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THE IMPACT OF FISCAL INCENTIVES AND MACROECONOMIC CONDITIONS ON EXPORT PERFORMANCE: EVIDENCE FROM BONDED ZONE COMPANIES IN INDONESIA

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ABSTRACT

Research Originality — This study provides empirical novelty by examining manufacturing companies that exclusively receive fiscal incentives in bonded zones, together with key macroeconomic variables over the 2019-2024 period, an area that has received limited attention in prior studies on export performance in Indonesia.

Research Objective — This study aims to analyze the effects of bonded zone fiscal incentives and key macroeconomic factors on the export performance of manufacturing firms in Indonesia.

Research Methods — This study employs a quantitative approach using data obtained from the DGCE database and other relevant sources, with samples selected through purposive sampling from manufacturing firms receiving bonded zone fiscal incentives over the 2019-2024 period. The analysis applies panel data regression techniques to test the proposed hypotheses.

Empirical Results — The results show that fiscal incentives improve companies' export performance. The analysis also indicates that inflation rates have a positive effect on export performance, consistent with findings from prior studies.

Implications — In addition, the policymakers could use this study to evaluate the effectiveness of fiscal incentives comprehensively, with a focus on the bonded zone policies for long-term implementation.

Keywords: Exchange Rates; Export Performance; Fiscal Incentives; Inflation Rates; Manufacturing Enterprises.

JEL Classification: E0, E6, H0, H2, H3, L5, L60

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INTRODUCTION

The Minister of Finance is examining the total economic growth in Indonesia, which has shown a positive trend. However, there are high risks and uncertainties that threaten the international trade performance and fiscal policy decisions in the country (Kementerian Keuangan, 2025a). Despite showing a positive trend, the global economic growth in 2022 had decreased compared to 2023, from 3.1% to 2.7%. The site id.tradingeconomics.com showed that the global growth in 2024 had increased by 3.2%, followed by Indonesia by 5% on a year-on-year basis. The following is the annual gross domestic product (GDP) trend for the period of 2019 to 2024, as shown in Figure 1.

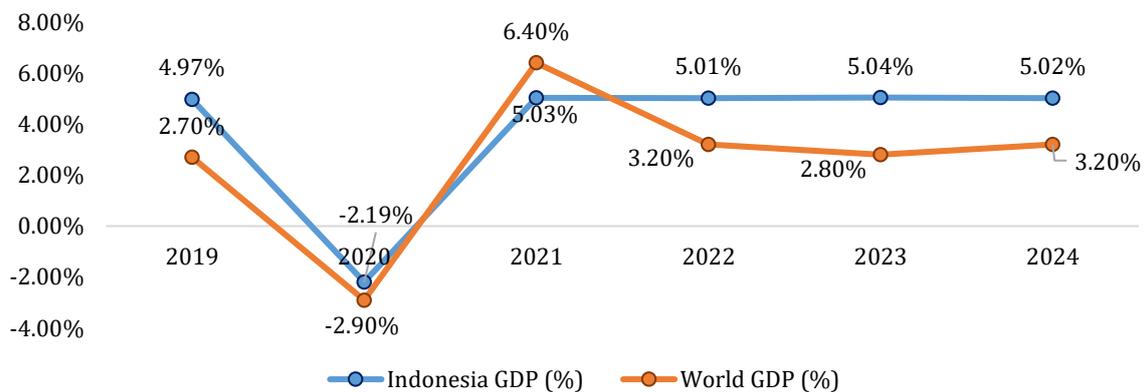
In recent years, Indonesia's economic development has increased significantly (Prahaski & Ibrahim, 2023), and the country has continued to strive to increase the economic growth during global conflicts and uncertainties, one of which was through international trade. International trade makes a crucial contribution to the economy, as it allows the country to expand its market and increase access to various products and services (Suryanto & Kurniati, 2022). It further provides an opportunity to lift national income, capital transactions, and employment opportunities (Fitriani, 2019). An increase will also lead to a rise in foreign exchange reserves. Indonesia's foreign exchange for imports and exports experienced an upward trend from 2019 to 2024, although the value of foreign exchange for imports and exports decreased in 2023 compared to 2022 (Badan Pusat Statistik, 2025). The following is the trend of foreign exchange for imports and exports during the period of 2019 to 2024, as shown in Figure 2.

