.740956
Std. Dev.	0.421866
Skewness	0.268310
Kurtosis	2.614343
Jarque-Bera	1.037145
Probability	0.595370

Figure 2. Normality Test Result

The next test is a multicollinearity test to ensure the model is free from multicollinearity problems by looking at the correlation coefficient.

Table 6. Multicollinearity Test

Variables	LN_EXPORT_TIME	LN_CUSTOMS_STAFF	LN_INTERNET	LN_EXPORT_VALUE
LN_EXPORT_TIME	1.000000	0.102733	-0.169407	-0.433266
LN_CUSTOMS_STAFF	0.102733	1.000000	-0.100460	0.610912
LN_INTERNET	-0.169407	-0.100460	1.000000	0.378334
LN_EXPORT_VALUE	-0.433266	0.610912	0.378334	1.000000

The correlation coefficient value of the maximum multicollinearity test is obtained 0.610912 (Table 6) which is smaller than the rule of thumb (0.7) so that the conclusion is there is no multicollinearity. Next is the heteroskedasticity test with GLS Weight Cross-section method by looking at the Sum Square Resided and Unweighted values. The result showed SSR Weighted (0.08) < SSR Unweighted (0.10) (Table 7). The conclusion is there is no heteroskedasticity.

Table 7. Heteroskedasticity Test

Weighted Statistics			
R-squared	0.999437	Mean dependent var	29.59108
Adjusted R-squared	0.999266	S.D. dependent var	9.576699
S.E. of regression	0.044415	**Sum squared resid**	**0.084824**
F-statistic	5866.870	Durbin-Watson stat	1.331529
Unweighted Statistics			
R-squared	0.999158	Mean dependent var	25.66567
Sum squared resid	**0.100691**	Durbin-Watson stat	1.234437

c. Panel Data Regression Estimation Results

After the classical assumption test is met, the panel data regression estimate is obtained as follows:

Table 8. FEM Model Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.03263	1.356576	11.08130	0.0000
LN_EXPORT_TIME	-0.207474	0.070620	-2.937894	0.0053***
LN_CUSTOMS_STAFF	-0.119412	0.056604	-2.109618	0.0408**
LN_INTERNET	0.128384	0.026551	4.835358	0.0000***
LN_EXPORT_VALUE	0.475740	0.049538	9.603572	0.0000***
Cross-section fixed (dummy variables)				
R-squared	0.999221	Mean dependent var	25.66567	
Adjusted R-squared	0.998986	S.D. dependent var	1.461256	
Log-likelihood	101.9991	Hannan-Quinn criteria	-2.892670	
F-statistic	4243.560	Durbin-Watson stat	1.245517	
Prob(F-statistic)	0.000000			

Note: ***0.01 (1%), **0.05 (5%), *0.1 (10%)

From table 8 regression results, it can be formed a model of equations estimating the relationships of dependent and independent variables discussed in this research as follows :

$$\text{Ln GDP}_{it} = 15{,}03 - 0{,}21 \text{ Ln Export\_Time}_{it} - 0{,}12 \text{ Ln Customs\_Staff}_{it} + 0{,}13 \text{ Ln Internet}_{it} + 0{,}47 \text{ Ln Export\_Value}_{it} + e \dots\dots\dots(2)$$

In addition, the results of estimates can be expressed in several indicators that show the relationship between variables, among others:
1. **Coefficient of Determination (R2)**
   Based on table 8 above, the coefficient of determination (R2) value obtained by 0.99, can be interpreted as independent variables (Export Time, Customs Staff, Internet and Export Value) able to explain the GDP by 99,0%. The remaining 1,0% can be explained by other variables outside the research model.

2. **F Test (Simultan)**

    Based on table 8 obtained an F-Statistic probability value of 0.00000 which is less than α value by 5% (0.05). So the conclusion is independent variables together have significant effect on dependent variables which means that the Export Time, Customs Staff, Internet and Export Value simultaneously together affect the GDP significantly at a confidence level of 95%.

3. **Individual Significance Test (Test T)**

    Based on table 8 obtained a probability value of export time worth 0.0053 which is smaller than α of 5% (0.05) and 1% (0.01) which means export time significantly affects GDP at a confidence level of 95% and 99%. While the probability value of the number of customs staff is worth 0.0408 which is smaller than α 5% (0.05) which means the number of customs staff significantly affects GDP at a confidence level of 95%. Furthermore, the probability value of internet user is worth 0.0000 which is smaller than α of 5% (0.05) and 1% (0.01) which means internet user significantly affects GDP at a confidence level of 95% and 99%. In the end, the probability value of an export value is worth 0.0000 which is smaller than α by 5% (0.05) and 1% (0.01) which means export value significantly affects GDP at a confidence level of 95% and 99%.

