

The Impact Of Imports of Consumer Goods and Raw Materials On The Growth Rate of The Manufacturing Sector In Indonesia

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Abstract.

This study aims to analyze the effects of consumer goods imports, raw material imports, and inflation on the growth rate of the manufacturing sector in Indonesia during the period 2013–2024. The study uses quarterly secondary data obtained from Statistics Indonesia (Badan Pusat Statistik/BPS) and employs the Autoregressive Distributed Lag (ARDL) method. The Bounds Test indicates the existence of a cointegrating relationship among the variables. The long-run estimation results show that consumer goods imports have a negative and significant effect on the growth rate of the manufacturing sector, while raw material imports have a positive and significant effect. Meanwhile, inflation does not have a significant effect in the long run. In the short run, consumer goods imports have no significant effect in the current period but have a positive and significant effect with a one-quarter lag, while the effect at a two-quarter lag is not significant. The Error Correction Model (ECM) results indicate that approximately 45.54 percent of the deviation from the long-run equilibrium is corrected within one quarter. The findings indicate that the effects of imports on manufacturing performance vary by type of goods and time horizon. Raw material imports contribute to the growth of the manufacturing sector, whereas an increase in consumer goods imports in the long run is associated with pressure on domestic industrial growth. These findings highlight the importance of trade policies that consider the characteristics of import use, along with efforts to strengthen domestic industrial capacity.

Keywords: consumer goods imports; raw material imports; inflation; manufacturing sector growth and ARDL.

I. INTRODUCTION

The manufacturing sector is one of the strategic sectors in promoting economic growth and creating employment opportunities in Indonesia. According to data from Statistics Indonesia (Badan Pusat Statistik/BPS), the manufacturing sector was one of the largest contributors to Indonesia's Gross Domestic Product (GDP), accounting for approximately 23.77 percent in 2025. This substantial contribution indicates that the development of the manufacturing sector plays an important role in maintaining national economic stability and growth (Permana et al., 2023; Primanthi and Kalirajan, 2023). This role makes the performance of the manufacturing sector an important aspect to consider, particularly in understanding the development of production activities and sectoral growth in Indonesia.

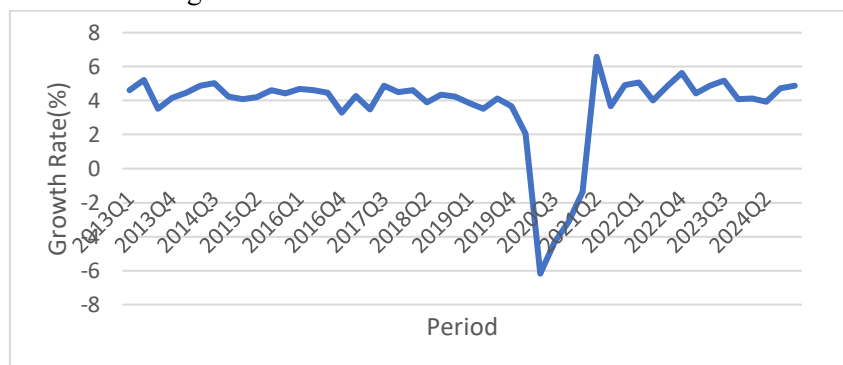


Fig. 1. Growth Rate of the Manufacturing Sector in Indonesia, 2013–2024

Source: Statistics Indonesia (Badan Pusat Statistik/BPS), processed by the authors.

The growth rate of Indonesia's manufacturing sector fluctuated over the 2013–2024 period. As shown in Figure 1, the growth rate of the manufacturing sector varied throughout the study period, with a sharp contraction in 2020, particularly in the second quarter, amid the COVID-19 pandemic. Following this contraction, the growth of the manufacturing sector recovered and returned to positive territory in subsequent periods. This condition indicates changes in the performance of the manufacturing sector throughout the study period.

Indonesia's manufacturing sector continues to face challenges in meeting its production input requirements, one of which is its reliance on supplies from abroad. This condition is reflected in the composition of Indonesia's imports, which is dominated by imports of raw materials, followed by capital goods and consumer goods. The development of import values by broad economic category over the study period is presented in Figure 2.