Based on Figure 1, the most significant decline in GDP occurred in 2020, and was largely caused by the COVID-19 pandemic. The pandemic forced countries around the world to restrict economic activities. Consequently, economic growth slumped. In 2021, economic activity began to recover, and this trend of increasing economic growth continued until 2023. The lowest foreign exchange for imports and exports was in 2020, amounting to USD 141,569 million and USD 163,192 million due to the COVID-19 pandemic. In 2021 and 2022, the foreign exchange for imports increased by 38.58% and 21.03%, respectively, while the foreign exchange for exports increased by 41.92% and 26.03%, respectively. The increase in the foreign exchange for imports and exports in 2021 was due to the Indonesian government's efforts to deal with the pandemic through the national economic recovery (PEN) in various economic sectors. The Ministry of Finance participated in PEN efforts by increasing the provision of fiscal incentives, including in the customs sector. However, the decline of the import and export foreign exchange in 2023 was due to geopolitical conflicts in several countries, such as Middle Eastern countries and the Russia-Ukraine conflict, causing global supply chains to be disrupted.

APPLICATIONS FOR PRACTICE

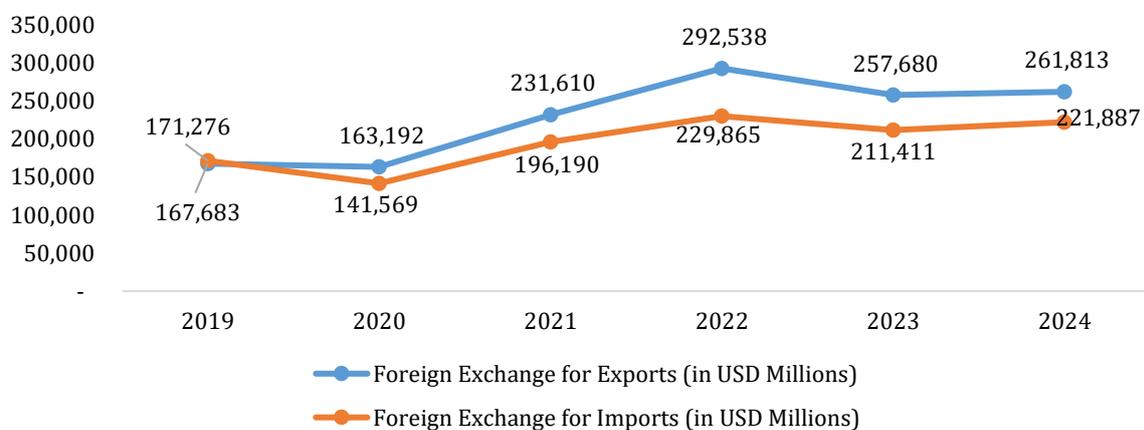
- The provision of the fiscal incentive aims to improve the export performance of manufacturing sector. This study proved that the fiscal incentives could enhance the export performance.
- The companies had to evaluate and apply many strategies to face the uncertainties. For example, the fluctuation of the exchange rates and the inflation rates that could affect the price of exported goods and services.
- The Government should evaluate continuously and keep the effectiveness of the fiscal incentives to generate the targeted benefits.
- Furthermore, the Government also should pay attention about how to control inflation rates because inflation policy decision could affect the export performance.

Figure 1 Annual GDP Trend (%), 2019-2024



Source: www.data.worldbank.org & id.tradingeconomics.com (2025)

Figure 2 Trends in Foreign Exchange Imports and Exports (in USD millions), 2019-2024

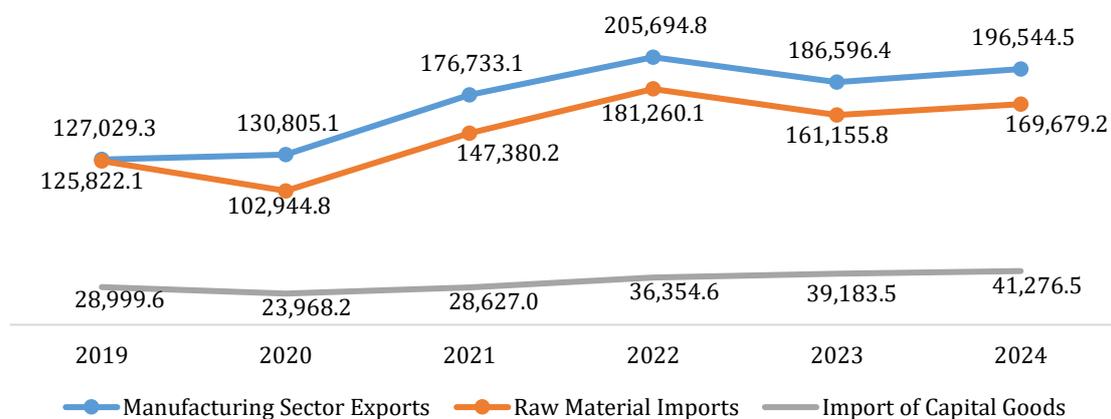


Source: Badan Pusat Statistik (2025)

Yu et al. (2018) explained that developing countries had to motivate industrialization to stimulate economic growth. A high-income country could be achieved by developing and realizing the manufacturing sector, economic transformation, and further industrialization (United Nations, 2024). Moreover, the development of the manufacturing sector can create jobs with better quality by down-streaming natural resources (SDA) to get value added and substitution of imports. Nguyen, (2024) also expounded an alternative to developing and support industrialization by exporting industrial products.

