



# Impact National Strategic Program Transportation Sector On Export Performance In Indonesia

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## Abstract

The study aims to identify the impact of transport infrastructure development policies on Indonesian export performance. The case on this study is the National Strategic Program (PSN) of the transport sector, which has begun to implemented in stages over time and between different locations since 2017. The study also compares the impact of policy between regions on Java Island and regions outside Java Island. By using the Callaway and Sant'Anna Difference-in-differences (CSDID) method, the study analysed the impact of policy interventions on the PSN province (province in which there is a PSN transport sector) compared to the Non PSN Province (Province in which there is no PSN Transport sector). The results of the study found that after the intervention of policy and the availability of international ports, the Province of PSN has a 33,9% higher export performance than the Non-PSN Province. The research also found that policy interventions had a significant impact partially in the region outside of Java. The research also found that policy interventions only partially had a significant impact in the region outside of Java, because the existence of policy intervention and the availability of international ports, the PSN Province outside Java Island had an export performance of 59,5% higher than the Non-PSN Province.

## INTRODUCTION

A more productive company would be more brave to enter the international market, and otherwise a less productive one would restrict its activity only to the domestic market (Melitz, 2003). It's called the selection effect, where companies with higher productivity will be able to compete and thrive globally through export activities. In addition, the study also found the dynamic effects of international trade on corporate behaviour, as well as the positive impact on the overall performance of the country's economy.

The balance of foreign trade, whether exports or imports, plays an important role in the income of a country. Demirbilek & Civelek (2022) revealed that the volume and ratio of foreign trade coverage had a positive impact on the increasing in gross domestic product per capita. Foreign trade, especially exports, also contribute not only to economic development, but also to social and human development (Jurado-Gonzalez & Gómez-Barroso, 2022).

Now, the countries in the world are striving to expand their respective foreign trade capacity. Inter-country then work together to overcome tariff barriers so that the flow of goods and services between countries is accelerated. An example of a form of cooperation between countries is through the ASEAN Free Trade Agreement (AFTA), which is a trade facilitation to overcome tariff barriers between ASEAN members and other non-ASEAN countries that are trading partners (ASEAN, 2023). Through the participation of Indonesia in the facilitation of trade, it is expected to further streamline inter-country trade as well as improve Indonesian export performance.

As a country with the largest population, territory, cultural diversity and natural resources in Southeast Asia, Indonesia has a strategic role in global trade. Since the beginning of increasing fiscal decentralization, Indonesia has continuously improved its macroeconomic and developmental policies in terms of trade, and proved to be the eighth largest economy in the world in 2016, and is projected to become the world's fourth largest economy by 2050 (OECD, 2018). Indonesia is a strategic partner of world trade, so it is important to maintain and enhance engagement in the global economy.

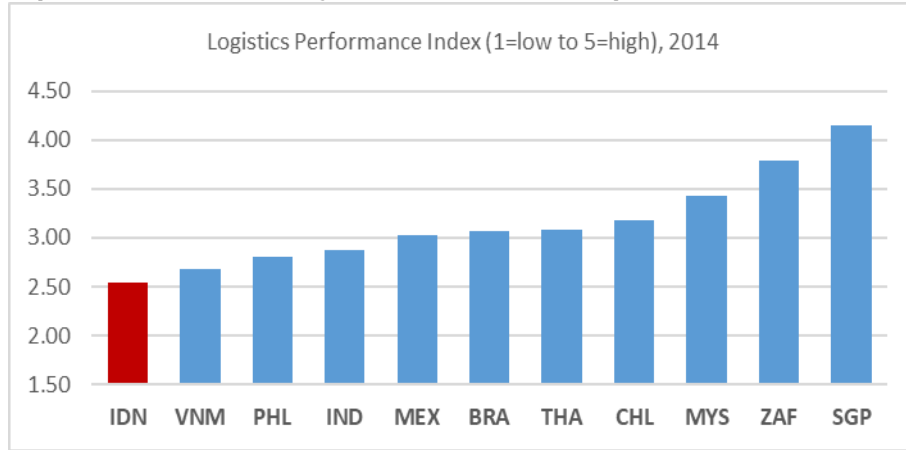
The Indonesian Finance Minister also revealed that in order for a country to compete in the global economy, as well as to be able to earn high incomes and free from the middle-income trap, it must be capable of building competitiveness and productivity in global markets (Kementerian Keuangan, 2023). Such productivity and competitiveness are reflected in export and import transactions of both services and goods, which come not only from the domestic economy but also benefit the world economy. In addition to facilitating trade in cooperation with other countries, building productivity and competitiveness in the global market also requires other trade facilitations, such as the availability of adequate transport infrastructure to support connectivity, and the movement of goods.