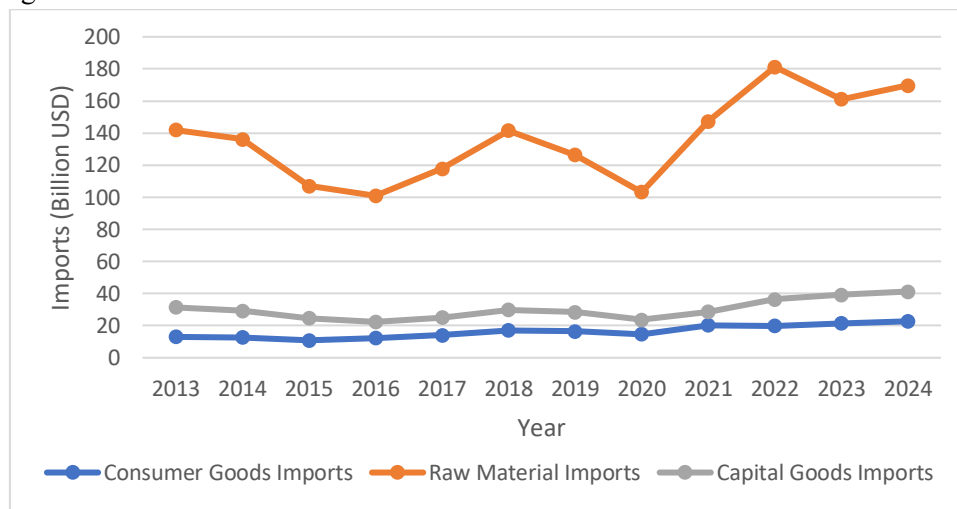


Fig. 2. Import Value by Broad Economic Category in Indonesia, 2013–2024

Source: Statistics Indonesia (Badan Pusat Statistik/BPS), processed by the authors.

Based on Figure 2, Indonesia's imports during the 2013–2024 period were dominated by raw materials, followed by capital goods and consumer goods. The value of raw material imports increased from approximately US\$141.96 billion in 2013 to US\$169.68 billion in 2024, although it declined in 2020 amid the COVID-19 pandemic. Meanwhile, imports of capital goods and consumer goods also changed over time and tended to increase during the post-pandemic period. The dominance of raw material imports indicates that manufacturing production in Indonesia remains dependent on the supply of inputs from abroad. This condition may increase risks to production activities in the event of supply disruptions or changes in international trade conditions.

Imports of raw materials and capital goods can, in principle, have positive effects on the development of the manufacturing sector. The availability of imported raw materials can help industries meet production input requirements that cannot yet be fully supplied by the domestic market, while imports of capital goods can increase production capacity and efficiency and support the adoption of more advanced technologies. In the industrialization process, imports of raw materials and supporting goods are part of efforts to meet domestic production requirements (Yuliadi, 2008). Patunru (2023) explains that industrial production in Indonesia remains highly dependent on imports of raw materials (*intermediate goods*) and capital goods, making access to imported inputs an important factor in supporting production activities and industrial competitiveness. Similarly, access to inputs and technology from abroad has the potential to increase manufacturing productivity through improvements in the quality of production inputs and technology transfer (Oktaviani and Djamaluddin, 2020). Therefore, increased imports of raw materials and capital goods have the potential to promote higher industrial output and value added, which may ultimately be reflected in higher manufacturing GDP. However, high dependence on imports may also create risks in the event of global supply disruptions, exchange rate fluctuations, or changes in international trade policies.

On the other hand, consumer goods imports may have different effects on the manufacturing sector. An increase in consumer goods imports may intensify competition between foreign and domestic products in the domestic market. Competition in international trade requires domestic industries to maintain and improve their competitiveness in order to compete with products from other countries. Jayanti and Muqorobin (2017) show that improving competitiveness is an important aspect for leading industries in facing ASEAN economic integration. If imported products substitute for goods produced by domestic manufacturing industries, an increase in consumer goods imports may reduce the market share, sales, and production activity of domestic industries (Bräuer et al., 2023). This condition may subsequently reduce demand for

domestically produced manufactured goods and potentially constrain the growth of the manufacturing sector. Thus, the effects of imports on the manufacturing sector may differ depending on their type and end use, making it necessary to analyze the effects of each type of import more specifically.