The Minister of Industry stated that the manufacturing sector had made a consistent contribution to developing national export performance. Subsequently, the export performance contributed 72.24% and 74.25% of total national exports in 2023 and 2024, respectively. The value added originated from processing raw materials to produce higher-value goods. According to the data from the Ministry of Trade (satudata.kemendag.go.id), Figure 3 shows the trends in raw material imports, capital goods imports, and export performance of the manufacturing sector from 2019 to 2024.

Figure 3 Trends in Raw Material Imports, Capital Goods Imports, and Manufacturing Sector Export Performance (USD Million), 2019-2024



Source: Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi (2024)

Based on Figure 3, the imports of raw materials and the export performance of the manufacturing sector fluctuated from 2019 to 2024 with an upward trend. In 2020, the imports of raw materials declined due to policy restrictions during the pandemic. Imports of raw materials showed an upward trend in 2021 and 2022 before experiencing a decline in 2023. This was due to global uncertainties and the heating up of the geopolitical conflicts. The highest export performance of the manufacturing sector during the 2019-2024 period was achieved in 2022, reaching USD 205,694.8 million. The figure showed an improvement in the export performance after the downturn due to the pandemic from 2019 to 2021.

Shi et al., (2025) further explained that domestic products would not spontaneously turn into export quality, as they would need government intervention. To improve and make Indonesia's economy more resilient, the government provides fiscal incentives in the customs sector, specifically in the manufacturing sector, through the provision of facilities for deferring import duties (BM) and no taxes for imports (PDRI), known as bonded zone facilities. The provision of the incentives is intended to stimulate the manufacturing sector to produce goods and services with value added, specifically by motivating the export performance. Ratiyah et al. (2021) stated that the provision of fiscal incentives through the bonded zone facilities could facilitate cash flow for the manufacturing sector to run its business without any obstacles in international trade.

The provision of the bonded zone facilities has made a positive contribution to the realization of exports of companies receiving the facilities to national exports. In 2023, the bonded zone facilities contributed 30.39% of the national exports. The amount of contribution has decreased compared to 2022 by 35.61% (Direktorat Jenderal Bea dan Cukai, 2023). On the other hand, a publication conducted by Syafi'i et al. (2023) showed that the provision of bonded zone facilities had a positive effect on the company's export performance. Gunadi (2023) also provided relevant results that the provision of incentives had a strong effect on company export growth. Fasta'sima et al., (2024) asserted that the fiscal incentives in the field of taxation also influenced the growth of the manufacturing industry in Indonesia.

Sieng et al. (2020) found that macroeconomic factors, such as economic growth, inflation rates, and exchange rates, had a crucial role in determining export activities. The factors can fluctuate the export activities in Thailand, Malaysia, Indonesia, and the Philippines. The importance of the macroeconomic role

in export activities is related to the optimal allocation of global resources. Additionally, Khasanah et al. (2024) asserted that macroeconomic factors had a significant influence on export performance. Kumaat (2020) showed the results of relevant studies suggesting macroeconomy had a significant role in the export performance of companies. Guntara & Muchtar (2024) It stated that the provision of fiscal facilities and macroeconomic factors significantly affected export performance. Furthermore, Guntara & Muchtar (2024) used exchange rates, economic growth, and inflation rates as the macroeconomic variables to measure the effect on export performance. The importance of measuring macroeconomic variables is related to the direction of government policy to improve the company's export performance continuously.

Based on the phenomena and background described, as well as the lack of study literature for the scholars' references, this study analyzes the effect of fiscal incentives and macroeconomic factors on the export performance of manufacturing companies in Indonesia for the period 2019 to 2024. The novelty provided in this study was that all the study objects were companies receiving fiscal incentives, along with key macroeconomic variables affecting an area that has received limited attention in previous studies on export performance in Indonesia. In publications conducted by Guntara & Muchtar (2024) and Nabila & Sriyanto (2018), the effect of the incentives was provided by the government to the manufacturing industry in the form of ease of import for export purposes (KITE). Therefore, another novelty in this study is the provision of incentives in the manufacturing sector from the point of view of deferred import duty in the bonded zones.

LITERATURE REVIEW

Fiscal policy played a critical role for economic conditions in a country (Wan, 2022; Khan et al., 2021). In this context, Riggs (2015) explained that fiscal policy served as a method used by the government to influence the country's economy through taxation and spending policies. When a country aims to increase economic growth, the government could implement an expansionary fiscal policy. In this policy, the government would enhance state spending, including the provision of fiscal incentives for enterprises in various sectors. The fiscal incentives provided by the government included incentives in the international trade sector related to customs. Additionally, the fiscal incentives were defined as a reduction in tax rates, levies, or obligations for certain purposes that later led to certain benefits (Hasbi et al., 2025).

