

UNIVERSITI TEKNOLOGI MARA

**THE IMPACT OF CONSUMPTION ON ECONOMIC
GROWTH:
EVIDENCE FROM ASEAN COUNTRIES**

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AUTHOR'S DECLARATION

I declare that the work in this final year project paper was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Undergraduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Economic growth is the measurement of the increasing in production of goods and services over a specific period. It is also included the increasing in capital goods, labour force, technology and human capital. Consumption is one of the theories applied in determining the economic growth. Consumption can be defined as how the consumers spend their income. Some of this income is spent on buying the products and services they need. According to the economists, they said that consumption is the main concept to determine the economic growth. So, is that true consumption is the major concept in the economic growth? This study is using a panel data sample of 10 ASEAN countries covering the periods of 2008 until 2018 (11 years). The dependent variable for this study is economic growth for the ASEAN countries (GDP). While the independent variables are household income, personal income tax rate, business investment, prices of goods & services, national saving and lastly national spending. The statistical methods use in this study are descriptive analysis, correlation analysis and regression analysis. At the end of the study, the expectation from this study is independent variables will give impact towards the economic growth in the ASEAN countries. At last, it has been proven that the household income, personal income tax rate, business investment and national saving give the positive effects while the other two (prices of goods & services and national spending) give negative effects towards the economic growth.

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TABLE OF CONTENTS

	Page
AUTHOR'S DECLARATION	2
ABSTRACT	3
ACKNOWLEDGEMENT	4
TABLE OF CONTENT	5-6
LIST OF TABLES	7
LIST OF ABBREVIATIONS	8
CHAPTER ONE INTRODUCTION	
1.1 Introduction	9
1.2 Overview / Background of the Study	10
1.3 Problem Statement	11
1.4 Research Objectives	11
1.5 Research Questions	11
1.6 Significance of the Study	11
1.7 Scope of the Study	12
1.8 Limitation of the Study	12
1.9 Definition of Key Terms	13
1.10 Summary	14
CHAPTER TWO LITERATURE REVIEW	
2.1 Introduction	15
2.2 Literature Review on Economic Growth	15
2.3 Household Income and Economic Growth	15
2.4 Personal Income Tax and Economic Growth	16
2.5 Prices of Goods & Services and Economic Growth	16
2.6 Business Investment and Economic Growth	17
2.7 National Saving and Economic Growth	17
2.8 National Spending and Economic Growth	18
2.9 Theoretical / Research Framework	18

2.10	Summary	18
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CHAPTER THREE RESEARCH METHODOLOGY

3.1	Introduction	19
3.2	Sampling	19
3.3	Data Collection	19
3.4	Variables	20
3.5	Research Design	20
3.6	Hypothesis Statement	20-21
3.7	Research Methodology	22
	3.7.1 Descriptive Analysis	22
	3.7.2 Correlation Analysis	22
	3.7.3 Regression Analysis	23
3.8	Summary	24

CHAPTER FOUR FINDING / DATA ANALYSIS

4.1	Introduction	25
4.2	Descriptive Analysis	25-27
4.3	Correlation Analysis	28-29
4.4	Regression Analysis	30-31
	4.4.1 T-Test	30-31
	4.4.2 R-Squared	32
	4.4.3 F-Test (Annova)	33
4.5	Summary	33

CHAPTER FIVE CONCLUSION AND RECOMMENDATION

5.1	Introduction	34
5.2	Conclusion	34-35
5.3	Recommendation	35

REFERENCES	36-37
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APPENDICES	38-44
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LIST OF TABLES

Tables	Title	Page
Table 3.4	Data of Variables	17
Table 4.2	Results of Descriptive Analysis	22
Table 4.3	Results of Correlation Analysis	24
Table 4.4	Results of Regression Analysis	26
Table 4.4.1	Results for T-Test	27

LIST OF ABBREVIATIONS

Abbreviations

ASEAN Association of Southeast Asian Nations

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Economic growth is known as the increase in the amount or quantity of goods and services that were produced per head of the population over a period of time. The capital goods, labor force, technology and human capital also included in the calculation. To identify whether it increase or vice versa, it must be compared from one period of time to another. To measure the economic growth, it can be calculated in nominal or real terms. Normally, economic growth is measured in term gross national product (GNP) or also known as gross domestic product (GDP).