In addition to international trade factors, domestic macroeconomic conditions such as inflation may also affect manufacturing sector performance. High inflation can increase production costs through higher prices of raw materials, energy, and other operating costs. At the same time, inflation can reduce consumers' purchasing power, thereby decreasing demand for manufactured products. Conversely, stable and controlled inflation can create a more conducive business environment for industrial production and investment. Changes in the inflation rate may affect production costs, investment decisions, and economic activity in the manufacturing sector, making price stability an important factor in supporting industrial development (Silalahi et al., 2025). These conditions indicate that changes in inflation may be associated with changes in the growth rate of the manufacturing sector.

Previous studies have examined the relationship between international trade and economic growth in Indonesia. Hodijah and Angelina (2021) and Utami et al. (2024) found that exports and imports affect Indonesia's economic growth, both in the short run and in the long run. In addition, Permana et al. (2023) showed that the manufacturing sector plays a strategic role in supporting Indonesia's economic growth, making improvements in industrial capacity and productivity important for sustaining economic growth. However, these studies generally use aggregate economic growth indicators and therefore do not specifically explain the factors associated with the growth rate of the manufacturing sector. Moreover, studies examining the effects of imports by end-use category, particularly raw material and consumer goods imports, as well as the role of inflation as a macroeconomic condition in relation to the growth rate of the manufacturing sector, remain relatively limited.

Against this background, this study aims to analyze the effects of raw material imports, capital goods imports, consumer goods imports, and inflation on the growth rate of the manufacturing sector in Indonesia, both in the short run and long run. The study employs the *Autoregressive Distributed Lag* (ARDL) approach to identify the relationships among the variables in the short and long run. The findings are expected to provide empirical evidence on the relationship between international trade, macroeconomic conditions, and manufacturing sector performance, as well as to inform the formulation of industrial and trade policies that support the growth of the manufacturing sector in Indonesia.

II. DATA AND METHODOLOGY

This study uses quarterly secondary data for Indonesia covering the period from 2013 to 2024, including the growth rate of the manufacturing sector, raw material imports, capital goods imports, consumer goods imports, and inflation. All data were obtained from Statistics Indonesia (Badan Pusat Statistik/BPS). Import and inflation data, which were originally available on a monthly basis, were subsequently converted into quarterly data to match the frequency of the manufacturing sector growth rate data. In the conversion process, monthly import data were aggregated into quarterly data, while inflation was calculated as the average of monthly inflation rates within each quarter. All data processing and analysis were conducted using EViews 12.

This study employs the *Autoregressive Distributed Lag* (ARDL) method to analyze the relationship between imports, inflation, and the growth rate of the manufacturing sector in Indonesia. The ARDL method combines the *Autoregressive* (AR) and *Distributed Lag* (DL) models. The AR model incorporates past values of the dependent variable, while the DL model incorporates current and past values (*lags*) of the independent variables into the model (Pesaran et al., 2001). The use of lags in the ARDL model is relevant because the effects of imports and inflation on the growth rate of the manufacturing sector may not occur immediately within the same period but may require an adjustment process through production, investment, and trade activities.

The ARDL method is widely used in *time series* analysis because it can capture both short-run and long-run relationships among the variables. In addition, the ARDL approach can be applied to variables with different orders of integration, namely variables that are stationary at level, $I(0)$, or at first difference, $I(1)$,

provided that none of the variables is integrated of order two, $I(2)$ (Pesaran et al., 2001). Given these characteristics, the ARDL method is considered appropriate for analyzing the dynamics of the relationship between imports, inflation, and the growth rate of the manufacturing sector.