The Ministry of Trade in Indonesia stated that international trade referred to transactions where two or more countries export and import to make a profit. International trade occurred due to differences in potential resources and technology of a country (Judijanto & Aziz, 2024). It had become an important economic activity at the global and national level (Manik, 2022), aiming to trigger the country's economic growth (Dungey et al., 2018). Syafi'i et al. (2023) elaborated that the theory of international trade underwent development, where free trade between countries would positively impact the country's industry and economy. International trade could be optimized through policies taken by the government, such as minimizing restrictions on international trade to make export prices competitive (Syafi'i et al., 2023).

Export was defined as a trading activity carried out by selling goods or services originating in the country abroad (Tiara et al., 2023). Additionally, exports referred to the activity of sending goods outside the customs area to be traded and forming an international trade. These activities served as an important aspect for the domestic economy due to the ability to open up markets larger than the domestic counterpart, create jobs, and further improve residents' welfare. Further, it could motivate industries to survive and develop applying multiplier effects on employment, economic growth, and the level of prosperity of the country (Syafi'i et al., 2023). Moreover, export activities increased a country's profits in terms of income and accelerated the process of economic development as well as growth (Ilmas et al., 2022). Vo et al. (2023) stated that many countries had different policies to support export activities. A publication conducted by Lestari et al. (2023) used the logarithm of export value as a proxy for calculation. Keho (2018) argued that exports possessed a relevant relationship with the economic growth of a country. Sukirno (2016) also asserted that exports affected the country's economy positively, while the economy did not necessarily affect export activities.

The Ministry of Commerce & Industry Government of India said many countries could stimulate export activities by increasing the export revenue of the exporter, reducing input costs, and lowering or eliminating the profit tax liability of the exporter. In Indonesia, one of the fiscal incentives used to motivate exports was to reduce input costs by providing bonded area facilities (Syafi'i et al., 2023). By implementing a suspension mechanism, import duties that must be paid on imported inputs should be avoided from reducing the cost of exports (López-Valenzuela, 2022). In lowering inputs, the companies could sell the exported goods at a competitive price in the international market (Ahmad, 2015). Besides, policymakers used fiscal incentives as a viable instrument for attracting and sustaining investment (Oyerogba et al., 2024).

The Regulation of the Minister of Finance Number 131/PMK.04/2018 on Bonded Zone stated that the bonded zone was a Bonded Area for stockpiling imported goods or domestically produced goods to be processed or assembled prior to export or import for use. The fiscal incentives provided by bonded zones were in the form of postponement of import duties and not paying taxes on imports (PDRI). PDRI served as a tax facility imposed on the object of import taxes when the company conducted the import of goods, which consisted of income tax (PPH) Article 22, value added tax (VAT), and sales tax on luxury goods (PPnBM). Goods produced by the companies receiving bonded zone facilities, besides being intended for export, could also be sold domestically after meeting certain requirements.

Analysis conducted by Nabila & Sriyanto (2018) used the natural logarithm as a proxy for calculating the value of fiscal incentives. Firmansyah & Pratiwi (2022) also used the natural logarithm for calculating the value of fiscal incentives. Moreover, Syafi'i et al. (2023) stated that the bonded zone facility had a positive effect on export performance. The studies from Gunadi (2023) and Firmansyah & Pratiwi (2022) were also relevant, stating that fiscal incentives providing bonded area facilities had a positive effect on the value of exports. A publication from Onah et al. (2022) stated that fiscal incentives on exports had a positive influence on export performance. This showed that more import duty facilities and not levying PDRI would motivate companies to export more. On the other hand, Wicaksono & Mangunsong (2021) stated that the bonded zone facility had an inverse relationship with export value. This implied that more provision of suspension of import duties and not levying PDRI led to lower company exports. On the other hand, the provision of these area facilities may have adverse effects if the prices of export products are not competitive in the international market. The result may also be attributed to the tendency of manufacturing companies to sell their products domestically rather than export them. Companies that were given fiscal incentives should have more ability to manage the cash flow. This would increase the company's operational capabilities to increase product competitiveness at the global level (Syafi'i et al., 2023). Based on the results, the first hypothesis was proposed as follows:

H₁: Fiscal incentives significantly influenced export performance.

GDP was one of the tools in assessing the level of economic growth of a country or a region. According to the Statistics Indonesia publication in 2022 on Indonesia's GDP by Spending in 2017- 2021, GDP was defined as the value of goods or services produced through household and government consumption, gross fixed capital formation, and net exports of goods and services. Chen et al. (2018) who examined GDP showed that the level of aggregate economic activity in a country was proxied by the annual percentage change in GDP. Subhagit (2021) further asserted that GDP growth was adjusted to the annual rate of change.

