



# Expanding Philippine Trade: Measures to match Intra-ASEAN-4's Trade Level

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## ABSTRACT

The Philippines has copious natural resources and a literate workforce, creating a possibility of further growth and being at par with Members' Intra-ASEAN Trade Levels and ASEAN's Average Trade Level. With this, the effect of the Philippine Total Trade, GDP by Sector, Foreign Direct Investment (FDI), and Intra-ASEAN Trade by Products on the Philippine Intra-ASEAN Trade Level were examined among the ASEAN-4 nations – Indonesia, Malaysia, Thailand, and Singapore. Such was necessary to state if a connection exists between the former and the latter. Moreover, as numerous countries form trade blocs globally, trade agreements for broader economic integration and grow their trade, as the world is interconnected through trade. This study will reinforce those external initiatives by foreign countries (FDI) and regional organizations (ASEAN) will remain keys to further trade liberalization and economic growth in the Philippines.

*Keywords: ASEAN-4, GDP Growth Rate by Sector, FDI, Total Trade*

## 1. Introduction

Can the Philippines expect to be at par with its ASEAN member countries? Philippines — designated to be one of the five founding countries of ASEAN, established on August 8th, 1967, with neighboring countries, including Indonesia, Malaysia, Singapore, and Thailand. Its vital objective is to “accelerate the economic growth, social progress and cultural development in the region, promoting regional peace and stability, encouraging active collaboration and mutual assistance in the economic, social, cultural and technical, and administrative spheres”. It has cultivated over 700 assemblies a year regarding economic, political, cultural, educational, and security challenges and initiatives.

These ASEAN countries represent a collective market equivalent to 620 million people and are home to a growing workforce and improving consumption-oriented middle class with a reported



combined GDP of over USD2.2 trillion in 2012, which most economists expected to double in 2020. For the past five years since 2014, ASEAN's five founding countries have been recognized as flourishing as any other regional organization globally. As mentioned in the ASEAN Foreign Trade, Investment and Integration in Comparative Perspective, the Intra-ASEAN trade deepened. It now comprises a quarter of the total trade of ASEAN countries, compared to a fifth in the early 1990s and 18.6% in the 1980s. Such indicates that the intra-ASEAN merchandise trade is significantly soaring compared to the business within SAARC and Mercosur yet still remarkably lower than the NAFTA and EU. Nonetheless, such a lower stance than the latter does not equate to the failure of ASEAN's regional integration efforts. (Lehmarcher, 2016) stated that the ASEAN trade improved from 2007 to 2014, valued at USD1 Trillion within the region, China, Europe and Japan, and United States, respectively. However, these accomplishments are insufficient for the potential significance of further growth, considering that the ASEAN is the third-largest market globally, following China and India. It was also remarked as the seventh-largest economic power, comprising a combined GDP of USD 2.6 Trillion.

In the 2018 ASEAN statistical highlights, the Philippines have intra-ASEAN exports of goods by destination equivalent to 15.6%, with a 7.9% lag the average ASEAN trade level of 23.5%. The surge in investments and wage ascent led to changes in the comparative advantage of several ASEAN member states over the past three decades. It resulted in Malaysia, Thailand, and the Philippines – known as export competitive countries with skilled, labor-intensive industries for electronics and electrical equipment becoming less competitive in low-skilled, labor-intensive industries. Moreover, Indonesia, Myanmar, Singapore, Thailand, and the Philippines increased their reliance on the ASEAN region as an export market and import source, especially Indonesia and the Philippines.

In this paper, the researchers discussed and identified the variables and critical policy suggestions that the Philippines and other ASEAN countries could adopt to influence its expansion, resulting in an increase in the Philippine trade level to match its neighboring countries and the intra-ASEAN trade level. It also attempts to shed light on how international trade and politics and domestic interactions and institutions can influence the outcome of the Philippine trade position at the intra-ASEAN level.

