



International Journal of Humanities and Applied Social Science (IJHASS)  
E-ISSN: 2471-7576  
E-mail: editor@ijhassnet.com  
<http://ijhassnet.com/>

©Center for Promoting Education and Research (CPER) USA, [www.cpernet.org](http://www.cpernet.org)

## **Influence Import, Export, Investment and Gross Domestic Product to Inflation in Indonesia and Asean Countries**

**Dr. Akhmad Sodikin, SE, MM, M.Si**

Faculty of Economics

Krisnadwipayana University Jakarta

Campus UNKRIS Jatiwaringin

P.O.Box 7774/Jat CM. Jakarta 13077, Indonesia

E-mail: [ihin\\_2007@yahoo.co.id](mailto:ihin_2007@yahoo.co.id)

Indonesia

**Dra. Ella Siti Chaeriah, MM**

Faculty of Economics

Krisnadwipayana University Jakarta

Campus UNKRIS Jatiwaringin

P.O.Box 7774/Jat CM. Jakarta 13077, Indonesia

### **ABSTRACT**

*The aims of this research are to know influence import variable, export, investment and Gross Domestic Product (GDP) to inflation in Indonesia from 1970 to 2008, partially and simultaneously. Besides that, to know variable, export, investment and Gross Domestic Product(GDP) to inflation in Asian countries partially or simultaneously. This information was needed to inflation reference management in Indonesia. Data is collected from database Asian Productivity Organization(APO) and analyzed with multiple regression using  $t$  and  $F$  test.*

*Based on data analyzed is known that import variable, export, investment and GDP influenced to inflation in Asian countries which are analyzed in Indonesia, Malaysian, Singapore, Thailand and Philippines. Data was counted in 38 years from 1970 to 2008. But import which influenced in Asian countries. All variables which analyzed influenced to inflation in Indonesian, Thailand, and Philippines.*

**Keywords: import, export, investment, GDP, inflation**

### **INTRODUCTION**

Every country has an inflation problem in its development. Inflation is price increases which continuously happen and thoroughly. Inflation can disturb economic activity because price increase will affect increasing price of input which influences price. In high price, the consumer will confirm their decision to buy good so economic can be decreased.

Inflation must be controlled to avoid negative impact in economic. Bank Indonesia is an institution which has a responsibility to care inflation in Indonesia. In other countries, the central bank has a role to control this inflation. Here, Bank Indonesia has a single objective is reach and maintain rupiah stability where before Bank Indonesia has multiple objectives is pull economic growth, supply opportunity job, and control rupiah. This statement based on Law of the Republic of Indonesia No. 23 of 1999 year.

Inflation can be identified of factors which influences are economic and noneconomic factors. The economic factor can be considered are an import, export, investment and Gross Domestic Product(GDP).



Import activity has benefited because can be incurred as well in domestic which needed consumer or producers. Producers still depend on import of input, like as crude palm oil, automotive spare part, electronic tools and others. Dependence of import product happened in other countries.

Import activities have a negative impact if it is done in huge commodities. If commodities which needed is too many so rupiah exchange will run down. Inflation can happen. Another factor which is considered in inflation is the export volume which done by the industrialist. Export can be maintained rupiah stabilities. Export can come foreign exchange. Investment activity can be considered to inflation. Investment can supply consumers well. Beside investment can push demand inflation in input industries so can be push inflation. Gross Domestic Product(GDP) stated as well or service which is produced by countries in one year can be push inflation because it relates with investment.

The growth of import, inflation, export, and GDP in Indonesia and other countries in ASEAN from 1970 to 2008 can be shown in the table below. This data is counted from Asian Productivity Organization (APO).

**Table 1. Growth rate of import, inflation, export, investment and GDP of ASEAN countries from 1970 to 2008**

No.	Countries	Import	Inflation	Export	Investment	GDP
1.	Indonesia	25.61%	12.59%	6.03%	1.79%	22.97%
2.	Malaysia	14.34%	3.90%	8.68%	12.99%	11.66%
3.	Singapore	12.41%	3.16%	11.23%	11.33%	10.82%
4.	Thailand	16.35%	5.61%	9.73%	13.25%	11.67%
	<i>rate</i>	17.18%	6.32%	8.92%	9.84%	14.28%

Source: analyzed from APO database

Data is collected of some ASEAN countries which completed from 1970 to 2008. Inflation in Indonesia in this period is highest 12,59 %. In this period, the inflation rate in ASEAN is 6,32 %. Wherever in Indonesia balanced by the growth of GDP is 22,97 % while investment rate is low.