Carolina & Aminata (2019), Guntara & Muchtar (2024), and Siburian et al. (2024) found that economic growth had a positive influence on export performance. This showed that higher economic activity of a country would lead to increased export performance. Furthermore, the growth of the economy was a good signal for the capability of production capacity because of the stability of the good prices (Mamun et al., 2024). The analysis found that general economic growth would lead to better export performance. Consequently, the second hypothesis was proposed as follows:

H₂: Economic growth had a significant effect on export performance.

Inflation referred to a macroeconomic risk that could affect company performance (Al-muharrami & Murthy, 2017). Bonab (2019) stated that inflation was an increase in the price of goods or services in general and in continuity. Based on Keynes' theory, inflation occurred due to excess demand compared to the supply of a good or service (Ilmas et al., 2022). This condition occurred when there was a comprehensive increase in the price of goods generally (Riyadi & Nugrahanto, 2024). Salike & Ao (2018) also used the annual consumer price index (CPI) to measure inflation.

An increase in the price of domestic goods or services when exported led to an increase in the price of goods or services. When export prices increased, global demand for domestic goods or services would decrease, reducing export performance. This implied that inflation made it difficult for domestic production to compete in the international trade sector. The theory correlated with the results by Ilmas et al. (2022) and Mamun et al. (2024) which found that the inflation rate had a strong negative influence on the company's export performance. Based on the theory, the third hypothesis was proposed as follows:

H₃: Inflation rates strongly influenced the export performance.

International trade could not be separated from exchange rate conditions (Ilmas et al., 2022). Ramadhani et al., (2025) defined the exchange rate as the price of a country's currency to another country. In macroeconomic theory, changes in the exchange rate affected exports through the spending-switching mechanism (Li, 2025). This implied that when there was a depreciation, the price of export goods became more competitive, so foreign demand increased, and vice versa (Oktaviani & Shrestha, 2021).

According to the World Bank (2025), the effect of exchange rates on export activity depended on the type of goods. Exports of homogenous goods, such as soybeans, mangoes, and wheat, showed a response to exchange rate appreciation and depreciation. On the other hand, exports of differentiated products, such as

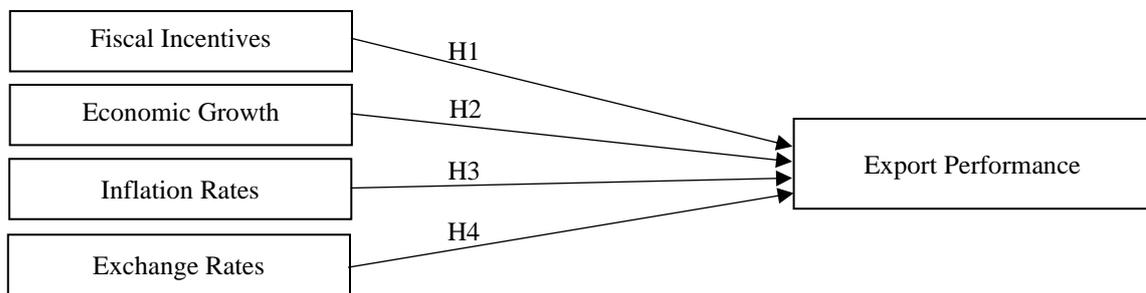
mobile phones or clothing products, showed a weaker effect. This was because exporting differentiated products required a strong relationship between buyers and sellers, proximity to market demand, and pricing consistent with product quality.

The results by Ilmas et al. (2022) and Mamun et al. (2024) stated that the exchange rate had an inverse effect on exports. Relevant results were also stated by Oktaviani & Shrestha (2021), indicating that a weaker domestic currency led to increased exports (Mamun et al., 2024). Moreover, this was consistent with the empirical results that when the exchange rate weakened (nominal exchange rate rose), there was an increase in the demand for export goods. A different result was submitted by Widjajanto et al. (2024) who stated that the exchange rate had a positive effect on export performance. The results were assumed to occur because there was a dependence or necessity on certain types of goods exported. Therefore, the importing country had to buy those goods to fulfill domestic needs. As a conclusion, the fourth hypothesis was proposed as follows:

H4: The exchange rates had a strong effect on the company's export performance.

Based on the descriptions above, a conceptual framework that describes the independent variables and dependent variables was depicted in Figure 4.

Figure 4 Conceptual Framework



Source: Processed by the author

METHODS

This study aimed to analyze the effect of fiscal incentives and macroeconomic factors on export performance, using a quantitative method and hypothetical testing. The hypothetical testing was based on numeric data, and data analysis was carried out using statistical procedures. The analysis used secondary data obtained from the database of Directorate General of Customs and Excise (DGCE), namely the value of fiscal incentives, and the value of exports. The value of fiscal facilities consisted of the amount of import duty deferred and the amount of PDRI received by companies engaged in the manufacturing sector.