The empirical model in this study is formulated to examine the relationship between the growth rate of the manufacturing sector, imports, and inflation. The dependent variable is the growth rate of the manufacturing sector, while the independent variables include raw material imports, capital goods imports, consumer goods imports, and inflation. The growth rate of the manufacturing sector is used as an indicator of manufacturing sector performance because it reflects changes in economic activity and production over time. The selection of variables is based on previous studies concerning international trade, inflation, and industrial performance. The import variables are included to represent the characteristics of imports by end use. The selection of import variables refers to Oktaviani and Djameluddin (2020), who found that raw material imports are associated with increased firm productivity through access to production inputs and technology transfer. In addition, inflation is included as a macroeconomic variable related to industrial production activity. The selection of inflation as a variable refers to Silalahi et al. (2025), who found that inflation is one of the factors affecting the development of the manufacturing sector through its effects on production costs, investment, and economic activity. Based on these previous studies, the empirical model in this study is formulated as follows.

$$GROWTH_C_t = \beta_0 + \beta_1 \ln BB_t + \beta_2 \ln BM_t + \beta_3 \ln BK_t + \beta_4 INF_t + \varepsilon_t$$

where $GROWTH_C_t$ represents the growth rate of the manufacturing sector in period t . The variable $LNBB_t$ represents the natural logarithm of raw material imports, $LNBK_t$ represents the natural logarithm of capital goods imports, and $LNBK_t$ represents the natural logarithm of consumer goods imports in period t . Meanwhile, INF_t represents the inflation rate in period t , while ε_t denotes the error term. The coefficient α_0 represents the constant term, while β_1 , β_2 , β_3 , and β_4 are the estimated parameters representing the effects of the respective independent variables on the growth rate of the manufacturing sector. The natural logarithm transformation is applied to the import variables to reduce differences in data scale and facilitate the interpretation of the estimation results.

The basic model is subsequently estimated using the ARDL framework by incorporating lags of the dependent and independent variables to analyze both the short-run and long-run relationships among the variables. In general, the ARDL model used in this study can be expressed as follows.

$$GROWTH_C_t = \alpha_0 + \sum_{i=1}^p \alpha_i GROWTH_C_{t-i} + \sum_{j=0}^{q_1} \beta_j \ln BB_{t-j} + \sum_{k=0}^{q_2} \gamma_k \ln BM_{t-k} + \sum_{l=0}^{q_3} \delta_l \ln BK_{t-l} + \sum_{m=0}^{q_4} \theta_m INF_{t-m} + \varepsilon_t$$

where p denotes the lag length of the dependent variable, while q_i denotes the lag length of each independent variable. The optimal lag length is determined based on the *Akaike Information Criterion* (AIC). The analysis consists of several stages, including testing data stationarity using the *Augmented Dickey-Fuller* (ADF) test, determining the optimal lag length based on the *Akaike Information Criterion* (AIC), testing for cointegration using the *Bounds Test*, estimating the long-run coefficients, and estimating the short-run dynamics using the *Error Correction Model* (ECM).

III. RESULTS AND DISCUSSION

Table 1 presents the descriptive statistics of the study variables, consisting of the growth rate of the manufacturing sector, consumer goods imports, raw material imports, capital goods imports, and inflation over the 2013–2024 period.

Table 1. Descriptive Statistics of the Study Variables

Variable	Unit	Mean	Maximum	Minimum	Std. Dev.
Manufacturing Sector Growth Rate	Percent	3.71	6.58	-6.18	2.43
Consumer Goods Imports	Million USD	4,076.37	6,365.70	2,540.30	1,030.62
Raw Material Imports	Million USD	34,055.55	48,359.70	23,044.50	6,641.96
Capital Goods Imports	Million USD	7,511.38	11,482.20	5,131.80	1,596.87

Inflation	Percent	0.312	1.477	-0.143	0.301
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Based on Table 1, the growth rate of the manufacturing sector has a mean value of 3.71 percent, with a maximum value of 6.58 percent and a minimum value of -6.18 percent. The minimum value indicates that the manufacturing sector experienced a contraction during one of the observation periods. Among the import variables, raw material imports have the highest mean value, at approximately USD 34.1 billion, followed by capital goods imports at USD 7.5 billion and consumer goods imports at USD 4.1 billion. Meanwhile, inflation has a mean value of 0.312 percent, with a standard deviation of 0.301 percent. Overall, the descriptive statistics indicate variations in the characteristics of the study variables over the observation period, particularly for raw material imports, which have the widest range of values compared with the other import variables.