The study of the relationship between the availability of transport infrastructure and economic growth is a matter of interest to many researchers, because the sustainable economic growth compares directly with the provision of adequate infrastructure. As stated by Pindyck and Rubinfeld (2018), infrastructure development is one of government interventions to improve social well-being.

Pradhan & Bagchi (2013) research also supports the importance of availability of adequate transport infrastructure, because availability of transportation infrastructure affects two things, namely resource mobilization, and increased productivity. In theory, the availability of infrastructure is a prerequisite for goods and services produced by one economic agent to be effectively accepted by another economic agent, as well as for regional disparities to be reduced.

The current condition of Indonesia's transport infrastructure is still inadequate and potentially hindering growth, as a result of the Asian financial crisis in 1990s. As shown in Figure 1 the quality of the infrastructure that supports trade in Indonesia is still very low when compared to other countries. In 2014, out of 157 countries in the world, Indonesia's scored an infrastructure was of 2.54 and was ranked 85th worldwide, while in the same region Singapore scored 4.15 and is ranked 2nd worldwide (OECD, 2015). To overcome this, infrastructure improvement efforts have begun to be carried out steadily since President Joko Widodo's administration. Furthermore, the procurement of infrastructure is a priority set out in the medium-term development plan. (RPJMN).

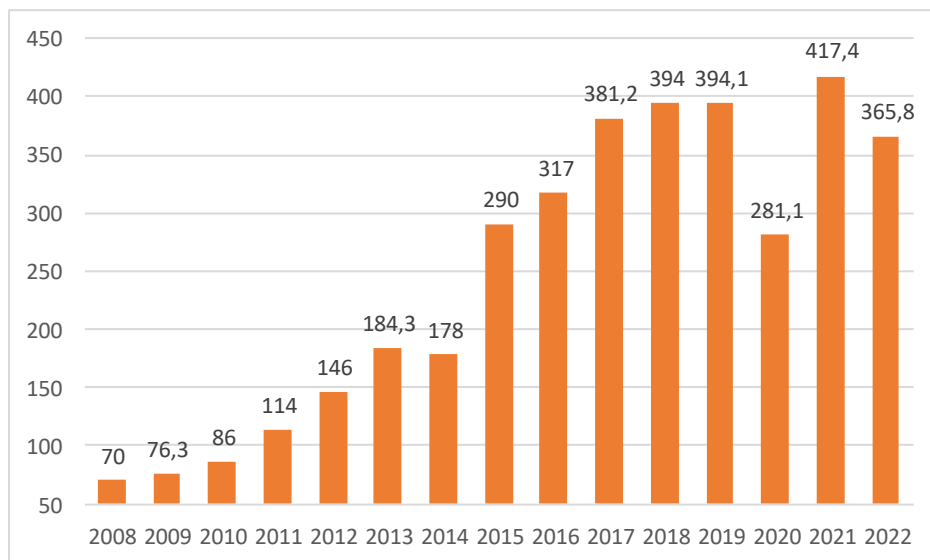
**Graphics 1 Rate of Quality on Indonesian Transportation Infrastructure**



Source : OECD, 2015.

The government expenditure of President Joko Widodo in building infrastructure are seen in the allocation of infrastructure budgets that are increasing every year, as shown in Graph 1.2. In the 2020-2024 JPMN, which also includes the National Strategic Programme (PSN), Indonesian infrastructure expenditure projections amount to Rs. 6,445 trillion (Government of Indonesia, 2020), road infrastructure construction that began from 2014 to 2020 has increased the length of roads in Indonesia by 30.613 km (BPS, 2022). In 2020-2024, there are targets for the development of new national roads of 3,000 km, the construction of new and or operating road for 2,500 km, and the improvement of national road conditions by 97% aimed at supporting the economic activity of the people.

**Graphics 2 Infrastructure Expenditure Budgeting in Indonesia 2008-2022**



Source : Ministry of Finance, 2022, analysis data.