In Indonesia, Bank Indonesia has strategic to press inflation with instrument effectively, monetary policy, determine final monetary policy, an identified variable which influenced inflation and formulate monetary policy respond. In this research is hoped to be the able bank of central in Indonesia to the identified factor which influenced inflation and compare the same case in developing countries, mainly in ASEAN Countries.

## LITERATURE REVIEW

Inflation is continuously priced increasing in whole good in a region or countries. The long objective of government is maintaining low inflation. Zero inflation wasn't final government because is difficulty achievement. Inflation can be divided based on push inflation, cost inflation, and import inflation. Inflation which caused by push demand can happen in high growth economies. High job opportunity created high income so inflation can appear. Inflation which caused push cost will happen in the cost of production which is high so the price of goodwill increases too. Wherever import activity can caused inflation (Sukirno,2004).

International business has an advantage in specialization, expand domestic market industries, us modern technology and promote productivity(Sukirno,2004). International business related with export and import activity. The international business related effort to take competitive production factor, and look for nearer production location to a consumer to product efficiently cost(Yusgiantoro, 2004).



In developed countries, Gross Domestic Product (GDP) means the value of good and service which produced in one year. Good and service which is produced not only by native but other of abroad (Sukirno,2004). GDP can be counted based on market or price of factor (Sukirno,2004). Beside that national income can be counted with expenditures approach. In this approach, GDP can be counted add all expenditure is house expenditures, government expenditure, private capital and net export. Besides that, GDP can be counted to add all value added. Finally, GDP can be counted by adding all income.

Based on previous research concluded that internal factor which caused inflation is commodity price. Price of commodity-related export, import activity and exchange rate(Oriavwote and Eshenake, 2012). Other research is done by Caputo and Magenzo(2011) in America. Variables which is used GDP and influenced to inflation. GDP correlates significantly to exchange rate and inflation. This research is done in Costarico, Dominican Republic, Guatemala, Honduras, Mexico, Nicaragua, Salvador, and Panam.

Gosha and Islam (2012) find that influenced economic growth to inflation. This research is done in Bangladesh from 1978 to 2010. Based on analyzes that inflation, economic growth, and GDP didn't have a correlation. Patra and Sahu(2012) find that inflation and GDP have a negative correlation in Nepal. Besides that, Che and Li (2011) stated that inflation related with the domestic price. This phenomenon happens in China. Dickson (2012) stated that factor which correlates inflation is payment with the exchange rate. This variable happens in Nigeria country. In China, Chen (2011) stated that export agriculture in China can influence to exchange rate. In Nigeria, exchange rate, and international price can influence agriculture price(Elsheikh, et al,2012).

## METHODOLOGY

Population of data in this research is countries in ASEAN; they are Malaysia, Thailand, Singapore, Philippines and Brunei, Vietnam and Cambodia. But data which available is Indonesia, Thailand, Singapore and Malaysia. This sample used purposive sampling.

Model for this research is

$$Y=a+b_1X_1+b_2X_2+b_3X_3+b_4X_4+e$$

Direction:

Y=inflation

A=constants

$b_1$ =coefficient  $X_1$

$b_2$ =coefficient  $X_2$

$b_3$ =coefficient  $X_3$

$b_4$ =coefficient  $X_4$

$X_1$ = import growth

$X_2$ = export growth

$X_3$ =investment growth

$X_4$ = GDP growth

e =error

To know influenced all independent variables t inflation in figure 1, used F analyzed and to know influence independent variable partially used t analyzed. Data analyzed used SPSS software. Analyzed of classic assumption is used normality data, Multicollinearity, heteroscedicityand auto correlation. This analyzed can be defining good model.



## RESULT AND DISCUSSION

Inflation is counted based on Price Consumer Index. Result of counted can be shown on Table 1.