Stationarity Test

The stationarity test results presented in Table 2, using the *Augmented Dickey-Fuller* (ADF) test, show that inflation is stationary at level, or integrated of order I(0), while the growth rate of the manufacturing sector, consumer goods imports, and raw material imports are stationary at first difference, or integrated of order I(1). Meanwhile, capital goods imports do not meet the stationarity requirement, as they are non-stationary at both level and first difference. Although capital goods imports were included in the initial model specification, these results indicate that the variable does not meet the requirements for ARDL estimation. Therefore, capital goods imports were excluded from the final model estimation, and the subsequent analysis uses only variables that satisfy the stationarity requirements.

Table 2. Results of the Augmented Dickey-Fuller (ADF) Stationarity Test

Variable	Test Level	Prob.	Integration
Manufacturing Sector Growth Rate (GROWTH_C)	First Difference	0.0000	I(1)
Log Consumer Goods Imports (lnBK)	First Difference	0.0000	I(1)
Log Raw Material Imports (lnBB)	First Difference	0.0000	I(1)
Log Capital Goods Imports (lnBM)	First Difference	0.2007	Non-stationary
Inflation (INF)	Level	0.0000	I(0)

Optimal Lag Selection

The optimal model was selected using the *Akaike Information Criterion* (AIC), with the model having the lowest AIC value among the alternative models being selected. Based on Table 3, the ARDL (2,3,0,0) model was selected as the optimal model and was subsequently used for ARDL estimation and the *Bounds Test* for cointegration to identify the long-run relationship among the study variables.

Table 3. Optimal Lag Selection Results

Criterion	Selected Model	AIC Value
Akaike Information Criterion (AIC)	ARDL (2,3,0,0)	3.683556

Cointegration Test

The *Bounds Test* results presented in Table 4 indicate the existence of a cointegrating relationship among consumer goods imports, raw material imports, inflation, and the growth rate of the manufacturing sector in Indonesia. This is indicated by the F-statistic of 6.968, which is higher than the upper bound critical value at the 5 percent significance level, which is 3.67. These results indicate the existence of a long-run equilibrium relationship among the study variables, allowing the estimation of both long-run and short-run coefficients using the ARDL model.

Table 4. Cointegration Test Results (Bounds Test)

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	6.968206	10%	2.37	3.20
k	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

Long-Run Estimation

Table 5. Long-Run Estimation Results

Variable	Coefficient	Prob.	Description
Log Consumer Goods Imports (lnBK)	-18.44110	0.0012	Significant
Log Raw Material Imports (lnBB)	24.28325	0.0003	Significant

Inflation (INF)	-3.070344	0.1832	Not Significant
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Based on the long-run estimation results presented in Table 5, consumer goods imports have a negative and significant effect on the growth rate of the manufacturing sector, with a coefficient of -18.4410 and a probability value of 0.0012 . The results indicate that a 1 percent increase in consumer goods imports is associated with a decrease of approximately 0.184 percentage points in the growth rate of the manufacturing sector, holding other variables constant. This finding suggests that an increase in consumer goods imports may put pressure on the development of the domestic manufacturing sector by intensifying competition between imported and domestically produced goods. Imported consumer goods may directly compete with products produced by domestic industries, so increased import penetration may place greater competitive pressure on domestic producers.

Using data from 430 districts and municipalities in Indonesia for the period 2007–2013, Agustina (2018) found that increased import competition had a negative effect on the share of manufacturing employment, with the effect being primarily driven by consumer goods imports. This finding indicates that consumer goods imports exert greater competitive pressure on manufacturing activities than imports of intermediate and capital goods. Similarly, Nababan et al. (2021) found that consumer goods imports have a significant effect on Indonesia's GDP, indicating an association between changes in consumer goods imports and domestic economic activity. Therefore, the findings of this study provide further evidence that an increase in consumer goods imports may place pressure on the growth of the manufacturing sector when imported products directly compete with goods produced by domestic industries.

Meanwhile, raw material imports have a positive and significant effect on the growth rate of the manufacturing sector in the long run, with a coefficient of 24.2833 and a probability value of 0.0003 . The results indicate that a 1 percent increase in raw material imports is associated with an increase of approximately 0.243 percentage points in the growth rate of the manufacturing sector, holding other variables constant. This finding suggests that the availability of raw materials from abroad continues to play an important role in supporting manufacturing production activities in Indonesia. The use of imported intermediate inputs can provide access to a wider variety of inputs, higher-quality inputs, and technology that can support firm efficiency and productivity.