Transportation infrastructure also plays an important role in encourage post-Covid-19 economic recovery toward increasingly inclusive economic growth (Ministry of Finance, 2022). Covid-19 caused many global supply chains have been blocked, so infrastructure development has the potential to boost local and regional competitiveness in the long term (Ministry of Finance, 2022). By increasing development activity and employment, investments in high-quality infrastructure can boost economic output in the short term. Rehman et al. (2020) explain that

the availability of infrastructure had a positive impact in encourage exports, and a negative impact on trade deficits in South Asia.

The PSN, launched in 2016, aims to address the infrastructure deficit in Indonesia and the decline in investment due to the global economic crisis of 2008-2012. During the global economic crisis, Indonesia's Infrastructure Stock accounted for only 38% of national GDP, while the developed countries account for 70% of GDP (Kemenko Bidang Perekonomian, 2023). In accordance with Presidential Decree No. 75 of 2014 on Accelerating the Provision of Priority Infrastructure as last amended by Press No. 58 of 2017 on Accelerating the Implementation of National Strategic Projects, and further regulated by Economic Sector Permenko No. 5 of 2017 concerning Acceleration of the Preparation of Infrastructure, priority as last modified by the Economic Area Permenco No. 21 of 2022 on Changing the List of Strategic National Projecte, there are 14 sectors included in the PSN list, with a total of 210 projects and 12 programmes. As for the total of 91 projects in the transport sector, with details namely Road and bridge 53 projects, Railway 14 projects, Airports 8 projects, and Ports 16 projects. The eligibility of a project that is included in the PSN is determined by the Priority Infrastructure Provision Acceleration Committee (KPPIP), which has been formed since 2014 to overcome the bottleneck and become a point of contact in the coordination of PSN and priority projects (Kemenko Bidang Perekonomian, 2023). By the end of 2022, there are a total of 21 transportation sector PSNs that have been completed or in progressive operation. The details are that in 2017 there are two projects that have completed the construction, then in 2018 as many as one project, in 2019 as much as two projects, in 2020 as many five projects, 2021 as many projects, and in 2022 as 6 projects. With regard to the type and territory of the transport sector that has completed its construction or operation as outlined in Appendix 1. A number of such transport sector PSNs are built to encourage economic growth, one of which can be through export activities to improve trade balance. As the studies and backgrounds mentioned above, this study attempts to explain the impact of transport infrastructure development, using a case study of the National Strategic Programme of the transport sector to the outcome of export value. As for the previous research in Indonesia is limited to measuring the availability of infrastructure for economic growth, so there is no study specifically dealing with the impact or improvement of the infrastructure of transport on export performance. If there is an improvement in export performance, then there is a possible impact on the occurrence of economic growth.

The study uses the analysis of export value trends before and after the PSN policy, to design a quasi-experimental evaluation of the impact of the transport sector's PSN policies on Indonesia's export performance, at the provincial level during the period from 2008 to 2022. The method used is staggered difference-in-differences (Staggered DiD) to measure the magnitude of changes in Indonesian export performance that are likely to be caused by changes in transport infrastructure conditions, with periods of occurrence of different policies between times. The analysis of the impact of this policy at the provincial level is expected to contribute in two ways, the first is to provide evidence of the existence or absence of the influence of transport infrastructure development policy on foreign trade in particular Indonesian exports, given the massive budget and infrastructure construction since the administration of President Joko Widodo. Second, this analysis tries to provide reference or feedback to ministries or policy makers, which relates to the effectiveness of policy implementation.

## LITERATURE REVIEW

The New Trade Theory revealed by Krugman reveals that bilateral trade between two countries can occur even though both have similar advantages or production structures (Krugman, 2008). According to the theory, by scaling up the economy, product differentiation, and innovation in trade, a country will be able to increase their profits. This theory emphasizes the development of international trade, which will provide an increasingly diverse choice of

goods and services, as well as at lower costs. According to Salvatore (2013), transnational trade or globalization is inevitable. This is because each country is competing in improving efficiency and production, so it requires raw materials or technology from other countries. Nowadays, globalization demands ever better governance from every country involved in world trade.

Blanchard (2017) also stated that a country's import and export activities can influence gross domestic product (GDP), exchange rates, inflation rates, and interest rates. If there are conditions which too much imports are relative to exports, then a country's trade balance can be distorted and cause currencies to be devalued. The value of a currency is one of the determining factors in the success of a country's economy, and has a significant influence on economic activity.