The GDP is actually the total of market value or total monetary. It included the production amount of goods and services whether it sold domestically or overseas. It also has its own unique equation that form of $GDP = C + I + G + NX$. C is representing the consumption while I for investment, then G representing the government spending and lastly NX is for net exports. So, basically the most accurate measurement of growth is using the real GDP. Hence the real GDP is taking the impact of the inflation, it allows the country or giving the opportunity to compare the economic output from one year to another year or time to time.

In that equation, the first variable is C (consumption). Meaning that, consumption is vital part in the economic growing followed by capital investment (including foreign direct investment and domestic private investment), government spending and net export (Kim, 2017). In that case, it is attracting the researchers to study more about this special part. The economists list out many components under the consumption variable and try to figure which is becoming the most contributors towards the economic growth.

1.2 Overview / Background of the Study

In worldwide, economic growth is known in terms of profitability. The four main sources are very crucial to determine it. They are consumption, investment, government spending and net exports. Consumption is defined as how the consumers spend their income. While the investment giving the figure of the capital expenditures or domestic investment. Spending the money in the business activities such as buying the machinery or buying new building also categorize in the business investment. While, the government spending explains about the government gross investment. It represents the government consumption on infrastructure, equipment or payroll. Last but not least, the net export. It is sum up of total exports minus total imports. It is actually the production of goods and services that are exported to other countries, less the goods and services that are brought in.

According to Kim H (2017), he stated that the Asian economic growth has its own uniqueness. This is because Asia is the fastest growing economic region. Different from all world regions, the wealth of Asia differs widely within the states. This is due to the vast region area that includes the different cultures, environments and government system. Moreover, specialty of Asia is possessing the special one also the strong association that called as Association of Southeast Asian Nations or known as ASEAN. The association was early founded on 8 August 1967 with five members only. They were Indonesia, Malaysia, Philippines, Singapore and Thailand only. But, on 2010, the association expanded and increased its members to 10 countries. The lucky countries are Brunei Darussalam, Cambodia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Indonesia and last but not least the Vietnam.

Unfortunately, the economists emphasized that ASEAN countries as less developed countries (Kim, 2017). Even though Asia is classified as unique economic growing but still the association has been categorized as less developed countries because low of Human Development Index ratings. Perhaps, that indicates that these ASEAN holding the weaknesses of nutrition, health, education or even low of adult literacy.

1.3 Problem Statement

There are many theories that effect the economic growth. Consumption is one of the theories applied. Thus, issue on the consumption become a major growth engine especially in less developing countries such as ASEAN countries will be figure out. With the major idea of the association to strengthen the organization and achieved the dynamic economic growth, further investigation needs to be executed. And this triggered on interest to investigate their relationships related to economic growth.

1.4 Research Objectives

- i. To examine the effect of the consumption's components (household income, personal income tax rate, prices of good & services, business investment, national saving and national spending) towards the economic growth in ASEAN countries.
- ii. To investigate the relationship between the consumption's components and the economic growth in ASEAN countries.

1.5 Research Questions

- i. Which components of consumption that mostly effect the economic growth in ASEAN countries?
- ii. What is the relationship between the consumption's components and the economic growth in the ASEAN countries?

1.6 Significance of the Study

Firstly, it will give an opportunity to the researches to point out the major elements in economic growth. They will able to figure out if the consumption theory give inspiration to the growth or even give just a slight impact. This case needs to be confirmed in other to detect the best growth engine in an economic sector.

Next, this will very beneficial to the members of the ASEAN countries in order to improve their economic condition. A clear investigation needs to be done to know the key elements in the economic development.

1.7 Scope of the Study

This study aims to identify the impact of consumption on economic growth. The evidences are taken from the ASEAN countries. Brunei Darussalam, Cambodia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Indonesia and last but not least Vietnam are 10 countries that become members of the association. The consumption's components that effect on the economic growth are household income, personal income tax rate, prices of good & services, business investment, national saving and national spending. All the components are categorized under the consumption theory. For the duration, the time range is within 11 years from 2008 until 2018. The economic growth data will be collected from the World of Bank website. The data for all the variables also will be collected from the World of Bank website.

1.8 Limitations of the Study

The main limitation of the study is lack of resources. This is because the study almost covers in all the Asia region. It shows that this study coverage is huge and to get all the data are quite difficult since it consumes a long period range from 2008 until 2018 and involved 10 different countries. Furthermore, to get the data, some of the websites required for payment to access the data. Here, it become one of the hugest obstacles in finding and collecting the data. Thus, a lot of alternatives need to be done in gaining the important data.