**Table 2 Comparing of Consumer Price in ASEAN Countries 1970-2008**

Countries	Price Index	Inflation
Indonesia	35.11%	12.59%
Malaysia	68.07%	3.90%
Singapore	79.96%	3.16%
Thailand	60.37%	5.61%
Philippines	43,79 %	11,03 %
Growth rate	48,70 %	5,05 %

Source: analyzed from APO data base

Based on growth of data in Table 2, the highest inflation from 1970 to 2008 happen in Indonesia is 12,59 %. This inflation is higher than rate of inflation in ASEAN countries (6,32 %). Besides that, we can conclude that increasing consumer price index (48,70%) can influence inflation increase 5,05 %.

We can see other data relates inflation; they are import, export, investment and growth of GDP below. This data is elasticity inflation to independent variables.

**Table 3. Inflation Elasticity to Independent Variables in Indonesia**

No.	Countries	Inflation Elasticity to Inflation			
		Import	Export	Investment	GDP
1	Indonesia	0.49	2.09	7.03	0.55
2	Malaysia	0.27	0.45	0.30	0.33
3	Singapore	0.25	0.28	0.28	0.29
4	Thailand	0.34	0.58	0.42	0.48
5	Philippines	0.18	0.11	0.17	0.15

Source: APO data base analyzed

Data in Table3 is counted of comparison growth of inflation to growth rate import, export, investment and GDP from 1970 to 2008. Based on counted, inflation elasticity to independent variables is not same in every ASEAN countries.

Indonesia has highest inflation elasticity to import, it is 0,49%. This means if import increase 1% cause inflation will increase 0,49 %. In ASEAN countries, Philippines has lowest inflation elasticity to import, it is 0,18 %. Besides that, Indonesia has highest inflation elasticity to export, it is 2,09 %. Activity of export can press inflation in this country.

Indonesia has highest inflation elasticity to investment and GDP. Inflation elasticity to investment is 7,03 % means increasing investment 1% will cause increasing of inflation7,03 %. Inflation elasticity to GDP in Indonesia is 0,55 %.



Influence import, export, investment and GDP to inflation simultaneously and partially. Regression model in Indonesia is  $Y=0,018+0,116X_1-0,169X_2-0,217X_3+0,645X_4$ . In this case  $Y$ =inflation,  $X_1$ =import,  $X_2$ =export,  $X_3$ =investment and  $X_4$ =GDP.

**Table 4. t Value and Significance Variable**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.018	.018		.972	.338		
	Import	.116	.051	.301	2.272	.030	.285	3.506
	Export	-.169	.076	-.181	-2.223	.033	.756	1.322
	Investment	-.217	.052	-.339	-4.213	.000	.775	1.290
	GDP	.645	.117	.724	5.511	.000	.290	3.450
a. Dependent Variable: Inflation								

Based on Table 4, we conclude that import, export, investment and GDP influence to inflation partially because significance of analyzed is lower than 0,05. Beside that we can see ANOVA to conclude that simultaneously influenced below.

**Table 5. ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.343	4	.086	41.676	.000 <sup>b</sup>
	Residual	.068	33	.002		
	Total	.410	37			
a. Dependent Variable: Inflation						
b. Predictors: (Constant), GDP, Export, Investment, Import						

Based on Table 5, we can conclude that all independent variable influenced to inflation simultaneously because significance is lower than 0,05. How many influenced all independent variable to inflation can see r square below.

**Table 6. R square**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.914 <sup>a</sup>	.835	.815	.04533	1.317
a. Predictors: (Constant), GDP, Export, Investment, Import					
b. Dependent Variable: Inflation					

Based on Table 6, we can see that r square is 0,835 means independent variable influenced to inflation about 83,5 % and 16,5 % other influenced by other variable which wasn't applied in this regression.

Regression equation in Malaysia can displayed below  $Y=0,025+0,171X_1-0,2X_2-0,033X_3+0,097X_4$ . Analyzed of each independent variables can see this table.

**Table 7. Significance of Each Independent Variables in Malaysia**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.025	.009		2.830	.008
	Import	.171	.049	.807	3.491	.001
	Export	-.200	.076	-.418	-2.649	.012
	Investment	-.033	.043	-.194	-.759	.453
	GDP	.097	.089	.233	1.094	.282



©Center for Promoting Education and Research (CPER) USA, [www.cpernet.org](http://www.cpernet.org)

a. Dependent Variable: Inflation

Based on Table 7, we can see that import and export have significantly partially to inflation. We can conclude influenced independent variable to inflation in Malaysia below.