The following are the determinans of country's net exports, imports, and exports according to (Mankiw, 2016), which include: 1) consumer appetite for domestic and foreign products, 2) prices of goods in and abroad, 3) rates that determine the amount of domestic currency needed to buy foreign currency, 4) consumer income at home and overseas, 5) transportation costs between countries; and 6) government policy on international trade. When the value of a country's currency weakens, it will have an impact on higher exports and causes the imports to become more expensive. Import price disparities over previous periods will lead to inflation, as well as a major influence on rising input costs such as commodity prices and wages.

## METHODS

This research is quantitative. The data in this study was balanced data panel of 33 provinces in Indonesia during the period 2008 to 2022, so the total number of observations is 495. The study aims to analyze the impact of the PSN of the transport sector on export performance. By using quasi-experiments based on the DiD method, panel data is divided into two groups, namely treatment group and control group. The group division is aimed at obtaining appropriate counterfactual to estimate the causal effect of an intervention. In addition to causal effects, DiD methods can also reduce endogeneity problems such as the conditional independence assumption (CIA) that is difficult to meet when using regular regression. The estimated impact of the PSN transport sector in this study has the following model. 
$$\text{Ineksportit} = \beta_0 + \beta_1 \text{trprovit} + \beta_2 \text{first\_treatit} + \beta_3 \text{trprovit} \times \text{first\_treatit} + \sum \beta_4 \text{tinftit} + \sum \beta_5 \text{industryit} + \sum \beta_6 \text{ekonit} + \sum \beta_7 \text{intportit} + \varepsilon_{it}$$

This assumption requires that if there is no intervention, then the difference between the control group and the treatment group must be constant over time. the outcomes of both groups must have the same pattern in the period prior to policy intervention.

The easiest way to test a parallel trend assumption is to use a graph that compares the two groups. in addition to the did method, the application used in this study also uses the standard cluster error method through the variance estimator and the wildbootstrap on the analysis unit. this method is used to address the problem of autocorrelation and heterogeneity, so the classical assumption test is no longer needed. (wooldridge et al., 2010).

## RESULTS

### Parallel Trend Assumption

Before estimating the impact of PSN transport sector on export performance through staggered DiD method, parallel trend assumption testing is carried out. The test was conducted to compare whether there were differences in outcome trends between the period prior to the policy being implemented and the period after the policy was implemented. When the parallel trend test is significant, then it can be acknowledged that the presence of policy intervention does have an impact on the outcome. Test parallel trends based on the Callaway and Sant'Anna Difference-in-differences (CSDID) method, as shown in the following table:

**Tabel 1 Event Study: Dynamic Effects Psn Transportation Sector And Export Performance**

	Coef.(1)		Coef. (1)
Pre_avg	0.0887**	T-3	-0.0533
	(3.15)		(-0.85)
Post_avg	0.275***	T-2	0.143*
	(5.18)		(2.01)
T-10	-0.121	T-1	0.247
	(-1.78)		(1.36)
T-9	0.266***	T+0	0.0293
	(3.98)		(0.60)
T-8	-0.0617	T+1	0.161
	(-0.44)		(0.98)
T-7	0.217	T+2	0.318***
	(1.10)		(4.73)
T-6	0.216***	T+3	0.238***
	(5.32)		(4.41)
T-5	0.176	T+4	0.631***
	(1.31)		(5.65)
T-4	-0.141		
	(-1.50)		
N	495		
Chi2(51)	5.453		
p-value	0.0000		

t statistics in parentheses

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Source: Stata analysis 17, 2023

Results in Table 1. contain coefficients that measure the dynamic effects of events prior to intervention versus subsequent. Based on the results, it is known that the value of the independent variable group coefficient on export performance prior to policy (Pre\_avg) is 0,0887 significant at the level of 1%, and after policy intervention (Post\_Avg) increased to 0,275 significant at level of 0,1%.

This represents a change in the outcome between the period prior to and post-policy, in which due to policy interventions the export value of PSN Provincial group increased by 0,1863 compared to Non-PSN Provincial Group. The pre-treatment coefficient value has also qualified for a parallel trend assumption, where it has a significant value and the p-value value is close to or equal to zero. When the p-value is closer to zero, it can be interpreted as a difference between data groups, i.e. there is a difference in Pre avg compared to Post\_avg.