## 2. Literature Review

### 2.1. Total Trade of the Philippines to Philippine Intra-ASEAN Trade with ASEAN-4

The Philippine Statistics Authority (PSA) perceived that the Philippines' total external trade from January 2021 to 2022 comprised 64% of imported goods, leaving the rest for exports. The Philippines' most significant export primarily came from manufacturing goods, accounting for 83.7% of the total exports yet electronic and electrical products accounted for the highest sales in the total exports, amounting to US\$ 3.51 billion. Such was composed of the United States of America (USA) having the highest export share, followed by the People's Republic of China (14.6%), Japan (13.7%), Hong Kong (12.2%), and Singapore (6.8%). Moreover, the highest imports of the Philippines were focused on raw materials and intermediate goods, representing



41.3% of total imports. Nevertheless, E&E products maintained the highest import value in the total import, amounting to USD2.79 billion. The people's Republic of China is the biggest supplier of imported goods sharing 19.3% of the total imports, followed by the Republic of Korea (9.8%), Japan (8.8%), the USA (7.1%), and Singapore (5.7%).

According to World Trade Organization's trade policy review, the Philippine trade policy constitutes a great hindrance to competition, leaning toward the country's domestic interests, resulting in non-tariff barriers impeding imports and restricting some exports (Van de Haar, 2011). Healthy competition arises when both the public and private sectors create an innovative environment where firms effectively exchange and collaborate on ideas to increase the performance of both sectors (Andriese, 2017). Canare and Francisco (2017) even concluded that competition and innovation positively affect Small and Medium Enterprises (SMEs) in the Philippines. Hence, SMEs can benefit from globalization and regional integration as the Philippines is more open to trade. Moreover, its participation in the Global Value Chains (GVC), regional production networks, and innovations from technological spillovers in a competitive environment can result in the development of new products and improve the production process (Aldaba, 2017).

Mehar (2021) concluded that monetary policy intervention creates new trade activities in the private sector. Moreover, political influences are perceived to have a slow growth effect on trade and establish a more stable environment in the long run (Perkin, 2021), contrasting profitability which increases over time as the firm grows (Gangakhedkar et al., 2021). In addition, Galkin, Bollino and Atalla (2018) argued that Preferential Trade Agreements (PTA) is the dominant factor affecting the trade flows of oil products. However, Chang, Chiang, and Huang (2020) stated that shipping and logistics positively impact trade after production. Export companies must adjust to globalization and rapid global market changes since they significantly influence the international trade market (Yana et al., 2017). A country's geographic location affects the acquisition of direct and spillover effects of merchandise trade (Lin et al., 2020). Thus, timely tracing and tracking of exports positively impact trade and is a good indicator of export competitiveness (Olyanga et al., 2021).

In various countries worldwide, regionalism was developing – forming regional trade agreements, and integrating their labor and investment economies (Kang, 2016). One of ASEAN's first measures in integrating members' economies and trade was the 1992 ASEAN Free Trade Agreement (AFTA) which anticipates eliminating non-tariff barriers, addressing diversification among the ASEAN-4 industries to better allure investors. The ASEAN market interdependence resulted in significant micro and macro metrics growth and a more financially developed and transparent economy (Lee and Hooy, 2013). Moreover, the AFTA has forged ahead in trade liberalization, leading to the 2015 ASEAN Economic Community. Apart from tariff reduction and elimination, it also emphasized industry-focused efforts to abolish non-tariff barriers, resulting in a climatic increase in exports among ASEAN countries. Aslam and Hamid (2017) affirmed that the textile industry's exports between the ASEAN-4 tripled, with the share of exports between ASEAN countries remaining between nine to ten percent onwards.



The 2021 ASEAN Key Figures presented the intra-ASEAN trade with the most significant share of ASEAN's Total Trade. In 2020, the Intra-ASEAN Trade Level was 21.3%, lower than 22.5% in 2019 – with an Intra-ASEAN market standing of 21.3% and 21.2% for exports and imports in ASEAN's Total Merchandise, respectively. Moreover, within the same year, Singapore was hailed as the largest exporter among the ASEAN Member States, with 27.6%. It also conquered the 2020 import reports, with 26.7% of the total ASEAN imports, followed by Vietnam (15.4%), Malaysia (15.4%), and Thailand (13.7%). Furthermore, Cruz et. al (2016) mentioned that trade openness permits domestic firms to face new competition, whereas exporting firms will have more access to the market. However, Fulton and Reynolds (2015) stated that if a political economy assists the country's export system, it can lead to a radical response from the international market which benefits the domestic demand for exports. Yue and Das (2015) even mentioned that the country's economic growth could improve through economic restructuring and the financial incentives and facilities in pursuit of research and development spearheaded by the government.