1.9 Definition of Key Terms

The dependent variable in this study is economic growth in ASEAN countries. The meaning of economic growth is the rising in amount of good & services that were produced per head of the population in a specific time. Thus, if there is any changing in the quantity of the productions, it will be calculated. Of course, each of the ASEAN countries have their own economic growth rate in every single year.

While for the independent variables, firstly it is household income. Household income is the combination of the gross income for all members who are 15 years and above of a household. The individuals no need to be related with each other to be recognized as a household but as long as they are live in one place, perfectly they are known as a household.

Next independent variable is, personal income tax rate. It is the federal or state government charge's on individuals. It is charge on the individual wages and salary, even on the gambling winnings or on the other sources. Income tax may be on a flat rate which means that all citizens pay for the same amount to the government or maybe as a progressive income tax which citizen need to pay it according to their income. Higher income, higher income tax rate.

Then, the prices of goods and services. Price literary means a quantity of a payment that given by one party to another party in order to receive or exchanged the goods & services. Prices will be valued by currency for every transaction. It will be divided into two categories which are asking price or selling price.

The fourth independent variable is business investment. It is defined as the funds that will be spend on the business's commitment either in an active way or as a passive funds. The active one is when the funds are used as the startup capital and the passive way is when the investors used to purchase stocks and bonds.

The national saving is the next independent variable. It is means amount of private and public saving. It is involving of personal saving, business saving and government saving. But the foreign saving is excluded in this calculation.

Last but not least, the national spending. It is means including the government investment, government consumption and transfer payment. The changes on this factor can stabilizing the macroeconomics business cycle.

1.10 Summary

This study gives the researchers idea of the major component in the economic growth. It will figure out either the consumption is really become major engine in affecting the economic growth or not. The discussion will be involving many factors that enhancing the expanding of consumption theory in economic growth. The researches will be focusing on the elements of consumption in economic theory.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In chapter 2, it will clarify about the opinion of the past researchers towards the relation between the dependent and independent variables. The previous journals and article will be reviewed and will be existing the new literature review.

2.2 Literature Review on Economic Growth

Economic of Asia is growing speedily over the past three eras because of the vigorous growth in the capital accumulation (Lee & Hong, 2012). This fact is enhancing the invasion of the consumption in economic growth. With the ability of the consumption for becoming the major growth engine in economic growing, without any doubt, the country will be experiencing an economic development.

Moreover, this fastest growth rate in Asia has generated an interest in academic studies over the worldwide (Li & Liang, 2010). The researchers will be focusing more on the consumption since the variable has the potential to become the most productive in determining the economic growth. Actually, there is a lot of components that include in the consumption, but to identify the most contributors among them, a further investigation needs to be done.

2.3 Household Income and Economic Growth

Efficiency of the work force is crucial part in determining the components of consumption. According to Li, H., & Liang, H. (2010), human capital affecting the economic growth. Here, the human capital means knowledge or skills that can contribute to the creation of economic growth by producing the goods and services. When people have that skills or knowledge, they can used it as a license to get their jobs. Then, the household income can be improved and on top of that, the economic condition will getting better.

Frankly speaking, human capital give the chances to the citizens to get their jobs and automatically increase the level of household income in a region. Full time employee have significant effect on labor force (Chen & Sun, 2018). It is increases the numbers of workers and normally it will tend to boost up the household income and automatically increased the economic growth too.

2.4 Personal Income Tax Rate and Economic Growth

This theory is very special case towards Brunei Darussalam. This is because the country does not implement any tax charge for its individual's citizen. The government just charge for corporate tax only. Since the country is based on sharia by practicing Hudud Laws, the country even put at a low percentage for its corporate tax.

But for the others ASEAN countries, they are implementing different percentage that are actually affecting the economic growth. In developing countries, a well implementation of tax system can boost the economic growth and indirectly minimize the productivity loss. This is because a lower marginal tax rate and low government regulation can improve the economic growth in that region (Kim, 2017).

Thus, the country that really implement a good structure of tax system will eventually enhancing its economic growth. Perhaps because the fact of low government regulation that give the opportunity to the citizens in using or spending their money according to their needs and wants rather than they had to pay for the highly tax.