### Impact Analysis Of PSN Policy On Transportation Sector

In order to measure the impact of the transport sector PSN policy on exports occurring over different periods of time between the analysis units, the regression estimate used is the CSDID method (Callaway & Sant'Anna, 2021) with implementation (stabilized) IPW DiD estimator (Abadie, 2005; Callaway & Sant'Anna, 2021). The use of DiD analysis potentially faces selectivity problems, namely the possibility that the treated group and the control group have different initial characteristics, which can lead to inaccurate impact estimates. In order to overcome the bias of selectivity, the CSDID uses the method of inverse probability weighting (IPW). Through the IPW, the problem of selectivity is solved by giving the reverse weight based on the inverse probability of policy intervention. In other words, the groups that had a high probability of being treated were given lower weights, and the control groups were given higher weights.

The predictor or variable of interest in this study is the interaction between the existence of the transport sector PSN policy in a region with the year of policy intervention. In addition, it also uses several control variables such as characteristics of transportation infrastructure, industrial characteristics in the region, as well as economic and social characteristic of the region. The estimated average effect of interactions between  $trprovit \times first\_treatite$  can be seen in Table 2 and Figure 2 below.

**Table 2 Average Treatment Effect On Treated PSN's Policy Transportation Sector On Export Performance**

	Coef. (1)	with international port Coef. (2)
ATT	0,223***	0,339***
	(3,31)	(4,27)
N	495	420

t statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

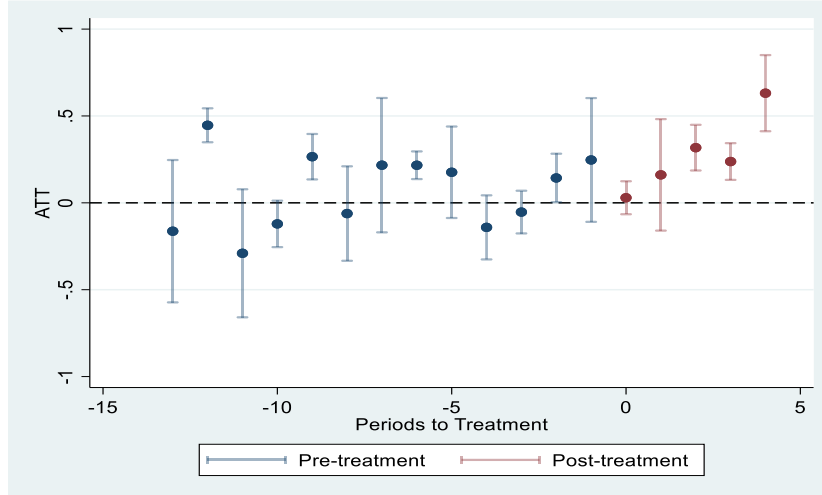
Source: Stata analysis 17, 2023

The CSDID regression result shown by the average treatment effect on treated (ATT) value in Table 2. shows a positive and significant relationship between the PSN policy of the transport sector towards export performance. Without the control variable or interaction of international ports, the ATT coefficient is 0,223 and significant at the level of 0,1%. This shows that there is a significant change and simply due to the intervention of PSN's policy in the transportation sector itself, and not because of the interaction with other policies.

Furthermore, when the model estimate is added to the control variable or interaction of the type of international port to address the possibility of bias due to the existence of other transport infrastructure that potentially support export activities in a province, the ATT coefficient rises to 0,339 and is significant at the level of 0,1%. The results indicate that it is not enough to have only the transport sector PSN, but a region also needs interconnected port to be able to improve export performance.

With the presence of the international port, then the PSN transport sector will more doubled its impact on exports. After the intervention of the policy, there was an impact on the value of exports of the province of PSN that is 33,9% higher than non-PSN province. Based on this, it can be concluded that the presence of policy intervention such as PSN infrastructure sector has a positive and significant impact on increased export performance.

**Figure 3 ATT PSN Policy Of Transportation Sector And Export Performance**



Source: Stata Analysis 17, 2023

Figure 3. shows that before the intervention of the p-value value on the ATT coefficient its magnitude is close to zero. This indicates that there is an outcome difference between the pre\_treatment condition compared to the post\_treating condition, so that it can then be said that the parallel trend assumption has been met. Post treatment also shows values above zero or up, which means that there is a positive impact of policy intervention.