In 2019, all ASEAN members with Japan, South Korea, China, Australia, and New Zealand, signed the Regional Comprehensive Economic Partnership (RCEP). Chang et al. (2020) stated that trade creation with RCEP countries was better than in the EU, which developed production, maritime transport, and trade networks. In comparison, inside the single common market of the EU, most of its member states have a significantly high intra-EU share, averaging 62% of their export of goods were intra-EU export of goods as reported by Eurostat. The European Union was one of the notable regionalisms that was formed. It is a supranational union with more than 20 member states – acting as a governing body, having its own democratically elected parliament, executive branch, court, unified central bank, and currency. In 1986, the EU established its single common market for its member states, with 12 states consequently signing the Single European Act. This agreement permits the market of each member state to merge into one larger market, allowing free mobility of goods and services, people, and capital across their borders.

According to the World Bank and Federal Statistical Office of Germany, Germany is the 2020 third-largest exporter globally, with about 53% of its exports transported among other EU member states. Ireland was declared with the lowest intra-EU export share, with only 41% of their total export. Based on the 2020 World Bank data, most EU member states have a soaring total export-to-GDP ratio with an average of 67%. Among the 2020 top 5 world's largest economies, Germany has a high export to GDP ratio of 43% compared to the US, China, Japan, and India, with below 20%. In Africa, most African Union (AU) members also aimed for economic integration by signing the Malabo Declaration on Accelerated Agricultural Growth Transformation for Shared Prosperity and Improved Livelihoods. Such aims to increase agricultural productivity and trade between African countries. In the study by Bouet et al. (2017), Malawi and Guinea-Bissau will be countries that will benefit from this agreement as both major exports are agricultural products.

**H1: Total Trade of Philippines has no significant effect on expanding Philippines' trade within ASEAN-4 countries.**

## **2.2. GDP Growth Rate by Sector to Philippine Intra-ASEAN Trade with ASEAN-4**



Electronics and Electrical equipment were the Philippines' most exported goods wherein Frederick et. al (2014) reported that the E&E industry cradles 20% of employment in the Philippine Manufacturing sector. According to the Philippine Export Zone Authority (PEZA), numerous facilities were upgraded these past decades – ISO certified, and expansion investments were made in export zones. Moreover, various foreign companies had established manufacturing facilities in the Philippines, namely Toshiba, Canon, Analog Devices, Maxim, and Fairchild. The organization also apportioned data regarding the total number of expansion and new projects welcomed by firms structured in the export zone, acting as a proxy variable for product and process upgrading. The E&E industry received 109 expansions towards process upgrading and 642 new products towards product development, representing 12% of all initially recorded investments yet accounting for growth and new projects – 21% and 37%, respectively.

**Table 1**  
**PEZA Investments by E&E Firms (1978-2015)**

PSIC Industry	Original	Expansion	New Projects
<b>Total</b>	<b>372</b>	<b>109</b>	<b>642</b>
Radio, Television, and Communication Equipment and Apparatus	240	82	471
Electrical Machinery and Apparatus, N.E.C.	101	22	74
Office, Accounting, and Computing Machinery	23	4	72
Medical, Precision, and Optical Instruments, Watches and Clocks	8	1	25
<b>E&amp;E Share of All PEZA Entries</b>	<b>12%</b>	<b>21%</b>	<b>37%</b>

*Source: Philippine Export Zone Authority (PEZA)*

Opposite the growing E&E manufacturing industry, most of the Philippine Manufacturing sector experienced sluggish growth despite its efforts to open the market through tariff and non-tariff barrier removal. Moreover, the industry failed to create adequate employment opportunities to welcome new entrants into the labor force and those who moved from the agricultural sector. In the past three decades, the manufacturing sector's contribution to employment ranges bleakly between ten to twelve percent, lower than its recent performance. With this, most of the labor force was forcibly displaced to the unproductive sectors. However, it was still recognized that the rest of the manufacturing industry is an FDI magnet for the Philippines, with Japan, the US, Hong Kong, Mainland China, and Singapore as its major export markets.