Other data were obtained from the official website of the Statistics Indonesia, the official website of Bank Indonesia, and the official website of the World Bank. The data used were panel data, which were a combination of time series data and cross-sectional data. The population studied consisted of all manufacturing companies that used fiscal incentives from DGCE. The sample determination was carried out through purposive sampling to determine the number of analysis units studied for 6 years (2019-2024). The first sample determination limitation was the companies that used fiscal incentives from 2019 to 2024. Nevertheless, the companies that used fiscal facilities after 2019 and those that experienced revocation of fiscal facilities before 2024 were not included in the study. Furthermore, the companies that imported goods by obtaining import duty deferred facilities or not collecting PDRI were included, but the companies that fully obtained raw materials, auxiliary materials, or capital goods from local sources were not included in this study.

The dependent variable used in this study was the export value (EKS) as measured by the logarithm of export value (Lestari et al., 2023). The independent variables used were the value of fiscal incentives (FAST), measured by the proxy of the logarithm of the incentives value (Nabila & Sriyanto, 2018). The analysis also measured the influence of macroeconomic factors as independent variables, which included economic growth (GDP), inflation rates (INF), and exchange rates (EXC). Variables and measurements were denoted as stated in Table 1.

Data testing using panel data regression aimed to analyze the effect of fiscal incentives and the macroeconomic factors on export performance over 6 years (2019-2024) using Eviews 12.0. The analysis was further divided into three models, namely the common effect model (CEM), fixed effect model (FEM), and random effect model (REM). The selection of the three models was carried out with the Chow test, Hausman test, and Lagrange Multiplier (LM) test, which aimed to determine the appropriate model to interpret the results. The study regression equation was set into the following model.

$$EKS_{i,t} = \alpha + \beta_1 FAST_{i,t} + \beta_2 GDP_t + \beta_3 INF_t + \beta_4 EXC_t + \epsilon_{i,t}$$

Where: EKS_{it} : export value of company i -year t ; $FAST_{it}$: value of fiscal incentives granted to company i -year t ; INF_t : inflation in year t ; GDP_t : national economic growth in year t ; EXC_t : exchange rate in year t ; α : constant; β_{1-4} : coefficients; ϵ_{it} : error term company i -year t . For ensuring the validity of the data, classic assumption tests were carried out, including multicollinearity, autocorrelation, and heteroscedasticity tests, while the results were valid in all tests.

Table 1 Variables and Measurements

Variables	Variable Name	Abbrev.	Measurements	References
Dependent Variable	Export Value	EKS	Logarithm of Export Value	Lestari et al. (2023)
Independent Variables	Fiscal Incentive Value	FAST	Logarithm of Fiscal Incentives Value	Nabila & Sriyanto (2018)
	Inflation Rates	INF	Annual Consumer Price Index (%)	Salike & Ao (2018)
	Economic Growth	GDP	Annual Change of Economic Growth (%)	Chen et al., (2018)
	Exchange Rates	EXC	Logarithm of Exchange Rates of IDR to USD	www.bi.go.id

Source: Processed by the author

RESULT AND DISCUSSION

The company data appropriated as the object of the study consisted of 863 companies that received fiscal incentives in the manufacturing sector during the period 2019 to 2024. The results showed that the average value of exports carried out by companies receiving fiscal incentives was IDR 749.5 billion, with a standard deviation of IDR 272.5 billion. The analysis also indicated that the average value of fiscal incentives from 2019 to 2024 amounted to IDR 53.9 billion, with a standard deviation of IDR 9.72 billion. Therefore, it was concluded that the fiscal incentives generated aggregate value added in exports, as indicated in Table 2. From 2019 to 2020, the average decline in fiscal incentive value was caused by the pandemic, while from 2022 to 2023, it was driven by global conflicts, considering that those conflicts led to supply chain disruptions.

Manufacturing enterprises that carried out the production process by processing raw materials (upstream products) into finished goods (downstream products) applied for the use of bonded zone facilities by fulfilling the regulated requirements. Additionally, to drive manufacturing performance, the government made efforts to improve the performance of bonded zone companies through the relaxation of fiscal incentives under the National Economic Recovery (PEN) programs. The relaxation of fiscal incentives was regulated in the Minister of Finance Regulation Number 31/PMK.04/2020. This had an impact on improving the export performance of bonded zone companies, as observed in 2021.