**Table 3 ATT By Calendar Period**

	Coef. (1)
Calendar-Study Average	0.217***
	(7.84)
T2017	0.169***
	(10.16)
T2018	0.221***
	(11.42)
T2019	-0.107*
	(-2.07)
T2020	0.0516
	(0.80)
T2021	0.296***
	(3.47)
T2022	0.673***
	(4.59)
N	495

t statistics in parentheses

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Source: Stata analysis 17, 2023

Next, Table 2,3 shows an estimated average treatment based on each policy intervention period. On average, the PSN of the transport sector has a positive impact on export performance and is significant at the level of 0,1%. During the six policy intervention periods from 2017 to 2022, there was a statistically significant positive correlation between the PN of transport sector with export performance in 2017, 2018, 2021 and 2022.



In 2019, there was negative and significant correlations at 5%, and a negative but non-significant correlated in 2020. The negative correlate is due to the decline in export value that occurred in 2019 to 2020, where there is a poor global economic situation in 2019 and the Covid-19 pandemic in 2020, thereby affecting the declining foreign trade. In Table 3 there is also the value of the ATT coefficient in each year of policy intervention, where the initial period of intervention compared to the final period shows an increase. The ATT value in the early period of T2017 policy interventions is 0.169 and in the last intervention period studied T2022 is 0.673 which describes that the transport sector PSN policy has an increasing impact over time, *ceteris paribus*. The change also shows that the existence of the policy PSN transport sector has a long-term impact that will have a greater impact in the future after the policy. This is because infrastructure projects, including the transport sector, are long-term investments whose benefits are increasing and can only be felt some time later (Belli et al., 2001).

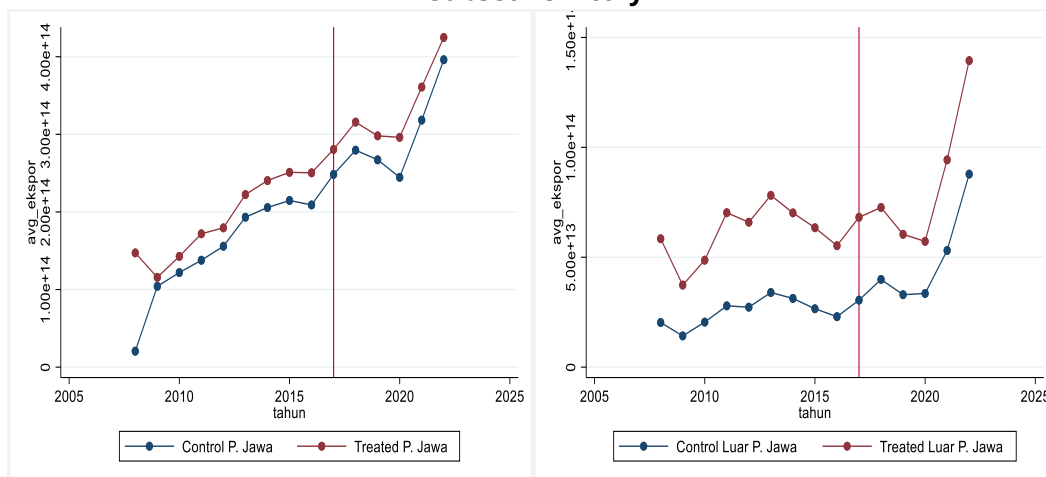
**Policy Impact Analysis Based On Subset Territory**

The testing based on the division of territory is carried out as a rigidity or resistance test of the estimated model. In addition, tests were conducted to find out how the PSN policy of the transport sector relates to export performance, in different regions of Indonesia. The measurement was done by dividing the subset of analytical units by provinces in Java Island compared to provinces outside Java Island (Kis-Katos & Sparrow, 2015).

**Parallel Trend Assumption Based On Subset Territory**

Based on the region, the parallel trend chart can also be seen based on the division of the analytical units between Java and beyond Java. Figure 4.5 shows the distribution of the analysis units among Java and outside Java. In the chart, between the two groups, treated (PSN Province) and control (Non PSN Province), both in Java as well as outside Java, there is a similar trend prior to policy intervention. Then in Figure 4.6 it is seen that after policy interventions, there are changes in the outcome where the slope is higher or steeper in the treated groups in the areas outside of Java, whereas in Java it tends to remain.