The Philippine manufacturing sector among ASEAN countries involves component fabrication, capital electronic equipment, and semiconductors. It was shown in the study of Bhaskaran (2020) that production in the E&E industry was affected by inventory adjustments due to supply and demand fluctuations. Contrastingly, our neighboring countries are developing with Malaysia's E&E sector has been the leading employer in the manufacturing industry since the 1980s. Numerous semiconductor firms from the US, such as Motorola and Intel, invested heavily in Penang and some started at Bayan Lepas Free Trade Zone within the state (Whah et al., 2018). Moreover, 11% of the global semiconductor market was from Singapore in 2018 (Elms, 2021), together with Thailand, which also has its E&E industry as its largest manufacturing export, with



its automotive sector rapidly growing (Kawai, 2011). Meanwhile, Athukorala and Kohpaiboon reported that, while there is a notable increase in their total trade, there is a favorable growth in exports for Thailand, wherein Australia's vehicle imports partly include imports from Thailand. However, Indonesia's E&E industry is declining, specifically in the Batam area (Grunsvan et al., 2017).

In addition, the global supply chain was very complex as many firms and countries produced parts of the products, especially at cheaper costs. This practice is prominent in the electronics industry, as many foreign electronic companies establish facilities and regional headquarters in various countries to produce the parts of their products. Foreign companies like Foxconn, LG, and Panasonic have manufacturing facilities in Vietnam (Frederick, Gereffi, 2016), while Japanese firms also established offshore facilities like Sharp and Matsushita in Malaysia, establishing their regional headquarters and production facilities. Due to the growing automobile sector in Thailand, Mitsubishi Electric set its Regional Headquarters and regional activities in the region. Notably, most of Mitsubishi's factories in the Southeast are in Thailand (Edgington & Hayter, 2013).

It is also insightful to note that outside ASEAN, Germany's manufacturing sector has experienced export growth due to the contribution of manufacturing firms with more than 500 employees (Wagner, 2013). In the hard drive industry, many firms were offshoring their production around the 1990s. The data gathered by Mitsuru Igami (2018) shows that there were more offshore factories than home factories during that time, and many firms shifted to Southeast Asia for cost-reducing investments. Moreover, local Chinese companies in the semiconductor and electronics industries, like Huawei and Semiconductor International Corporation (SMIC) were growing and becoming competitive globally. Huawei's products range from smartphones to computer chips and telecommunication equipment. With a significant investment of Chinese companies in innovation and development, continuous improvement of their products was established.

**H2: GDP by sector has no significant effect on expanding the Philippines' trade within ASEAN-4 countries.**

### **2.3. Foreign Direct Investment to Philippine Intra-ASEAN Trade with ASEAN-4**

ASEAN received global attention through its dynamic and steady growth throughout the recent two decades. Such powered the prediction of befitting to be one of the five largest economies in the world (Nguyen, 2021a). However, most of the ASEAN member countries are considered developing countries, which generally entails the demand for capital investment on account of the low rate of gross domestic savings. Foreign direct investment is vital for further economic growth and development.

Furthermore, ASEAN developing countries were acknowledged as the largest FDI recipient by alluring US\$476 billion, contradicting the global trend. Such receivables contributed to the increase in the global FDI share from 25 to 33 percent in 2016 and 2017, respectively (UNCTAD, 2018). In earlier reports, among the ASEAN member countries, Singapore received 45 percent of the Total FDI, amounting to US\$ 62 billion, greatly influencing its GDP. On the other hand,



Indonesia gained the most intra-regional investment, accounting for 45 percent of ASEAN's Total FDI, with Singapore as its leading investor (ASEAN & UNCTAD, 2018). Such reports can justify that the Philippines had every reason to embrace the prospect of improving its traditional position in a region abundant with agricultural resources and biodiversity, accounting for an estimated US\$ 305 billion in nominal GDP. Nonetheless, between 1986 and 2006, it reflected its listless economic performance through a GDP growth rate of only 1.8, making its neighboring countries regard it as the "Sick Man of Asia."

