



**Article Type:** Research Paper

## Impact of Manufactured Exports on Economic Growth in ASEAN

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**THIS ARTICLE IS AVAILABLE IN:**

<http://journal.umy.ac.id/index.php/jerss>

**DOI:** [10.18196/jerss.040121](https://doi.org/10.18196/jerss.040121)

**CITATION:**

Agustin, L., & Nahar, F. H. (2020).  
Impact of Manufactured Exports  
on Economic Growth in ASEAN.  
*Journal of Economics Research and  
Social Sciences*, 4(1), 82-86.

**Abstract:** Economic growth is an essential factor to measure how prosperous the economy of a country is. Therefore, each country will always try to increase their economic growth and put it as its economic target. This research aimed to find out the factors that influence the economic growth in ASEAN member countries during 2007–2016. The analysis method used was Generalized Least Square (GLS) method and Fixed Effect Estimation model. The data used were the panel data of seven ASEAN countries. The result showed that Manufacturing Export, Foreign Direct Investment (FDI), Government Expenditure, and Population had a positive and significant effect on economic growth although the contribution of manufacturing export is just at a small magnitude.

**Keywords:** Economic Growth; Manufacturing Export.

### Introduction

Economic growth is an essential indicator of a country's prosperity. This is the reason why every country will always strive to grow their economy and set economic growth as its economic target and also long-term economic prosperity. That results in the making of both bilateral and regional economic cooperation to hasten economic growth. In Southeast Asia, regional economic cooperation has been happening for a long time. An example is the Association of Southeast Asian Nations (ASEAN), which is a geopolitical and regional economic organization formed to create a peaceful zone that is conducive to cooperation to grow economies, develop socio-culturally, and to ensure peace and stability in the regional area. In the dynamics of its development, ASEAN's economic cooperation led to the formation of ASEAN Economic Community (AEC) which, in reality, moves relatively faster than cooperations in politico-security and socio-cultural sides. Economic integration cooperation was intended to accelerate economic growth in Southeast Asia.

However, not all countries can achieve the expected economic growth. Several factors were culminating in it, one of which is a country's inability to supply its own needs domestically, which became the basis of the importance of establishing international cooperation between countries in the world (Halwani, 1993). Macroeconomically, one way to measure a country's competitiveness is to see the country's trade sector, especially exports (Soelistyo, 1981). According to ASEAN Secretariat's report on 50 years of economic development, ASEAN total exports of 2016 contributed 7.2% to world exports with a total export value of 2.236 billion US dollars

(ASEAN, 2017). ASEAN is a rapidly-growing region. Within half a century, Southeast Asian people have evolved from agrarian societies to become one of the fastest-growing regions in the world. One of the factors driving this rapid development was its position as a manufacturing center with relatively lower production costs. Over the past decade, the manufacturing sector has played an important role in ASEAN's international trade, both exports, and imports. A massive expansion in international trade of manufactured products caused the birthing of some ASEAN member countries as significant exporters. However, at the same time, ASEAN member countries also opened up their domestic economy to manufactured product imports from other countries (Shamasundari, 2017).

The manufacturing industry's contribution to total exports is relatively significant in various ASEAN member countries. Exports from the manufacturing sector have an essential role in the formation of ASEAN member countries' national exports, and they also contribute greatly to national economic growth. In the ASEAN Secretariat's 50 years report on economic development, it is reported that 66% of ASEAN's total exports are dominated by the manufacturing sector (ASEAN, 2017). Therefore, it is not excessive if the manufacturing industry becomes one of the strategic sectors to kickstart growth and development of a country's economy alongside manufacturing revitalization.

## Research Method

This research was conducted in seven countries out of ten ASEAN member countries. The first, consisting of five founding member countries: Indonesia, Malaysia, Singapore, Thailand, and the Philippines. The second, additional countries: Cambodia and Vietnam. Cambodia was included in the research model because it is the country with the largest total contribution of manufacturing exports to the country's total exports compared to other ASEAN member countries. Meanwhile, Vietnam was included in the research model because of an interesting history: 40 years ago, after the American defeat of the Vietnam regime, America implemented an embargo of arms sales on Vietnam for 50 years, until it was lifted in 2016. However, those conditions did not prevent Vietnam from maintaining its economy, which is shown through the development of the continually-increasing throughout 2007-2016.

In this study, the dependent variable used is GDP data as an indicator to measure economic growth; independent variable used Manufacturing Exports, Foreign Direct Investment, Government Expenditures, and Population data. The method used is a panel data regression analysis to analyze the available data. Panel data regression analysis is used to see the effect of the independent variables used in analyzing the factors that influence Economic Growth in ASEAN member states from 2007 to 2016. From several variables used, the research model can be arranged as follows:

$$GDP = f(EM, FDI, GE, PO)$$

$$GDP_{it} = \alpha + \beta_1 EM_{it} + \beta_2 FDI_{it} + \beta_3 GE_{it} + \beta_4 PO_{it} + \varepsilon$$

Data that is too large in numbers for the equation causes the regression equation to be remade with a logarithmic-linear (log) model:

$$\text{Log}(GDP)_{it} = \alpha + \beta_1 \text{Log}(EM)_{it} + \beta_2 \text{Log}(FDI)_{it} + \beta_3 \text{Log}(GE)_{it} + \beta_4 \text{Log}(PO)_{it} + \varepsilon$$

## Result and Discussion

After statistical testing was done to determine the right model to use in panel data estimation, it was concluded that the Fixed Effect model would be used in this study. The following is a table 1 showing the results of estimated data with the number of observations of seven ASEAN member countries in 10 years.