**Table 8. ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.016	4	.004	6.943	.000 <sup>b</sup>
	Residual	.019	33	.001		
	Total	.036	37			
a. Dependent Variable: Inflation						
b. Predictors: (Constant), GDP, Export, Investment, Import						

Significance on Table 8 is 0,000. Significance is lower than 0,05 so we can conclude that all independent variable influenced to inflation simultaneously. The value of r square of Malaysia can be displayed below.

**Table 9. Value of r square**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.676 <sup>a</sup>	.457	.391	.02430	1.214
a. Predictors: (Constant), GDP, Export, Investment, Import					
b. Dependent Variable: Inflation					

R square is 45,7 % means that independent variable are import, export, investment and GDP influenced to inflation 45,7 % and 54,3 % others was influenced other variables. We need to analyze what all independent influenced to inflation partially. Based on table7, we see that import and export variable influenced significantly to inflation because have significant index lower than 0,05 but investment and GDP have significance more than 0,05. Therefore in Malaysia, import and export variables influenced partially to inflation.

In other country, it is Singapore, model regression can display below  $Y = -0,002 + 0,305X_1 - 0,217X_2 - 0,036X_3 + 0,220X_4$  which taken from result of SPSS 21 analyzed below.

**Table 10. Result Regression Analyzes of Singapore**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.002	.012		-.132	.896		
	Import	.305	.099	.840	3.066	.004	.194	5.159
	Export	-.217	.134	-.376	1.621	.115	.271	3.694
	Investment	-.036	.048	-.133	-.746	.461	.456	2.192
	GDP	.220	.129	.323	1.708	.097	.406	2.460
a. Dependent Variable: Inflation								

Based on data analyzed in Table 10, we can conclude that import variable has influenced to inflation, but other variable didn't influenced significantly because they have significant index more than 0,05. To know all variable simultaneously influenced to inflation, we can analyze F test which produced by SPSS below.

**Table 11. F Test of Singapore Regression Model**

Model	Sum of Squares	df	Mean Square	F	Sig.
-------	----------------	----	-------------	---	------





©Center for Promoting Education and Research (CPER) USA, [www.cpernet.org](http://www.cpernet.org)

1	Regression	.044	4	.011	8.915	.000 <sup>b</sup>
	Residual	.041	33	.001		
	Total	.086	37			
a. Dependent Variable: Inflation						
b. Predictors: (Constant), GDP, Export, Investment, Import						

Based on Table 11, value of F test is 8,915 and significance is 0,000 or lower than 0,05 so we can conclude that all variable influence to inflation simultaneously. How many influenced all independent variable to inflation, we can count r square which produce by SPSS software below.

**Table 12. Value of R Square of Singapore Regression Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.721 <sup>a</sup>	.519	.461	.03529	1.562
a. Predictors: (Constant), GDP, Export, Investment, Import					
b. Dependent Variable: Inflation					

Value of r square is 0,519 or 51,9 %. It implied that GDP, Export, Investment, Import variables influence to inflation about 51,9 % and other influenced other variable which wasn't analyzed.

Thailand is development country in ASEAN has different characteristics. Regression model in Thailand can imply below  $Y = -0,001 + 0,164X_1 - 0,334X_2 - 0,280X_3 + 0,854X_4$ . Value of t can display below.

**Table 13. Display of t of Regression Analysis in Thailand**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.001	.011		-.069	.945		
	Import	.164	.052	.481	3.171	.003	.357	2.803
	Export	-.334	.068	-.484	-4.896	.000	.840	1.190
	Investment	-.280	.054	-.950	-5.160	.000	.242	4.128
	GDP	.854	.119	1.126	7.159	.000	.332	3.009
a. Dependent Variable: Inflation								

Based on data Table 13, that all independent variables influence inflation partially because significance of t test is lower than 0,05 or 5 %. Here to determine inflation must be confirmed GDP, Export, Investment, Import variables. Besides that, we need to analyze all independent variables influenced to investment simultaneously to inflation used F test. Value of F test can show below.

**Table 14. Value of f Thailand Regression Model**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.069	4	.017	22.171	.000 <sup>b</sup>
	Residual	.026	33	.001		
	Total	.095	37			
a. Dependent Variable: Inflation						
b. Predictors: (Constant), GDP, Export, Investment, Import						

Based on Table 14, we can imply that value of F test is 22,171 and have significance is about 0,000 or lower than 0,05 so we can interpret that all independent variables influenced to inflation simultaneously. How influence to inflation can see from r square below.