Pane and Patunru (2023) show that the use of imported intermediate inputs increases the productivity of manufacturing firms in Indonesia, with the benefits arising, among other factors, from access to a wider range of inputs and better input quality. Similar findings were reported by Camino-Mogro and Carrillo-Maldonado (2023) for manufacturing firms in Ecuador, who found that the use of imported intermediate inputs can increase productivity through both direct effects and dynamic effects that support the *learning-by-importing* hypothesis. Therefore, the findings of this study provide further evidence that the use of imported raw materials can serve as one channel supporting improved production performance and, ultimately, contribute to the growth of the manufacturing sector.

Unlike the two import variables, inflation has a negative coefficient of -3.0703 but does not have a significant effect on the growth rate of the manufacturing sector in the long run. This is indicated by the probability value of 0.1832 , which is higher than the 5 percent significance level. Mathematically, the coefficient indicates that a 1 percentage-point increase in inflation is associated with an approximately 3.07 percentage-point decrease in the growth rate of the manufacturing sector, holding other variables constant. However, this relationship is not statistically strong enough to conclude that inflation has a long-run effect. Therefore, changes in inflation over the study period were not found to have a significant effect on the growth rate of the manufacturing sector.

This finding is consistent with Wibawa and Prasasti (2025), who found that inflation did not have a significant effect on the long-run growth of the manufacturing sector in East Java. Similar findings were reported by Nurhayani (2022), who found that inflation did not significantly affect the manufacturing sector in Indonesia. The consistency of these findings suggests that changes in inflation do not necessarily constitute a direct determinant of manufacturing sector growth in the long run. In the context of this study, variations in manufacturing sector growth may be more closely related to factors other than inflation, such as production conditions, input availability, investment, and demand for manufactured products.

Short-Run Estimation (Error Correction Model)

Although the long-run estimation results indicate that consumer goods imports and raw material imports have significant effects on the growth rate of the manufacturing sector, these results do not fully capture the dynamics occurring in the short run. Therefore, the analysis is extended using the *Error Correction Model* (ECM) to identify the short-run effects of each variable on the growth rate of the manufacturing sector.

Table 6. Short-Run Estimation Results (ECM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Manufacturing Sector Growth Rate (-1))	-0.121426	0.111991	-1.084244	0.2855
D(Consumer Goods Imports)	-0.316246	1.924729	-0.164307	0.8704
D(Consumer Goods Imports (-1))	8.135608	1.887701	4.309796	0.0001
D(Consumer Goods Imports (-2))	3.007527	1.835736	1.638322	0.1101
CointEq(-1)*	-0.455355	0.073186	-6.221917	0.0000

Based on the *Error Correction Model* (ECM) estimation results presented in Table 6, consumer goods imports do not have a significant effect on the growth rate of the manufacturing sector in the current period. This is indicated by the coefficient of -0.3162 and a probability value of 0.8704 . However, the effect becomes evident with a one-period lag, with a positive coefficient of 8.1356 and statistically significant at the 5 percent level ($p\text{-value} = 0.0001$). This result indicates that an increase in consumer goods imports is not immediately reflected in the growth rate of the manufacturing sector within the same period, but its effect becomes evident in the subsequent period. Meanwhile, consumer goods imports with a two-period lag have a positive coefficient of 3.0075 but are not statistically significant ($p\text{-value} = 0.1101$).

Thus, in the short run, the effect of consumer goods imports on the growth rate of the manufacturing sector is primarily observed with a one-period lag, while the effects in the current period and with a two-period lag are not statistically significant. This pattern suggests that the response of economic activity to changes in imports does not necessarily occur within the same period but may emerge after a time lag. Millia et al. (2021), using quarterly data for Indonesia and an ARDL approach, found that changes in several import components in the current period and previous periods affected economic growth in the short run. These findings indicate that the relationship between imports and economic activity may involve time dynamics, although the pattern and direction of the effects may vary depending on the type of imports and the indicator of economic activity used.