According to the Asian Development Bank (ADB), the Philippines's average growth rate in USD was 4.1%, the lowest among all ASEAN+3 countries excluding Japan and Brunei. Moreover, it stated that it does not anticipate any improvement from the Philippines and will continue to be the poorest among the ASEAN founding member countries. It cradles the highest incidence of poverty, income inequality, and low levels of socioeconomic development, receiving less FDI than its neighboring countries.

In earlier studies, it was contended that FDI only made a minimal economic impact, deeming management training as its sole positive output while regarding negligible capital inputs. With this, Nielsen et al. (2017) state that "other studies empirically identified that FDI is captivated by countries with significant demand or market size, and such study supports other variables such as the quality of formal institutions and the provision of special economic zones within the region to be an advantage for a country to receive more FDI." Moreover, Ali (2017) argues that "the capacity to enhance the country's competitiveness and productivity will establish the possibility of not only increasing the country's income level but also becomes its return-on-investment factor, which is considered one of the important determinants to explain economic growth prospects."

The Philippines' existing FDI is directly related to low-skilled, labor-intensive automotive production and electronics assembly, contributing to intra-industry trade flows. From the 1970s to the 1990s, affiliates of Japanese automotive manufacturers such as Toyota, Mitsubishi, Honda, and Isuzu, accompanied by an American firm, Ford, established their existence in the Philippine domestic automotive industry. In recent years, there have been some early indications of the domestic automotive industry through the emergence of ASEAN Auto Production Networks (Doner et al., 2021). Through this, Ofreneo (2016) reported that the media already entitled the Philippines as Toyota's "transmission capital." However, Ford and Toyota only designated the country as their export platform for passenger cars and manual transmission export hub, respectively, with wiring harnesses and transmissions as their significant exports. Thus far, the expected backward linkages are still limited due to labor-intensive and highly import-dependent exports.

In addition, the Philippine automotive industry was expanding with almost three decades of import substitution. Yet, according to Balaoing-Pelkmans, 2017, current case-study evidence supposes that the Philippines has experienced a lag in "industrial upgrading." Such meant that most of the parts and components sector remained unprogressive and could not advance to the high-value segments of the production process. Such limited backward linkages sprouted a weak connection between the automotive industry and the local parts and components sector, resulting in a low count of locally sourced domestic parts and components. It accounted for only 10 to 15% of the



aggregate number of parts and components required by local assemblers, compared to Thailand, which sources 85 to 90% of their needed supplies domestically.

In 2014, the Philippines exported over US\$ 29 billion in Electronics and Electrical related products with 87% and 13%, respectively. It was stated that the industry began through semiconductor manufacturing in the 1970s, progressing from 5,000 employed workers to 47,000 by 1984, and was driven through investments and subsidiaries. SEIPI (2015b) stated that the E&E firms are geographically clustered in CALABARZON and Metro Manila with 42% and 48%, respectively, and a few in Cebu and Northern/Central Luzon with 7% and 3%, respectively.

In 2015, the sector progressed to acquiring 498 – owned mainly by foreign MNCs, contributing to a significant portion of FDI. With this, there are designated functions for domestic suppliers and E&E subsidiaries, falling under assembly and testing parts and components, mainly semiconductors. According to the Department of Trade and Industry (2017), such accounts for two-thirds of the E&E exports and firms. Nonetheless, it was approximated the Philippine E&E participation rate would be less than 15%. Such is due to the heavy concentration in the semiconductor assembly, packaging, and testing (APT) sector and the narrow operating range of the country. With this, the Philippines is introduced to vulnerability with its declining participation in the global electronics market and depression in the semiconductor APT, resulting in limited spillover opportunities into the local economy.

