

# THE IMPACT OF INFLATION, EXPORT, FOREIGN DIRECT INVESTMENT AND UNEMPLOYMENT ON MALAYSIA'S ECONOMIC GROWTH: CASE OF ASEAN TRADE IN GOODS AGREEMENT (ATIGA)

Putra Faizurrahman Zahid<sup>1</sup>  
Shafiurrahman Hamzah<sup>2</sup>  
Siti Maziah Ab Rahman<sup>3</sup>

<sup>1</sup>Faculty of Business and Management, Universiti Teknologi MARA Kelantan Branch, Malaysia,  
(E-mail: putraf278@uitm.edu.my)

<sup>2</sup>Putra Business School, Universiti Putra Malaysia (UPM), Malaysia,  
(E-mail: shafi.hamzah@gmail.com)

<sup>3</sup>Siti Maziah Ab Rahman, Faculty of Business and Management, Universiti Teknologi MARA Kelantan Branch, Malaysia (E-mail: maziah650@uitm.edu.my)

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**Abstract:** *This paper investigates the relationship of macro-economic variables on Malaysia's economic growth which is foreign direct investment (FDI), export, inflation rate and unemployment rate. Particular attention is given to the ASEAN Trade in Goods Agreement (ATIGA) as this agreement is one of the main regional FTA with Malaysia's participation and consist of other 9 ASEAN member states (AMS). A sub-sample t-test being used to compared the data before and after the implementation period and found that all three variables which are export, FDI and unemployment rate is significant and has an impact on Malaysia's GDP. However, no evidence shows that the inflation rate in Malaysia has been influenced by ATIGA. Time series secondary data spanning from 2003 to 2018 also has been used to measure the impact of ATIGA on Malaysia's economic growth revealed that Malaysia's participation in ATIGA encourages Malaysia's export and FDI flow into Malaysia which have a positive impact on Malaysia's Gross Domestic Product (GDP). In addition, we find specific evidence that export (EXPT) and FDI has risen significantly after the agreement entered into force in May 2010. However, the unemployment and inflation rate have a negative relationship on Malaysia's economic growth as it works on opposite direction, as unemployment and inflation reduce, the GDP will increase. The result suggests the policy makers should continue to pursue high level regional FTA in order to boost Malaysia's export and increase the inflow of FDI into Malaysia.*

**Keywords:** ASEAN Trade in Goods Agreement, ATIGA

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## Introduction

Regional Trade Agreements (RTAs) are defined as corresponding trade agreements involving at least two parties. RTAs incorporate international free trade agreements and customs associations (WTO, 2019). Meanwhile, a Free Trade Agreement (FTA) is an agreement, treaty or trade pact between two or more countries with the objective of liberalizing and facilitating trade by reducing or eliminating trade barriers such as tariff, non-tariff barriers and quotas between participating countries. FTAs are a means of making trade more seamless among countries, with the ultimate aim of increasing trade activities that will pose a positive impact on the overall economic activity of the countries. The drive of FTAs could be a catalyst to more comprehensive partnership such RCEP (regional comprehensive economic partnership), which would be revolutionary for Asia-Pacific Region.

The main objective of ATIGA is to accomplish the free progression of merchandise in the ASEAN region and act as solitary market and production base for more profound economic mix in the region. Thus far, Malaysia has entered into seven bilateral FTAs and six regional FTAs. The first multilateral and regional FTA with Malaysia's participation was the ASEAN-China Free Trade Agreement (ACFTA) in 2003 and the latest one is the ASEAN Trade in Goods Agreement (ATIGA) in 17 May 2010. The objective of ATIGA is in alignment with the spirit of regional trade agreement which catalyses the acceleration of global trade liberalization where all the AMS are viewed as a single economic block. In order to allow a free flow of goods within the region, AMS has agreed to discuss and conclude all matters related to levy advancement, evacuation of non-duty obstructions, rules of the starting point, exchange help, custom norms and conformance, and sanitary and phytosanitary measures.

In the region of South East Asia, studies on AFTA (ASEAN Free Trade Agreement) are comprehensively available such as those by Okabe and Urata (2014), Masron (2013). Despite numerous international trade research on bilateral and multilateral relationship of free trade agreement (FTA), there are very few studies on the subject of trade performance of the member countries. Available studies mostly focus on the factor of logistic performance (Gani, 2017), aid performance (Lemi, 2017; Cali & Willem te Velde, 2011), operating performance and trade credit (Box et al., 2018). Meanwhile, focus performance of country members in international trade especially in bilateral and multilateral trade agreement was due to the entire population of a particular trade agreement. These evidences show the entire FTA agreement performance that may use dynamic panel data (Gnangnon, 2018; Lahet & Vaubourg, 2017). The findings of the performance of international trade FTA may conclude the entire FTA performance (Gumilang, Mukhopadhyay & Thomassin, 2011; Geldi, 2012).