Table 2 Incentive and Export Values of Manufacturing Companies from 2019 to 2024

Year	Incentive Values (IDR)	ΔIncentive Values (%)	Export Values (IDR)	ΔExport Values (%)
2019	63,749,770,113,137		485,387,000,360,863	
2020	38,704,578,907,763	-39.29%	498,919,849,575,316	2.79%
2021	59,018,597,933,769	52.48%	735,902,831,706,373	47.50%
2022	56,470,839,678,768	-4.32%	814,524,452,137,660	10.68%
2023	45,355,719,790,161	-19.68%	729,160,228,392,678	-10.48%
2024	60,186,537,713,088	32.70%	1,233,171,614,999,190	69.12%
Mean	53,914,340,689,448		749,510,996,195,347	
Standard Deviation	9,728,844,758,795		272,510,949,308,873	

Source: Processed by the author

The data testing used panel data analysis, which was divided into three models, namely CEM, FEM, and REM. The selection of the model was shown in Table 3.

Table 3 Study Model Selection

Model Test	Prob.	Decision	Conclusion
Chow Test EKS	0,0000	H ₀ rejected	FEM
Hausman Test EKS	1,0000	H ₀ not rejected	REM
Lagrange Multiplier Test EKS	0,0000	H ₀ rejected	REM

Source: Processed by the author

Based on the model selection test results shown in Table 3, the Chow test produced a probability value smaller than the significance level $\alpha = 0.05$, implying that the H_0 decision was rejected. Therefore, the most appropriate model used was FEM. The Hausman test was then conducted to determine the suitable model, and the results indicated a probability value greater than the significance level $\alpha = 0.05$. Consequently, H_0 failed to be rejected, and the selected model was REM. To further ensure the model selection, the Lagrange Multiplier (LM) test was carried out, which yielded a probability value smaller than the significance level $\alpha = 0.05$, thereby rejecting H_0 and confirming that the best model used was REM.

Table 4 Random Effect Model (REM) Regression Results

Independent Variables	Dependent Variable Export Value (EKS)		Conclusion
	Coef. (t-stat)		
C		8.204607 (5.641697)	-
Log_FAST		0.332959*** (20.14063)	H ₁ supported
GDP		-0.005172 (-1.516531)	H ₂ not supported
INF		0.026525*** (4.504710)	H ₃ supported
Log_EXC		-0.139709 (-0.408707)	H ₄ not supported
R ² / Adj. R ²		0.078263	
F-statistic		110.8923***	

Note: statistically supported at 1% (***), 5% (**), 10% (*) significance level
Source: Processed by the author

Where: Log_FAST: Logarithm of the value of fiscal incentives; GDP: economic growth; INF: inflation rates; Log_EXC: Logarithm of exchange rates of IDR to USD. Based on Table 4, the probability value of the study F-stat was less than the significance level $\alpha = 0.05$. Therefore, the independent variables simultaneously had a significant influence on the dependent variable, namely the export value. The coefficient of determination of this study was 0.078, indicating that the independent variables explained 7.8% of the variation in export value, while the remaining variation was influenced by factors not included in the analysis, confirming it to be valid.

The regression results presented in Table 4 showed that Log_FAST coefficient was 0.3329 with a significant level of 1%. These results supported the first hypothesis (H₁) and were relevant to the findings by Syafi'i et al. (2023), which stated that the provision of fiscal incentives had a positive effect on export performance. The higher the value of fiscal incentives, the stronger the boost to export performance, and vice versa. The provision of incentives was interpreted as part of the government's expansionary fiscal policy, in which state spending was increased to stimulate national economic growth. The results indicated that the expansionary fiscal policy was relatively successful because it enhanced export performance, particularly for manufacturing companies. Furthermore, the improvement of national economic growth reflected one indicator of the government's success in increasing societal prosperity.

Moreover, fiscal incentives helped ease companies' cash flow because they were not required to pay customs obligations at the time of importing goods. The deferral of customs obligations at the start of the production process reduced production costs, thereby preventing companies from facing heavy cash outflows.

The expansionary fiscal policies were also found to improve the export performance of manufacturing companies, as they enabled downstream processing by converting raw materials into finished goods, thereby creating value added. The production process could be undertaken either through labor-intensive or capital-intensive methods. In capital-intensive methods, companies invest in machines and other capital goods for production activities. In contrast, labor-intensive methods absorb more labor, creating employment opportunities, and helping reduce unemployment.

The results showed that economic growth did not have a significant effect on export performance, and thereby the second hypothesis (H₂) was not supported. As Sukirno (2016) stated, national economic growth did not necessarily translate into higher exports. Indonesia's national economic growth was measured from spending side, which comprised household consumption, company investments, government spending, and net exports (the difference between exports and imports). Household consumption contributed approximately 54% to economic growth (Kementerian Keuangan, 2025b). This suggested that purchasing power was the main driver of economic growth parameters. Although exports from the processing industry were the backbone of national economic growth in 2024, the increase and stability of manufacturing exports were largely concentrated in a limited number of sectors such as fuel commodities, crude palm oil

(CPO), and iron and steel. In short, Indonesia's national economic growth was determined primarily by household consumption, which did not significantly influence companies' export performance.