2.5 Prices of Good & Services and Economic Growth

Reducing the production cost of good & services will helping a country achieve the target towards a better level of economic growth (Kim, 2017). It also stated that lowering the obstacle in this production giving a lot of benefits towards the consumer. They can get such a greater supplier of goods & services with a minimal price since the production cost had been cut off. So, the consumers will spend more their money on buying the goods & services since they are satisfied with the price and without any hesitation to buy even more.

Another researcher also pointing out this fact. The contribution of the factor in production still in limited situation around the Asia country that slowly giving bad impact in achieving economic growth (Lee & Hong, 2012). So, to enhance the successful growing rate of economy, prices of goods and services of each country need to be recalculated frequently to prevent any losses on consumer sector.

2.6 Business Investment and Economic Growth

As the increasing in economic growth, there is must link together towards the increasing in the business capital funding (Tseng, Chiu, Tan, & Siriban-Manalang, 2013). It stated that this relation just not increase the business area but it is also strengthening the customers and supplier's relationship. To be clear Kim, H. (2017) supported this idea. The expansion and investment in business will increasing the opportunity to rise up the number of business organization.

With a lot of allocation numbers in business organizations, the bonding between the customers and suppliers become more closer. This case happen since it increase the loyalty level to make sure the business production will smoothly rising up and mechanically will improve the economic growth. Furthermore, it give the opportunity or chances to create a new job. Increase in the level of employment of course will increase the level of economic growth.

2.7 National Saving and Economic Growth

Since it is including the personal saving, business saving and government saving, this case is declared as the high rate of investment in this era. It will burst out a positive possible in the future consumer spending (Kim, 2017). Logically, this theory is explained about the current saving in gaining the future benefit. With the amount saving by the consumers, it can be used as the initial capital in the future.

Thus, the consumers are able to compete with each other with the current saving money to improve and expanding their businesses in order to upgrade the quality of the economic growth in a certain region. Furthermore, with the saving, the consumers will be able to spend their money later for the education or financial literacy and improving their social life. The sustainability of an economic growth is come from the background of the social life and environmental (Tseng et al., 2013).

CHAPTER THREE

RESEARCH METHODOLOGY

In this chapter, it will explain about how this study can be investigate. In fact, the main journal for this study (Kim, 2017) said clearly about all the independent variables (household income, personal income tax rate, prices of goods & services, business investment, national saving and national spending) are the components of consumption that can be effectively created the economic development.

3.1 Introduction

In this chapter, it will explain the details about the study especially in the data collection. This includes the population and sample of the data, the collection of data, the dependent and independent variables, the hypothesis statement and the crucial part in this chapter is research methodology.

3.2 Sampling

The population and sample data for this study is covered in 10 ASEAN countries which are Malaysia, Indonesia, Singapore, Philippines, Thailand, Brunei, Vietnam, Laos, Myanmar and Cambodia. The period range of this study is covered for 11 years from 2008 until 2018. The data is collected in yearly basis in every each of the country and the observation data collected was over 110 data.

3.3 Data Collection

The dependent and independent variables data are collected from World of Bank website. The dependent variable is economic growth in ASEAN countries. So, gross domestic product (GDP) will be used to measure the economic growth.

While the independent variables are firstly household income. To measure it, the percentage of wage and salaried workers will be used. Second, personal income tax rate. Each country has different rate of personal income tax. Third, prices of goods and services. The consumer prices index (CPI) will be used to measure it. Next, business gross fixed capital formation will be used to measure the business investment. National saving will be measured by gross saving and lastly national spending used the national expenses to calculate it.

3.4 Variables

Table 3.4: Data of Variables

Variables	Label of Variables	Unit Measurement	Proxy
Dependent Variable			
Economic growth	GDP	Billion US Dollar	GDP
Independent Variables			
Household income	HI	%	Wage and salaried workers
Personal income tax rate	PIT	%	PIT
Prices of good & services	PGS	%	Consumer price index (CPI)
Business investment	BI	% of GDP	Business gross fixed capital formulation
National saving	NSAV	% of GDP	Gross saving
National spending	NSPE	% of GDP	National expenses

3.5 Research Design

This study is formulated for quantitative research. The data used in this study is panel data series where it is built up from 10 different Asia countries with 11 years period range for each country. For more specific, this study is made up from experimental designs where it is the real experiment. It is detecting the cause-effect relationship between the dependent and independent variables.