However, findings on the trade performance of particular country members such as Malaysia are scarce. Very little information can be obtained on a particular FTA member. The findings of a specific research on a particular member in AFTA such as Indonesia (Gumilang, Mukhopadhyay & Thomassin, 2011) may conclude the findings of performance due to general trade liberalization. Even though Indonesia is a member of AFTA, the findings do not focus on FTA that has been signed by the country. Similarly, the aspect of country performance (China) on international trade had focused on trade liberalization in general (Chen et Al., 2018).

## Literature Review

Pietak (2014) conducted a comparative study on different types and models of economic growth developed by past economic gurus such as Adam Smith and David Ricardo. Smith and Ricardo defined economic growth in terms of production based on the "Law of Markets" introduced by

Jean-Baptiste Say. Smith (1723) asserted that increased production will influence market size particularly its expansion. Smith also linked economic growth with the labour division concept which is an outcome of capital accumulation and gradual market expansion. In contrast, Keynes who developed the Keynesian model considered demand as the most important factor in influencing economic growth. Even the simulation made assuming tariff reduction in a phased manner using the World Integrated Trade Solutions (WITS)-SMART partial equilibrium model by Jain and Kumar (2022), both gain from the proposed FTA for India and USA.

Masoud Albiman Md and Suleiman NN (2016) studied the relationship between imports, exports and economic development in Malaysia by utilizing the annual data over the 1967-2010 period. The results of the VAR analysis and Granger causality tests revealed a causal relationship between exports, imports and economic growth. Khairul Hashim and Mansur Masih (2014) also noted that most empirical studies on export-led growth (ELG) have shown a significant correlation between export development and gross domestic product (GDP).

Export growth can signify a rise in demand for a country's output, signifying a proliferation in real output on top of employment. The host or home country's GDP also increases the FDI flow from the home country into the host country. This is demonstrated by the positive and significant coefficients on the GDP of the home and host countries. This finding is in line with our theory that a larger distance can weaken FDI. This could explain why firms tend to invest in their neighbouring countries (Raymond, 2006).

A study conducted in four South Asian countries also discovered that there is a significant positive relationship between inflation and economic growth in the very long term (G. Mallik & A. Chowdhury, 2001). Nations which are characterized by stable and high economic growth and macroeconomic stability will not suffer from the impacts of inflation. Otherwise, inflation poses a long-term negative impact on economic growth (Pradana & Rathnayaka, 2013).

In the context of India, Gross Domestic Product (GDP) has grown from 3.5% in the 1970s to 5.5% in the 1980s with a steady acceleration in inflation rate with a yearly average of 1.7% in the 1950s to 6.4% in the 1960s and further to 9.0% in the 1970s before marginally easing to 8.0% in the 1980s (Prasanna & Gopakumar, 2010).

According to Findlay (1978), FDI can enhance economic development via its impact on technological advancement. Empirical studies including that of Blomstrom et al. (1992) and Borensztein et al. (1998) revealed the positive correlation between FDI and economic growth. Empirical studies on the link between economic growth and capital creation indicated that gross domestic investment (GDI) significantly affects economic development.

The theoretical work by Ferbermayr et al. (2008) revealed that unemployment reduces the impact of trade liberalization, in which the result is productivity-driven. In addition, the study demonstrated that any increase of aggregate productivity will weed out the least productive businesses and hence labour reallocation can be directed towards more successful companies. However, Helpmen and Iskhoki (2017) revealed the effect of business expansion with the control of differentiated products, heterogeneous-productivity sector with labor market friction, and homogenous good industry without a labour-market friction. Several other literatures revealed the ambiguous effect of trade liberalization (Davidson, Martin & Martusz, 1999).

Dutt, Mitra and Ranjan (2009) used panel data in testing the short-term effect of trade liberalization and found that it increases unemployment rates. The study also found that a reduction in unemployment occurs following a downturn implying an overall long-run decline in unemployment. In the case of South Africa, Banda (2016) affirmed the Okun's Law which states that increased GDP growth rates can lead to increased employment levels and therefore lowering unemployment rate.

### Methodology and Findings

Univariate and multivariate analysis were conducted to study the impact of ATIGA. The descriptive analysis conducted to analysed the distribution of each data series. For univariate analysis, each independent variable tested for mean subsample test and t-test for equality of means. Finally, the regression conducted to forecast the relationships of the macroeconomic variables.

**Table 1: Descriptive Statistics**

	GDPG	UNEMP	FDI	EXPT	CPI
Mean	5.126457	3.315625	8.38E+09	5.09E+10	2.362904
Median	5.402797	3.315000	8.98E+09	5.33E+10	2.097478
Maximum	7.424847	3.660000	1.51E+10	7.07E+10	5.440782
Minimum	-1.513529	2.880000	1.15E+08	2.61E+10	0.583308
Std. Dev.	1.938488	0.215715	3.89E+09	1.29E+10	1.269126
Skewness	-2.585823	-0.191873	-0.420937	-0.369721	0.780067
Kurtosis	9.983759	2.303432	2.763710	2.139620	3.208726
Jarque-Bera	50.34588	0.421645	0.509724	0.858018	1.651725
Probability	0.000000***	0.809918	0.775023	0.651154	0.437857
Sum	82.02332	53.05000	1.34E+11	8.15E+11	37.80646
Sum Sq. Dev.	56.36603	0.697994	2.27E+20	2.50E+21	24.16021
Observations	16	16	16	16	16

\*\*\* Significant at a 1% level

\*\* Significant at a 5% level

\* Significant at a 10% level

Table above shows the descriptive analysis of macroeconomic data series distributions. The dependent variable, Gross Domestic Products' Growth (GDPG), and the dependent variables, consist of Unemployment Rate (UNEMP), Foreign Direct Investment (FDI), Export (EXPT), and Inflation, proxy by Consumer Price Index (CPI).