**Table 1** Fixed Effect Model Result Estimation

Variable	Coefficient	Std. Error	T-Statistic	Prob
Constant	-2,394602	3,064689	-0,781352	0,4377
Log_ME	0,094272	0,023419	4,025368	0,0002*
Log_FDI	0,018910	0,006148	3,075858	0,0032**
Log_GE	0,670682	0,039237	17,09329	0,0000*
Log_PO	0,553796	0,201860	2,743464	0,0080**

Source: *Processed data, 2019*

\* denotes significance at 1% level

\*\* and \*\*\* indicate significant at 5% level and 10% level respectively

$R^2=0,998562$   $\overline{R^2}=0,998319$  F-stat=4098,425; (P-value= 0.0000)

In this study, the positive influence gained from manufacturing exports on economic growth in ASEAN resulted in manufacturing exports playing a huge role. According to the ASEAN Secretariat's 50 years report on economic development, the ASEAN's manufacturing exports in 2016 reached 66% of its total exports (ASEAN, 2017). Thus, the percentage obtained makes manufacturing exports one of the strategic sectors that could increase economic growth and development.

Over the past decade, ASEAN export developments have been dominated by-products in the manufacturing sector. The reason is that ASEAN is a region with low production costs for the manufacturing industry, resulting in many foreign manufacturing companies relocating their operations to ASEAN countries. Thus, this condition created additional employment opportunities, increased exports, and more direct foreign investment into the ASEAN region, which will simultaneously increase the economic growth of the ASEAN region (Shamasundari, 2017). Products produced from the manufacturing sector come from various industries, including automotive, electronics, and textiles.

ASEAN Economic Community plays an important role in growing the manufacturing export market in Southeast Asia through trade liberalization such as establishing ASEAN

Free Trade Agreement (AFTA), infrastructure development, liberalizing foreign direct investment laws, and easing of doing business for foreign or domestic companies investing anywhere in ASEAN member countries. This could accelerate the output growth and distribution of ASEAN's manufacturing sector. ASEAN can continue to drive growth in the manufacturing sector by implementing the AEC integration plan, which aims to improve intra-regional and global trade, reforming regulations with clear targets and leading to promotions so it can attract more production from multinational companies, and implementing big data applications and cellular internet so that ASEAN manufacturing companies are not left behind by their competitors.

Another variable is Foreign Direct Investment which has a significant positive effect on the economic growth of ASEAN member countries, but the effect is relatively small compared to other variables in the research model. This was due to the low flow of Foreign Direct Investment to ASEAN member countries. Some factors which influenced the size of investment flowing into the host country are: the conditions of the business environment and the investment climate in the country, as well a country's economic and political stability, influencing the decision to invest (Urata & Ando, 2010).

Then the government expenditure variable indicates that these variables have a positive effect on GDP, meaning, the more government spends, and GDP will also increase. The results of those statistical tests were in line with the research conducted by Ma'ruf and Wihastuti (2008) that government expenditure variables have a significant positive effect on economic growth. Government expenditures will increase along with the increasing economic activity of a country. This is known as Wagner's law, a positive correlation between government spending and national income level. In this study, government spending has a greater influence on economic growth than other variables (Manufacturing Exports, Foreign Direct Investment, and Population). This is because government spending is spent on strategic sectors and has a large multiplier effect on economic growth, such as improving physical infrastructure. Hopefully, the development of infrastructure can facilitate trade flows and increase foreign investment.

Meanwhile, the results of statistical tests on population variables indicate that these variables have a positive effect on GDP, meaning that as the population increases, GDP will also increase. The results of those statistical tests were in line with the research conducted by Owusu (2012), that population growth and population density can be the main keys to output growth and there is a long-term relationship between the population and economic growth with GDP indicators. The results were also in line with the statement of Todaro (2000) that the growth of the workforce and population growth has traditionally been considered as one of the positive factors spurring economic growth. The population regression coefficient has a fairly large value, which signals that the population contribution in seven ASEAN member countries is quite significant. This condition occurs because the population in the ASEAN region is dominated by people of productive age. Based on Figure 3.2, it can be proven that the population in productive age reaches 50.6% or 320,018 thousand people of the total population in the ASEAN region (ASEAN, 2016).

The large population count has a direct impact on economic growth in the form of the availability of labor. This is very much needed in the actioning of development. However, an increase in population is not only seen based on its quantity but also an equally important quality. Good-quality human resources (in this case, the population) will play a role in encouraging development and economic growth. Improving the quality of human resources can be done through formal and non-formal education.

## Conclusion

Variables of manufacturing exports, foreign direct investment (FDI), government spending, and population have a positive and significant effect on economic growth in seven ASEAN member countries. Government expenditure variables have a relatively greater influence on economic growth in seven ASEAN member countries, compared to other variables. This is because government spending is spent on strategic, economically growing sectors such as infrastructure improvements to facilitate smoother trade flows and increase foreign investment, which is then expected to encourage economic growth. Meanwhile, the variable of Foreign Direct Investment has the smallest influence on economic growth compared to other variables. This is due to the low flow of Foreign Direct Investment flowing to ASEAN member countries.

In particular, the government plays an important role in this era of globalization and industrial shifts. Some policies that the government can consider: adjusting taxes and providing financial support. The government must support companies that are making a transition or industrial shift by adjusting tax policies and creating special funds to encourage transformation and increase production. The government must promote industrial blocks, provide real support for start-ups, small businesses, and small and medium enterprises by helping to create an innovation platform that can connect local industries with IT experts or with industry associations who can help promote the company's products.

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