4.2 Discussion

Regression results and estimates show that export time has a negative and significant impact on GDP with a coefficient value of -0.207. This shows that export time, especially long-time customs services, can stunt growth and decrease GDP by 0.207%. The timing of customs services is closely related to the speed and smooth flow of trade where customs play an important role as a trade facilitator. If the customs process is hampered and the delivery time of goods to consumers becomes late it will cause an increase in logistics costs, shipping costs, transportation costs and production costs, causing the price of goods and services to be higher. Higher prices of goods and services will decrease the competitiveness and demand for goods and services, thus affecting the level of production of these goods and services. This is in line with the research of Martincus & Graziano (2013) which states that an increase of delay time spent in customs causes a decrease in the growth rate of exports and of course, it can lower GDP. Then Liu & Yue (2013) also argue that complicated, inconsistent and uncomplicated customs procedures cause delays in delivery times and hinder production processes.

One of the factors that can support export times, especially faster customs services, is to optimize customs and excise employees. The need for an adequate amount of human resources is very important, especially in carrying out the task of inspection and service of export goods. Based on the results of the estimated number of customs and excise employees have a negative and significant impact with a coefficient value of -0.119. This shows that an increase in the number of customs and excise employees, especially in ASEAN countries, can inhibit the increase in GDP. The increase in the number of customs employees should also be accompanied by an increase in competence, integrity and professionalism in carrying out their duties and functions as the vanguard that oversees the circulation of goods both out and into the country. Increasing the number of customs and excise employees if can support the efficiency of customs processes rather than hampering processes with complicated and long-lasting bureaucracy. Transparency and handling of corruption prevention at customs agencies in carrying out customs procedures in accordance with their duties and basic functions are also very necessary to increase work productivity.

Other influential factors are the variables of internet users that capture the development of technology, automation and digitalization, especially in international trade and customs services. Internet user variables have shown a positive and significant impact with a coefficient value of 0.128 which means an increase in internet users both by trade, logistics and especially among government agencies such as customs able to support the increase in GDP by 0.128%. This is in line with research by Y. Li (2019), which states that the internet can bring information and technology, optimize labor, and other resources, increase labor productivity, and drive economic growth. The more internet users, the greater the use of the internet and export and customs services can be run digitally or online using the internet network. Given the benefits of the internet to ensure speed in communication, administration, information exchange and means of exchange of technology and knowledge, the use of the internet is highly recommended and understanding or literacy related to internet utilization, especially among customs and excise employees, needs to be improved.

The impact provided by the number of customs and excise employees and internet use shows that taking into account the development of digitalization and social restriction conditions, internet use is considered to take precedence over the increase in the number of customs and excise employees. This is because the use of the internet network to perform customs services is better able to have a positive and significant impact in facilitating trade and increasing GDP. Therefore, to answer the challenges in facilitating trade, in addition to requiring sufficient and qualified employees, customs also need to improve the quality of internet network infrastructure and prioritize service innovation through the construction of customs service applications that can be accessed online anywhere and anytime. Application development such as the Indonesian National Single Window (INSW) system managed by the Ministry of Finance, National Logistics Ecosystem (NLE) and Customs Excise Information System and Automation (CEISA) managed by customs is very appropriate and should be supported by strong internet network connectivity.

The value of exports has a positive and significant impact on the increase in GDP. This is in accordance with the theory because one of the main components in the formation of a country's GDP is through export activities. An increase in the value of exports will cause an increase in GDP by 0.475%. These results are in line with previous research by Bakari (2017) which states that export activities have a positive and significant impact on economic growth and also Sultanuzzaman et al. (2019) who analyzed several countries in Asia shows that export activities have a very decisive impact on sustainable economic growth. Countries that increase exports and technology development will be able to optimize their economic growth. Therefore, ASEAN governments need to direct policies more to export goods and services than imports of course with quality and prices that can compete internationally. To ensure optimal export value, export actors need to optimize the added value of goods and services traded with the support of good logistics performance to reduce production costs, shipping costs and transportation costs to improve the ASEAN economy.

V. Conclusion

5.1 Conclusion

This research aims to find out the impact of logistics performance of the dimensions of customs efficiency on the ASEAN economy. Customs efficiency can be measured from the time of customs services, especially export times where export time that takes longer can hamper GDP growth. The number of customs and excise employees and internet utilization indicated by the number of internet users showed a significant impact on the economy but internet use was more significant and had a positive impact than the number of customs

employees. This shows that during Industry 4.0, digitalization and social restrictions, the need for internet utilization takes precedence over the increase in the number of employees. The development of internet-based applications and the strengthening of internet infrastructure can optimize the performance of customs in carrying out their duties. All these variables are needed to support the increase in export value because the increase in export value has a positive impact on increasing GDP. ASEAN governments need to focus on export policies and improve customs services with the use of internet networks to boost the ASEAN economy.

5.2 Suggestion

For further research should be able to explore more deeply explore the role of other dimensions of logistics performance in improving the ASEAN economy. In addition, discuss other forms of innovation such as artificial intelligence and other elements of information and communication technology to be able to better understand the role of technological developments to support customs performance as a trade facilitator in a better direction.

5.3 Acknowledgement

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