**Figure 4 Trend of Export Performance PSN Province And Non-PSN Province Based On Subset Territory**



Source: Stata analysis 17, 2023

**Average Treatment Effect Based On Subset Territory**

Regression estimates based on a subset of regions are also done using the CSDID method. Controls such as transport infrastructure characteristics, regional industrial characteristics as well as economic and social characteristics of the region were reused in the estimates. Results of average treatment effect on treated based on area distribution as shown in Table 4 below.

**Table 4 ATT PSN Policy On Transportation Sector On Export Performance Based On Subset Territory**

			with international port	
	Java Island	Outside Java Island	Java Island	Outside Java Island
	(1)	(2)	(3)	(4)
	Coef.	Coef.	Coef.	Coef.
ATT	0.861 (1.33)	0.439** (2.63)	0.861 (1.33)	0.595* (2.49)
N	90	405	90	330
chi2	0.0000	2.012e+11	0.0000	5.815e+09
p-value	1.0000	0.0000	1.0000	0.0000

t statistics in parentheses

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

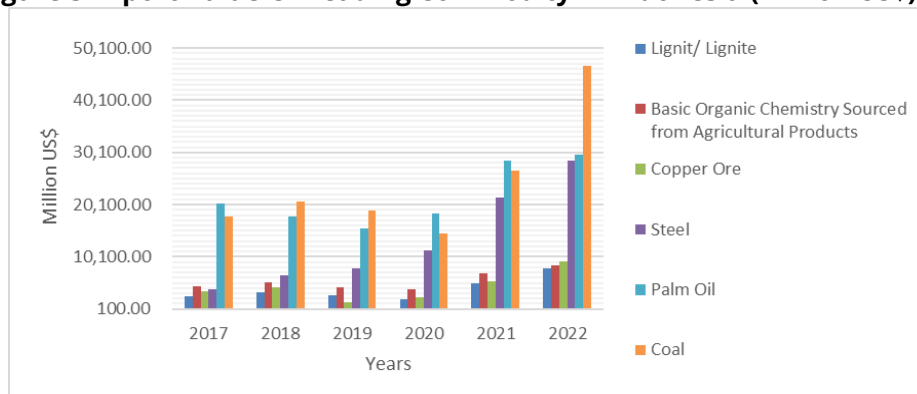
Source: Stata analysis 17, 2023

Based on the results in Table 4.6, it is known that there is a positive relationship between the transport sector's PSN policy towards export performance in the territory outside of Java and statistically significant, while in the region of Java it is not statistically significant. By adding the variable of control or interaction of whether or not there are ports or international airports (international ports) to address the possibility of bias due to the presence of other transport infrastructure. There has been an increase in the value of the ATT coefficient in the area outside of Java from a significant 0.439 at the level of 1% to a significant 0.595 at a level of 5%. This shows that outside Java because of the policy intervention has an impact on the export performance of PSN Province which is 59,5% higher than Non-PSN Province. Thus it can be concluded that the existence of policy intervention in the transport sector has an impact on increased export performance, partially in the territory outside of Java Island.

**DISCUSSION**

BPS noted that Indonesian export value trends are influenced by the growth of non-migas exports that are larger than migas exports. (BPS, 2022). By type, mineral fuels or coal are the largest non-migas commodity of Indonesia, which in 2022 has a 19.93% share in exports. (Kementerian Perdagangan, 2023). Indonesia's next largest commodity is vegetable fat and coconut oil, which will account for 12.74% of exports by 2022. The leading export commodity is dominated by the region outside Java, where Indonesia's largest coal mine is in Kalimantan, and the largest palm coconut plantation is in Sumatra as shown in Figure 4.7 and more is shown in Appendix 9.

**Figure 5 Export Value Of Leading Commodity In Indonesia (Million US\$)**



Source : Statistic Center Agency Analysis, 2022

The large volume of commodity exports originating outside Java should be supported by the availability of adequate transportation infrastructure. The availability of the PSN development of the transport sector in the region outside Java will have an impact on the movement of commodities leading exports that are increasingly rapid and with increasingly low transport costs. Thus, the transport infrastructure in the area outside Java has a significant influence on the improvement of export performance.