3.6 Hypothesis Statement

This hypothesis statement is clear out about the effect of the consumption's components towards the economic growth. There are two types of hypothesis statement which are null hypothesis (H₀) and alternate hypothesis (H₁).

Hypothesis for household income

H₀ : the household income does not give effect towards the economic growth of the ASEAN countries.

H₁ : the household income give effect towards the economic growth of the ASEAN countries.

Hypothesis for personal income tax rate

H₀ : the personal income tax rate does not give effect towards the economic growth of the ASEAN countries.

H₁ : the personal income tax rate give effect towards the economic growth of the ASEAN countries.

Hypothesis for prices of goods & services

H₀ : the prices of goods & services do not give effect towards the economic growth of the ASEAN countries.

H₁ : the prices of goods & services give effect towards the economic growth of the ASEAN countries.

Hypothesis for business investment

H₀ : the business investment does not give effect towards the economic growth of the ASEAN countries.

H₁ : the business investment give effect towards the economic growth of the ASEAN countries.

Hypothesis for national saving

H₀ : the national saving does not give effect towards the economic growth of the ASEAN countries.

H₁ : the national saving give effect towards the economic growth of the ASEAN countries.

Hypothesis for national spending

H₀ : the national spending does not give effect towards the economic growth of the ASEAN countries.

H₁ : the national spending give effect towards the economic growth of the ASEAN countries.

3.7 Research Methodology

3.7.1 Descriptive Analysis

Descriptive analysis is intended to describe the basic features in the data. Moreover, it also can summarize the given data set. It can measure the dispersion and able to calculate the central tendency that involving the mode, median, mean, variance and standard deviation.

Thus, in this study, to examine the effect of the factors of consumption towards the ASEAN economic growth, the data were collected including the 11 continuous years from 2008 until 2018. So, here the researchers will get the output data that form of central tendency. Actually, mode is the value that have the highest frequency. While, median is middle value in a list of number that arranges in ascending order. Mean is the average value after add up all the numbers and then divided it into the numbers of the numbers. After getting the mean, researchers will be able to get the variance since it is the expectation of the squared deviation from the mean. Then, the standard deviation will show the lesser standard deviation, the closely grouped the data fact are.

3.7.2 Correlation Analysis

Correlation analysis means that statistical apparatuses that have been used to know the intimacy of the relationship between two or more variables. It will show the movement of one variable is connecting together with the movement of other variables. To determine the relationship, it can be tested by measuring the Coefficient of Correlation. This type of measurement can test the significance and also can create the cause-and-effect relation.

The result range will be shows between +1 and -1. The +1 indicates that it has strongest positive correlation between the variables but for -1, it defines that it has strongest negative connection between the all variables included. If the result show on scale of 0, it is means that between the variables, they are having no correlation. It is the worst for that specific range. Thus, if there is a relation between of them, the researches can forecast the future trend. But remembered that model does not give 100% complete or perfect model because the correlation cannot include all the cause and effect.

3.7.3 Regression Analysis

Regression analysis defines as the method to describes the changes that occurs on both dependent and independent variables. It will be explaining the relationship between the two or more variables of interest. This method actually giving the clear figure either the factors give the most impact or can be ignored and how these factors might be manipulating each other.

The model equation of this study is: $Y = f (X_1, X_2, X_3, X_4, X_5, X_6)$

From the equation above, Y is referring to the one and only dependent variable which is economic growth of ASEAN countries by using gross domestic product (GDP). This dependent variable will be influencing by the variables of X which are X1 refers to household income, X2 for personal income tax rate, X3 defines as prices of goods & services, X4 for business investment following by X5 that indicates national saving and X6 for national spending.

The estimated regression analysis equation: -

Equation 1:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \varepsilon_{it}$$

Equation 2:

$$GDP_{it} = \beta_0 + \beta_1 HI_{it} + \beta_2 PIT_{it} + \beta_3 PGS_{it} + \beta_4 BI_{it} + \beta_5 NSAV_{it} + \beta_6 NSPE_{it} + \varepsilon_{it}$$

Where: -

GDP : Gross Domestic Product (Billion US Dollar)

HI : Household Income (% wage and salaried workers)

PIT : Personal Income Tax Rate (%)

PGS : Prices of Goods & Services (% consumer price index)

BI : Business Investment (% of GDP from business gross fixed capital formulation)

NSAV : National Saving (% of GDP from gross saving)

NSPE : National Spending (% of GDP from national expenses)

3.8 Summary

This chapter focusing on research methodology that includes 3 types on analysis that are descriptive analysis, correlation analysis and regression analysis. These 3 types of analysis are very crucial to determine the effectiveness of the components or the variables towards each other. From that, the researchers will be able to witness the relation between of them.