Furthermore, the CointEq(-1) coefficient of -0.4554 , which is statistically significant, indicates an adjustment process from the short-run dynamics toward the long-run equilibrium. This value indicates that approximately 45.54 percent of the disequilibrium is corrected within one period. Thus, when a deviation from the long-run relationship occurs, the growth rate of the manufacturing sector gradually adjusts toward its equilibrium level. The *Bounds Test* results also show an F-statistic of 6.9682 , which is higher than the upper bound critical value of 3.67 at the 5 percent significance level. This indicates the existence of a long-run relationship among the variables in the model.

When comparing the short-run and long-run results, consumer goods imports show different effects on the growth rate of the manufacturing sector. In the short run, consumer goods imports have a positive and significant effect with a one-quarter lag, whereas in the long run, the effect becomes negative and significant. This difference indicates that the response of the manufacturing sector to consumer goods imports may change as the economic adjustment process unfolds. In the short run, an increase in consumer goods imports may occur alongside increased economic activity and domestic demand, thereby providing a temporary stimulus to industrial activity. However, in the long run, sustained increases in consumer goods imports may intensify competition with domestic products.

Agustina (2018) found that increased import competition in Indonesia had a negative effect on labor market outcomes in the manufacturing sector, with the effect primarily driven by consumer goods imports. This condition suggests that when imported consumer goods directly compete with products manufactured by domestic industries, greater import penetration may constrain domestic industrial activity. Therefore, the different directions of the short-run and long-run effects found in this study indicate that the impact of

consumer goods imports on the manufacturing sector may change over time, shifting from a temporary stimulus in the short run to stronger competitive pressure on domestic industries in the long run.

IV. CONCLUSION

This study aims to analyze the effects of consumer goods imports, raw material imports, and inflation on the growth rate of the manufacturing sector in Indonesia using the *Autoregressive Distributed Lag* (ARDL) approach. The results show that, in the long run, consumer goods imports have a negative and significant effect on the growth rate of the manufacturing sector, while raw material imports have a positive and significant effect. Meanwhile, inflation does not have a significant effect in the long run. In the short run, consumer goods imports do not have a significant effect in the current period but have a positive and significant effect with a one-quarter lag, while the effect with a two-quarter lag is not significant. The *Error Correction Model* (ECM) results indicate an adjustment mechanism toward long-run equilibrium, with approximately 45.54 percent of the disequilibrium being corrected within one quarter.

The different directions of the effects of consumer goods imports in the short and long run indicate that the response of the manufacturing sector to consumer goods imports may change over time. In the short run, an increase in consumer goods imports may be associated with increased economic activity and domestic demand, such that its positive effect on industrial growth becomes evident in the following quarter. However, in the long run, an increase in consumer goods imports may intensify competition with domestic products and potentially reduce demand for goods produced by domestic industries. In contrast, the positive long-run effect of raw material imports indicates that access to inputs from abroad can support production processes and manufacturing capacity. These findings suggest that different types of imports do not have the same effects on industrial performance, and therefore, the characteristics and functions of each type of import should be considered in trade policy analysis.

From a practical perspective, the findings indicate that trade policies may consider differences in the functions and characteristics of imports based on their end use. The availability of imported raw materials remains important because it can support the continuity of production processes and manufacturing activities. However, in the long run, strengthening the capacity of domestic industries to supply raw materials is also necessary to reduce excessive dependence on external conditions. Meanwhile, for consumer goods imports, improving the competitiveness of domestic products should receive attention so that domestic industries can meet consumer demand and compete with imported products. Thus, trade policies can be directed toward supporting production input requirements while strengthening the capacity and competitiveness of domestic industries.

This study has several limitations. Capital goods imports could not be included in the model because they did not meet the stationarity requirements; therefore, their effect on the growth rate of the manufacturing sector could not be analyzed. In addition, the study uses aggregate national-level data and therefore does not capture differences in the characteristics of manufacturing subsectors. Future studies could use subsector- or firm-level data and consider other relevant variables, such as investment, exchange rates, exports, productivity, and the degree of dependence on imported inputs. The use of more disaggregated data is expected to provide a deeper understanding of the factors associated with the performance of the manufacturing sector in Indonesia.

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