**Table 2: The mean impact of the ATIGA implementation on the variables' subsample**

VARIABLE	STATISTIC	YEAR	YEAR
		2003 TO 2010	2011-2018
GDPG	Mean	4.729421	5.435263
	Max	6.783438	7.424847
	Min	-1.513529	4.449756
UNEMP	Mean	3.457143	3.205556
	Max	3.660000	3.440000
	Min	3.230000	2.880000
CPI	Mean	2.449528	2.295529
	Max	5.440782	3.871201
	Min	0.583308	0.884709
EXPT	Mean	3.90E+10	6.02E+10
	Max	5.10E+10	7.07E+10
	Min	2.61E+10	5.05E+10
FDI	Mean	5.14E+09	1.09E+10
	Max	9.07E+09	1.51E+10
	Min	1.15E+08	8.57E+09

Table 2 shows the mean impact of ATIGA implementation. The figure of each variable mean explained the impact on year 2011 till 2018. GDPG and EXPT shows an increase after ATIGA implementation, and UNEMP, CPI and FDI shows declined mean.

**Table 3: Test for equality of means between the series of Variables from 2003-2010 and 2011-2018 (Subsample t-test)**

Variables	Method	Value	Probability
<b>CPI</b>	t-test	-0.050885	0.9601
<b>Export</b>	t-test	-5.827284	<b>0.0000***</b>
<b>FDI</b>	t-test	-3.371063	<b>0.0046***</b>
<b>Unemployment</b>	t-test	3.094953	<b>0.0079***</b>

\*\*\* Significant at a 1% level

\*\* Significant at a 5% level

\* Significant at a 10% level

Table 3 shows Export, FDI and Unemployment data series of before ATIGA implementation and after implementation are significant difference in term of t-statistics. Only CPI not showing significant differences for both of the subsamples.

**Table 4: Least Square regression of GDPG**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGEXPT	-3.494621	1.153497	-3.029589	<b>0.0115**</b>
LOGFDI	1.768552	0.265910	6.650941	<b>0.0000***</b>
CPI	-0.108287	0.197287	-0.548879	0.5941
UNEMP	-0.485080	1.694985	-0.286186	0.7801
C	53.11890	32.75973	1.621469	0.1332
R-squared	0.847052	Mean dependent var		5.126457
Adjusted R-squared	0.791435	S.D. dependent var		1.938488
S.E. of regression	0.885287	Akaike info criterion		2.844496
Sum squared resid	8.621059	Schwarz criterion		3.085930
Log likelihood	-17.75597	Hannan-Quinn criter.		2.856860
F-statistic	15.22999	Durbin-Watson stat		2.889011
Prob(F-statistic)	<b>0.000185***</b>			

\*\*\* Significant at a 1% level

\*\* Significant at a 5% level

\* Significant at a 10% level

Table 4 shows the multivariate regression of Gross Domestic Product Growth (GDPG) on series on independent variables. LOGEXPT (logarithm of Export) and LOGFDI (logarithm of Foreign Direct Investment) shows significant at 5 percent level and 1 percent level. However, consumer price index (CPI) and unemployment (UNEMP) shows non-significant variables even though the direction of relationship follows the expectation of negative outcome.

### Conclusion

In the case of ATIGA, the value of export and FDI had increased tremendously after the implementation of ATIGA and had significantly contributed to Malaysia's economic growth based on its positive effect on GDP. Thus, we can assume that other regional or high-level FTAs that are currently under negotiation such as the Regional Comprehensive Economic Partnership (RCEP), the Malaysia-European Free Trade Area Economic Partnership Agreement (MEEPA) and the Malaysia-EU Free Trade Agreement (MEUFTA) could provide the same benefit and increase Malaysia's economic growth once they have been concluded and ratified. However, in macroeconomic aspect, the FTAs could be a rival for each other (Mohamad Zreik, 2023). This obviously has and will continue to benefit Malaysia as a country which heavily relies on the export market to expand the size of its market share in view of its relatively small population and market size if the execution is done in precise method.

FDI continues to be one of the key drivers in increasing Malaysia's economic growth as it creates job opportunities which can literally reduce the unemployment rate in Malaysia. This was proven by the level of unemployment rate that reached its lowest point during the post implementation period of ATIGA in 2014. FDI also has a multiplier effect on the economy as it increases the level of workforce productivity through technology transfer, upskilling and research and development activities (R&D).



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