CHAPTER FOUR

FINDING / DATA ANALYSIS

4.1 Introduction

This chapter will explain about the result or the finding from the tests. The research was conducted to examine the effect of the consumption's components (household income, personal income tax rate, prices of good & services, business investment, national saving and national spending) towards the economic growth in ASEAN countries.

4.2 Descriptive Analysis

Table 4.2: Results of Descriptive Analysis

	GDP	HI	PIT	PGS	BI	NSAV	NSPE
Mean	233.6272	53.5450	24.7727	3.9709	26.2778	33.0484	16.6005
Median	192.3200	47.7210	26.0000	3.1585	25.9050	30.6655	15.7065
Maximum	1022.450	92.9580	40.0000	26.8000	40.8910	63.7830	28.7480
Minimum	5.9500	14.6510	0.0000	-0.9000	13.6720	5.7250	7.7700
Std. Dev.	251.2417	22.7793	10.1028	4.6093	5.2840	13.0635	4.0985

Based on the above summary statistics, the data has been chosen from 2008 until 2018 in the ASEAN countries. The data that has been used in the research are economic growth (GDP) which is dependent variable, whereas the independent variables are household income (HI), personal income tax rate (PIT), prices of good & services (PGS), business investment (BI), national saving (NSAV) and national spending (NSPE).

According to descriptive analysis, the mean of economic growth (GDP) is USD233.6272 Billion. While, the median is USD192.3200 Billion. Maximum value of GDP is USD1022.450 Billion. The maximum value is coming from Indonesia (2018). During that time, the country was classified as a new industrialized country. Indonesia became the largest economic country in Southeast Asian. Meanwhile, the minimum value is USD5.9500 Billion

and it is come from Laos (2008). On 2008, Laos had been classified as underdeveloped country especially in its rural area. The economic growth deviated by USD251.2417 Billion.

Then, the mean of household income (HI) from 2008 until 2018 is 53.5450%. The median is 47.7210%. While, the maximum value is 92.9580% and it is coming from Brunei (2008). Brunei had been ranked as one of the highest rate macroeconomic stability in the world and the highest in Asia during that time. The minimum value is coming from Laos on 2008 (14.6510%). Again, the fact that Laos became an underdeveloped country during that period becomes the reason. The household income was deviated by 22.7793%.

Next, personal income tax (PIT) has mean value for 24.7723%. Its median is 26.0000%. The maximum value is 40.0000% that comes from Vietnam (2008). On that period, Vietnam was struggling with an economic overheating. So, implementing a tight monetary policy was the alternative to stable back its economy. While, the minimum value is 0.0000% that comes from Brunei (all over the years) because the country is implementing the economic system based on Syariah. Personal income tax deviated by 10.1028%.

Prices of goods and services (PGS) stated that 3.9709% for its mean value. The median is 3.1585%. 26.8000% was stated for its maximum value and this value is coming from Myanmar (2008). On 2008, Myanmar had economic mismanagement by generated little way of technology and faced little employment. While for the minimum value is -0.9000%. It is coming from Thailand (2015). During that time, the country's economic growth increased because increased in tourism and higher public spending. The prices of goods and services deviated by 4.6093%.

On the other hand, the mean of business investment (BI) is 26.2778%. The median is 25.9050%. The minimum value of BI is 13.6720%. It is from Brunei (2018). This is because on 2008, Brunei suffered as the country was one of the Southeast Asia's worst economies. But this country recovered since on 2018, Brunei had high economic growth because following its regional community (joint the Trans-Pacific Partnership). This turn the maximum value (40.8910%) belongs to Brunei too. Then, business investment is deviated by 5.2840%.

The national saving has 33.0484% for its mean value. The median is 30.6655% and for the maximum value is 63.7830%. This maximum value is coming from Brunei (2011). This is because Brunei implemented more saving after controlling the prices of oil and gas. While, for the minimum value is 5.7250%. Laos (2013) point out that figure. This is due to the reason the

country was in trying to increase the growth development slowly. It stated that national saving was deviated by 13.0635%.