Furthermore, MNCs that can establish an increment in their local purchases are typically halted by their headquarters, following a mandate of a global buying program from their parent company. Such requires these MNCs to import from selected international suppliers regardless if these items can be locally sourced. Through this, Philippine suppliers are adjusting themselves to become one of these certified global MNC suppliers, yet the approval process is often delayed and expensive. However, ASEAN-Japan Centre (2017) states that even if the E&E is highly dependent on foreign inputs and technologies, the industry is establishing a high level of Export DVA at 54 percent, garnering the highest GVC participation.

**H3: FDI has no significant effect on expanding Philippines' trade within ASEAN-4 countries.**

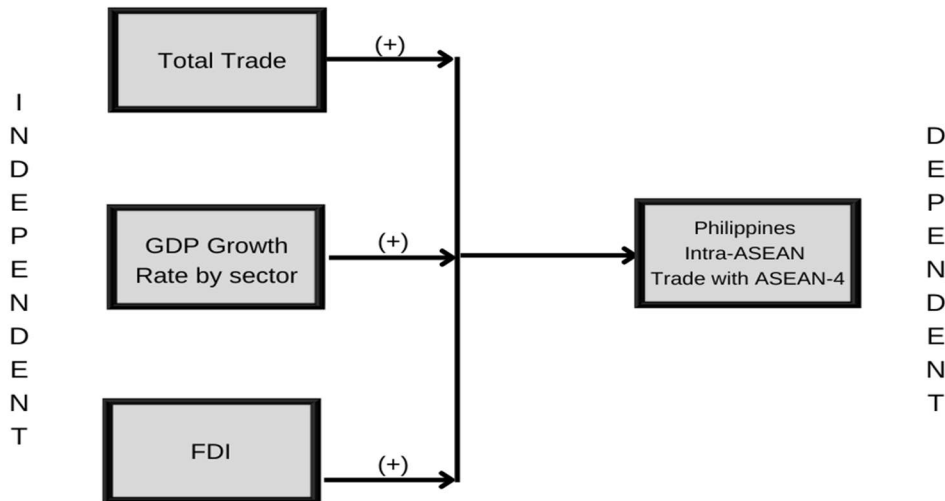
## 2.4. Synthesis

In this paper, the researchers are determined to identify the opportunities to leverage further the Philippines and its resources in imports and exports – improving its competitiveness with the Agriculture, Industry, and Service sectors with the aid of Foreign Direct Investment. In the citations mentioned above, it became imminent that the Philippines, although copious with natural resources and a literate workforce – still has a lower trading position than its ASEAN founding member countries. With this, the Philippines could anchor in acquiring Foreign Direct Investment which can increase the economic opportunities and create a technological spillover effect beginning from the E&E industry. Such will enhance the Philippines' production process in the said industry and the other linked sectors.





### 2.5. Simulacrum



### 3. Research Method

In this study, the researchers examined the factors of the Total Trade of the Philippines, Philippine Gross Domestic Product of Agriculture, Industry and Service sectors, and Foreign Direct Investment in the Philippines affecting the Philippines' Intra-ASEAN trade. The secondary data were gathered from the World Bank for the Gross Domestic Product by total, Sector, and Foreign Direct Investment. Meanwhile, the Philippines Statistics Authority for Total Trade. Conforming with previous related studies of Charoenrat and Harvie (2017), Pandian (2017), Canare and Francisco (2021), and linear regression analysis from the econometric model in expanding Philippine intra-ASEAN trade using the function below:

$$INTRA_{asean} = f(TRADE_{total}, GDP_{sector}, FDI)$$

Deriving the function into an econometric model by adding constant and error term:

$$INTRA_{asean} = \beta_0 + \beta_1 TRADE_{total} + \beta_2 GDP_{sector} + \beta_3 FDI + \epsilon$$

INTRA<sub>asean</sub> = Intra-ASEAN trade of Philippines

TRADE<sub>total</sub> = Total Trade (Export+Import) of Philippines

GDP<sub>sector</sub> = Gross Domestic Product Growth Rate by Sector

FDI = Foreign Direct Investment to Philippines (Net Inflow)