**Table 15. Value of R Square Thailand Regression Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.854 <sup>a</sup>	.729	.696	.02795	1.653
a. Predictors: (Constant), GDP, Export, Investment, Import					
b. Dependent Variable: Inflation					

Value of r square is 0,729 or 72,9 % means that import, export, investment and GDP influence to inflation about 72,9 % and other be influenced other variables which wasn't implied in regression model..

Finally, in Philippines we will describe regression model below  $Y = -0,061 + 0,192X_1 - 0,177X_2 - 0,356X_3 + 1,483X_4$ . Here, we can determine influenced of independent variables to inflation based on table.

**Table 16. T test of Philippines Regression Model**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.061	.013		-4.826	.000		
	Import	.192	.072	.334	2.658	.012	.221	4.517
	Export	-.177	.062	-.281	-2.859	.007	.361	2.774
	Investment	-.356	.062	-.640	-5.766	.000	.283	3.530
	GDP	1.483	.123	1.191	12.034	.000	.356	2.810
a. Dependent Variable: Inflation								

Here, we can describe that all significance of t test is lower than 0,05 that all independent variable, they are import, export, investment and GDP influence to inflation partially. Besides that, we can analyze influenced simultaneously below.

**Table 17. F Test Analysis Philippines Regression Model**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.281	4	.070	63.448	.000 <sup>b</sup>
	Residual	.036	33	.001		
	Total	.317	37			
a. Dependent Variable: Inflation						
b. Predictors: (Constant), GDP, Export, Investment, Import						

Based on Table 17, we can describe that F test is 63,448 and significance is 0,00 lower than 0,05 that all independent variables influence to inflation simultaneously.

## CONCLUSION

Independent variables of macro-economy which consist of import, export, investment and GDP influenced partially or simultaneously in Indonesia, Thailand and Philippines. In other countries, like as Singapore and Malaysian that independent variable of macro economy that influence to inflation is import and export in Malaysian and just import in Singapore but all independent variable there influenced to inflation simultaneously.

## IMPLICATION





International Journal of Humanities and Applied Social Science (IJHASS)  
E-ISSN: 2471-7576  
E-mail: editor@ijhassnet.com  
<http://ijhassnet.com/>

©Center for Promoting Education and Research (CPER) USA, [www.cpernet.org](http://www.cpernet.org)

Economic variables determine inflation in ASEAN countries like as Indonesia, Thailand and Philippines. Therefore in those countries, central bank must confirm inflation used import, export, investment and growth of GDP (Gross Domestic Product). Inflation will disturb economic activity like as in trading, production and bank transaction.

## REFERENCES

- Abdullah, B. 2003. *Peran Kebijakan Moneter dan Perbankan dalam Mengatasi Krisis Ekonomi di Indonesia*. Bank Indonesia
- APO. 2013. *APO Productivity Database*. APO. Tokyo
- Caputo, R dan magendzo. 2011. Do Exchange Rate Regimes Matter for Inflation and Exchange rate Dynamics the Case of Central America. *Journal Latin America Study*, 43. 327-354
- Che, Z dan Li, X. 2011. *On Inflation Accounting in China*, Vol. 5, No. 2, April 2012
- Chen, L. 2011. The effect of China's RMB Exchange Rate Movement on Its Agricultural Export, A Case Study Of Export to Japan. *China Agricultural Economic Review*, Vol. 3, No. 1, 2011, pp. 26-41
- Dickson, O. 2012. Exchange Rate and Economic Growth in Nigeria. *Mediterranean Journal of Social Sciences*, Vol. 3(3) September 2012
- Elsheikh, E, Elbushra, A dan Salih. 2012. Impacts of Changes In Exchange Rate and International Prices On Agricultural And Economy of The Sudan: Computable General Equilibrium Analysis. *Sustainable Agriculture Research*, Vol. 1, No. 2, 2012
- Hossain, Ghosh, Chandra dan Islam, Kahirul. 2012. Inflation and Economic Growth in Bangladesh. *Researchers World, Journal of Arts, Science and Commerce*, Vol. III, 4(2), October 2012
- Madura, J. 2000. *International Financial Management*. Terjemahana Emil Salim. Erlangga. Jakarta