Based on Table 4, the results showed that inflation rates had a significant positive effect on export performance, supporting the third hypothesis (H₃). This indicated that higher inflation rates in a country enhanced export value. The results elaborated that inflation did not have an adverse impact. Dzulfikri et al. (2023) also found a similar result that exports could be driven by inflation. The Ministry of Finance and the Central Bank of Indonesia had examined that the inflation remained stable for many years. Moreover, the Indonesian Government had continuously controlled the inflation fluctuation to prevent them from threatening the purchasing ability of society (Kementerian Koordinator Bidang Perekonomian, 2025). The stabilized inflation rates caused a positive impact on the conducive economy by supporting purchasing power. Otherwise, uncontrolled inflation rates could lower the purchasing power significantly (International Monetary Fund, 2015). The secured inflation rates would heighten the real sector as well as the manufacturing sector's ability by keeping raw material prices affordable or controlling supply chain costs to remain low. Furthermore, the results were also in accordance with the interest rate parity theory by Perera et al. (2017) and the trade theory by Ergashov & Sanarxo'ja. (2023), concluding that the inflation rates could enhance the export performance.

Based on Table 4, the results showed that the exchange rates had no significant effect on export performance. This was relevant to the studies from Su (2017). The appreciation and the depreciation of the rupiah currency would not increase or decrease the value of exports significantly. The possible reasons were the companies having a personal overseas market that highly relied on the products. Therefore, fluctuations in the exchange rate did not substantially affect demand. Companies improved their efficiency systems to offset potential declines in demand Su (2017). The companies were still capable of exporting larger amounts of goods (Raksha et al., 2025).

A robustness test was conducted to ensure that the results were unbiased and valid (Simangunsong et al., 2015). The test was carried out by adding control variables to the study, prompting the COVID-19 pandemic variable (PDM) to be introduced, which was evident in 2020 and 2021 (Li, 2022). The variable was assessed using a binary value, where 1 indicated the presence of the pandemic and 0 reflected its absence or the recovery stage. As shown in Table 5, consistent results were obtained regarding the effectiveness of fiscal incentives on export performance.

The robustness test strengthened the study, as shown in Table 3, where the role of the use of the incentives could improve export performance. The provision of fiscal incentives was accompanied by procedural facilities. This implied that manufacturing companies importing raw materials, auxiliary materials, and capital goods not only benefited from deferred import duties and tax exemptions but also gained procedural advantages, such as the ability to bring imported goods directly into company warehouses without customs inspection at ports. In principle, all imported goods entering Indonesia were subject to port inspection, particularly in relation to prohibitions and restrictions on imports. However, companies using bonded zone facilities could bypass this requirement, avoiding stockpiling at ports and ensuring faster access to imported goods.

Table 5 Robustness Test (REM)

Independent Variables	Dependent Variable Export Value (EKS)		Conclusion
	Coefficients (t-stat)		
C	0.966857 (0.339860)	-	
Log_FAST	0.626650*** (38.83157)	H ₁ supported	
GDP	-0.001735 (-0.193122)	H ₂ not supported	
INF	0.003317 (0.221087)	H ₃ not supported	
Log_EXC	0.879711 (1.292684)	H ₄ not supported	
PDM	0.067942*** (1.583937)	-	
	Adj R ²	0.226879	
	F-statistic	304.846600***	

Note: statistically supported at 1% (**), 5% (*), 10% (*) significance.

Source: Processed by the author

CONCLUSION

This study examines the role of fiscal incentives and selected macroeconomic factors on export performance. The samples were obtained through purposive sampling and consisted of all manufacturing companies that received fiscal incentives from 2019 to 2024. The data were collected from the database of DGCE as well as official sources, including the World Bank, Statistics Indonesia, the Ministry of Finance, Bank Indonesia, and other relevant institutions.

The results showed that the use of fiscal incentives had a significant positive effect on the export performance of manufacturing companies in Indonesia. It also showed that the macroeconomic variable that had a significant influence on export performance was the inflation rate. Inflation rates had a strong positive influence on export performance. A robustness test was conducted to examine the consistency and validity of the regression results. Based on robustness tests, this study had consistent results, which positively affected export performance.

Due to certain limitations in data availability, this study was intended to serve as a reference for future studies and to enrich perspectives, particularly those related to the effectiveness of fiscal incentives in manufacturing companies. Furthermore, the results showed that fiscal incentives motivated export performance. Accordingly, it was suggested that policymakers maintain and continuously evaluate fiscal incentive policies in the manufacturing sector to enhance national economic growth and stability (Oyerogba et al., 2024). For future publications, it was recommended to include additional independent variables, particularly other macroeconomic indicators, and to extend the study period. It was also suggested that future studies incorporate fiscal incentive variables related to the use of domestic raw and auxiliary materials, as well as analysis focused on specific business classifications.

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