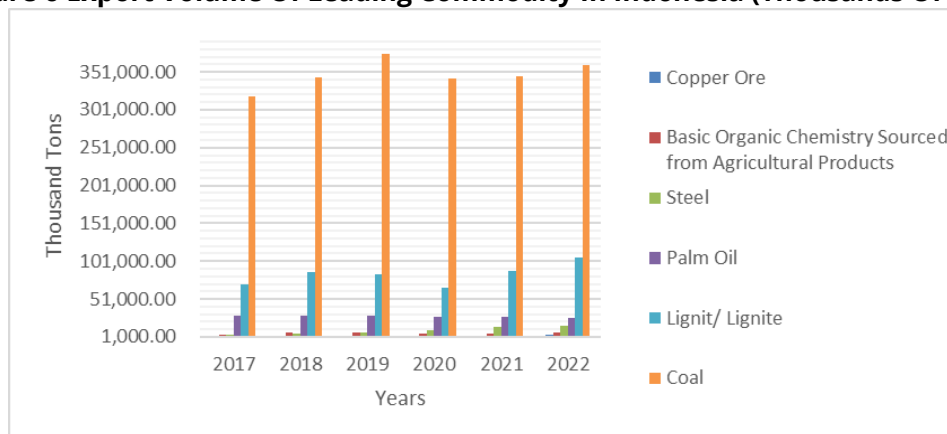
Based on the estimates in Table 4.6, the policy intervention in Java Island has no significant impact. This is due to the non-fulfillment of the assumption of parallel trend comparison outcome of PSN Province with Non-PSN Province of Java in the course of 2018 as shown in Graph 4.6. Although there is a greater amount of transportation infrastructure PSNs with higher investment value compared to outside Java, it does not have a significant impact on export performance.

Nationally, Java Island is occupied by 57% of the Indonesian population (BPIW Kemen-PUPR, 2017). So now the development of the PSN transportation sector in Java Island has a tendency not only for trade, but also to improve the connectivity of the population.

Referring to the comparison of average treatment effects based on the region, as well as the volume of exports in the detailed Graph 4.8 is shown in Appendix 10, Indonesian export commodities are dominated by Coal, Lignit, and Sawit Coconut Oil that are increasing every year. It briefly indicates that Indonesian transportation infrastructure development tends to be used to transport raw goods rather than processed goods. The condition also means that the region outside Java Island has a higher level of transportation infrastructure needs to support export performance.

This is as Panggarti et al., (2022) suggests that infrastructure affects the level of inequality between islands, which requires policy intervention. Transportation infrastructure in Java is more adequate than outside Java, so policy intervention needs to be given priority outside Java.

**Figure 6 Export Volume Of Leading Commodity In Indonesia (Thousands Of Tons)**



Source : Statistic Center Agency Analysis, 2022

Further related to the regression estimates in Java Island, it is known that the top export commodity originating from Java Island is the processing industry. These industries, especially machinery and equipment, are produced by West Java as the largest exporting province in 2022 (BPS, 2022).

Despite being the largest export contributor in the processing industry, until the end of 2022 in the West Java province there was no intervention of the transport sector PSN policy. The condition shows that despite the absence of transport infrastructure policy intervention, the province located on the island of Java is able to export extensively. The availability of transportation infrastructure in the Java region is far more adequate than in the outside of Java to support foreign trade.

## CONCLUSION

The National Strategic Programme (NSP) of the transportation sector has a positive and significant link with the improvement of export performance at the overall national level. With the existence of such policy, the export performance in the provinces with the NSP transport sector is higher by 33.9% compared to the province without the NFP transport sector.

The transport sector PSN policy can help remote areas, where the influence on exports only significantly affects outside Java, and does not significantly affect Java. Outside Java, the difference in export performance between provinces that have PSN in the transport sector and those that do not have it is 43.9%, and there is an increase of export performance to 59.5% when there are international ports.

## SUGGESTION

1. The transport sector has a good impact, so this programme needs to be developed. To further boost export activities, then the government can prioritize the improvement and acceleration of the transport sector PSN outside of Java Island.
2. The transport sector has a good impact, so this programme needs to be developed. To further boost export activities, then the government can prioritize the improvement and acceleration of the transport sector PSN outside of Java Island.
3. Infrastructure projects selection as roads that will enhance access and quality to ports, as well as enhancing capacity and facilities of ports that support as international hubs.

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