ε = Error term

The researchers will utilize Ordinary Least Square in estimating the linear regression parameters and the significance of the p-value. Moreover, a multicollinearity test will also be employed as a pre-estimation approach to confirm that the regressors are not reliant on each other and incorporate pairwise Pearson's correlation between the four variables of interest. The Breusch-Pagan test will



also be applied to detect the non-constancy of heteroskedasticity and normality of residuals in identifying that the underlying residuals of the data become normally distributed. In addition, when heteroskedasticity and non-normality are visible, a variable transformation must be carried out on the response variable, and a new model must be if needed. Furthermore, the stationarity of variables would ensure that the variables' values do not change over time—the autocorrelation to determine whether the observed variables are related. The Ramsey Regression Equation Specification Error Test (RESET) will also be applied to measure whether the fitted values of the nonlinear combinations can explain the response variables and whether there were variables or inappropriate functional forms.

## 4. Results and Discussion

### 4.1. Establishing Relevance of Variables

This research aims to measure the Philippines' multilateral trade by assessing its industries' and sectors' Intra-ASEAN trade among the ASEAN-4 member countries. A data set of 38 yearly observations (1983-2020) in each country of the ASEAN-4, the GDP growth rate by sector, and FDI were collected from the Philippine Statistics Authority (PSA) databases and the World Bank for a total of 38 observations.

#### 4.1.1. The First Stage Consisted of Estimating the Reduced Form of Equations by OLS:

$$\text{INTRAasean} = \beta_0 + \beta_1 \text{TRADEtotal} + \beta_2 \text{GDPsector} + \beta_3 \text{FDI} + \epsilon$$

All measurements used in the econometric model are in monetary values and ratios. The Intra-ASEAN trade of the Philippines consists of the output of trade from the ASEAN-4 countries (Indonesia, Malaysia, Singapore, and Thailand). The total trade of the Philippines included the output of total imports and exports from various countries. Gross domestic product (GDP) growth rate by sector comprises growth rates of output from the agriculture, industrial, and service sectors. Foreign direct investments (FDI) in the Philippines involve transactions that contribute to the net inflow of the country.

**Table 2**  
**Philippines-Indonesia Trade (1983 to 2020)**

	<i>Coefficient</i>	<i>p-value</i>	Significance
const	-4.22223e+07	0.4267	
d_agrate	8.17703e+08	0.1528	
d_indrate	-1.08950e+09	0.3009	
d_srvrate	-4.16666e+08	0.6895	
d_PHTotalTrade	0.0314435	<0.0001	***
d_PHFDI	0.166875	0.0021	***



Table 2 exhibited that the Philippines' Total Trade and FDI Inflow presented a positive effect and are significant to the Philippines-Indonesia trade. Meanwhile, the Agricultural growth rate only bore a positive yet insignificant effect, whereas the Industrial and Service growth rates conveyed a negative and insignificant effect on the PH-IND trade.

**Table 3**  
**Philippines-Malaysia Trade (1983 to 2020)**

	<i>Coefficient</i>	<i>p-value</i>	Significance
const	2.43010e+07	0.7401	
d_agrrate	7.87592e+08	0.3160	
d_indrate	6.20699e+08	0.6682	
d_srvrate	-7.41723e+08	0.6078	
d_PHTotalTrade	0.0237376	0.0015	***
d_PHFDI	-0.0323942	0.6430	

Table 3 exhibited that the Philippines' Total Trade presented a positive effect and is significant to the Philippines-Malaysia trade. Meanwhile, the Agricultural and Industrial growth rates only bore a positive yet insignificant effect. In contrast, the Service growth rate and FDI Inflow conveyed a negative and insignificant effect on the PH-MY trade.

**Table 4**  
**Philippines-Singapore Trade (1983 to 2020)**

	<i>Coefficient</i>	<i>p-value</i>	Significance
const	1.64059e+08	0.3870	
d_agrrate	-2.02077e+09	0.3178	
d_indrate	1.29265e+010	0.0014	***
d_srvrate	-6.70181e+09	0.0784	*
d_PHTotalTrade	0.0301109	0.0963	*
d_PHFDI	-0.296979	0.1055	

Table 4 exhibited that the Philippines' Total Trade, and Industrial and Service growth rates are significant with the Philippines-Singapore trade. However, the Service growth rate posed a negative impact on the said trade. Meanwhile, the Agricultural growth rate and FDI Inflow conveyed a negative and insignificant effect on the PH-SG trade.



**Table 5**  
**Philippines-Thailand Trade (1983 to 2020)**

	<i>Coefficient</i>	<i>p-value</i>	Significance
const	1.40479e+07	0.8593	
d_agrrate	-1.09666e+09	0.1994	
d_indrate	1.48516e+09	0.3461	
d_srvrate	-1.84092e+08	0.9061	
d_PHTotalTrade	0.0384097	<0.0001	***
d_PHFDI	0.00469825	0.9504	

Table 5 exhibited that the Philippines' Total Trade presented a positive effect and was significant to the Philippines-Thailand trade. Meanwhile, the Industrial growth rate and FDI Inflows only bore positive yet insignificant effects, whereas the Agricultural and Service growth rates conveyed negative and insignificant effects on the PH-MY trade.

## 5. Conclusion

This research aims to identify the variables that the Philippines can concentrate on and further enhances and improves its trade with other countries by analyzing its current trade relationship with its ASEAN co-founding member countries, namely Singapore, Indonesia, Malaysia, and Thailand. The tables above prove that the manufacturing segment of the Philippine industrial sector positively contributed to the growing Intra-ASEAN trade with three of its co-founding members, particularly Singapore, Indonesia, and Thailand. Moreover, the Total Trade also positively impacted the Intra-ASEAN-4 trade, demonstrating the impact of globalization. Consequently, the Philippines' Industrial sector has benefited from FDI, indicating a significantly positive effect on its Intra-ASEAN trade.

In addition, the Agricultural and Industrial sectors have significantly contributed to the Philippines-Malaysia trade. Meanwhile, the Industrial sector significantly contributed to the trade between the Philippines and ASEAN-3 member countries, Indonesia, Singapore, and Thailand. Such poses an unequivocal statement that the Industrial sector is vital to the trade between the Philippines and ASEAN-4. Moreover, statistics indicated a positive impact on trade for the Philippines' economic growth. Trade and other FDI inflow provided economic opportunities, leading to increased income and productivity of the Intra-ASEAN trade among the co-founding member countries.

## 6. Recommendation

The researchers also perceived the Philippines' shortcomings in (1) attracting an export-oriented FDI, (2) sustaining the growing manufacturing sector, and (3) effectively allocating its resources. Such drawbacks led to several recommendations wherein the researchers suggested that the Philippines exhibit a more assertive approach towards alluring foreign direct investment.



Developing countries like the Philippines rely heavily on FDI to sustain their economic growth. However, such a task is challenging considering the protectionist trade policy of the Philippines that fortifies import-substitution, especially in the manufacturing sector, and the effect of global advancements such as the emergence of NAFTA and EU, which insinuates a fiercer competition for resources and markets. Suppose the prospect of receiving substantial FDI progresses; it can allow the development of a more efficient E&E and automotive manufacturing industry, creating a possible technological spillover toward other segments of the said sector and backward linkages of industrialization.

Moreover, the allurement of investment for local and foreign firms can lead to establishing of more factories and facilities, increasing the Philippine production capacity. Foreign investments will contribute to the Philippines' Intra-ASEAN trade by expanding the manufacturing sector, which is the country's most significant trade contributor. The Philippines must institute a policy environment that supports competition as it can highlight the emergence of newer products and improve production. Furthermore, policymakers should implement regulations encouraging investment in the agricultural sector, considering that it is the second most significant sector and its means of crop cultivation through its rich and abundant land. To achieve this, the Philippines must also increase its participation and coordination within the ASEAN regional integration process to institutionalize a single common market – the most effective method for maximizing the benefits of political and economic unions.

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