Last but not least, the national spending's mean value is 16.6005%. It has 15.7065% for the median value. The maximum value is 28.7480% and the value is coming from Vietnam (2018). The country was enhancing the financial sector to support sustainable growth. While for the minimum value is 7.7700%. This minimum value is from Laos (2008). The country actually was trying to stable its growth rate by increasing its rate over 7%. This national spending was deviated by 4.0985%.

4.3 Correlation Analysis

Table 4.3: Results of Correlation Analysis

Correlation t-Statistic Probability	GDP	HI	PIT	PGS	BI	NSAV	NSPE
GDP	1.000000 ----- -----						
HI	0.058998 0.614198 0.5404	1.000000 ----- -----					
PIT	0.453476 5.287586 0.0000	-0.543321 -6.725655 0.0000	1.000000 ----- -----				
PGS	-0.042015 -0.437017 0.6630	-0.395451 -4.474369 0.0000	0.253380 2.722035 0.0076	1.000000 ----- -----			
BI	0.195865 2.075692 0.0403	-0.056719 -0.590391 0.5562	-0.134096 -1.406266 0.1625	-0.067520 -0.703290 0.4834	1.000000 ----- -----		
NSAV	0.051717 0.538178 0.5916	0.827424 15.31192 0.0000	-0.494288 -5.909119 0.0000	-0.297849 -3.242500 0.0016	0.070312 0.732512 0.4654	1.000000 ----- -----	
NSPE	-0.033568 -0.349048 0.7277	0.282845 3.064546 0.0028	-0.103807 -1.084650 0.2805	-0.128780 -1.349561 0.1800	0.156719 1.649049 0.1020	0.264277 2.847696 0.0053	1.000000 ----- -----

Based on the table above, the data has been chosen from 2008 until 2018 in the ASEAN countries. The data that has been used in the research are economic growth (GDP) which is dependent variable, whereas the independent variables are household income (HI), personal income tax rate (PIT), prices of good & services (PGS), business investment (BI), national saving (NSAV) and national spending (NSPE).

Table 4.3 shows the relationship between the dependent variable and independent variables. For instance, table above indicates that household income (HI), personal income tax (PIT), business investment (BI) and national saving (NSAV) are positively related to economic growth (GDP). However, prices of goods and services (PGS) and national spending (NSPE) have negative relationship with the economic growth (GDP). The significant value used for the test is 5% significant level.

The result between GDP and HI is 0.0589. The data shows that the variables have positive correlation since it is near to the +1. Next, between GDP and PIT is positive correlate too. It is shows that 0.4534 is almost near to the +1. The result between GDP and BI is 0.1958. This data shows that they have positive correlation since it is near to the +1. Then, positive relationship can be seen between GDP and NSAV. Since it results show that 0.0517 is near to the +1.

But, between GDP and PGS, the data shows that the variables have negative relationship. The value is -0.0420 that is near to the -1. Same goes with GDP and NSPE. The data shows for -0.0335. The result is near to the -1 that indicates the variables have negative correlation.

Based on the table above, PIT having the highest correlation with the dependent variable (GDP). This means, personal income tax is the component that becomes the most effecting towards the economic growth in ASEAN countries.

4.4 Regression Analysis

Table 4.4: Results of Regression Analysis

Variables	Dependent Variable: Economic growth (GDP)			
	Coefficient	Std. Error	t-Statistic	p-Value
HI	5.9311	1.6030	3.7000	0.0003
PIT	19.5317	2.1952	8.8976	0.0000
PGS	-1.2887	4.3169	-0.2985	0.7659
BI	16.8997	3.6556	4.6230	0.0000
NSAV	0.1240	2.5388	0.0488	0.9611
NSPE	-10.0896	4.7115	-2.1415	0.0346
C	-843.3808	155.0728	-5.4386	0.0000
R-squared	0.4644			
Adjusted R-squared	0.4332			
S.E of regression	189.1581			
Sum squared residual	3685423.			
F-statistic	14.8819			
Prob (F-statistic)	0.0000			

Based on the table above, it shows the results of regression analysis during the period from 2008 until 2018 to investigate the effect of the consumption's components. The dependent variable is economic growth (GDP) in form of Billion US Dollar. While the independent variables are household income (HI) in form of percentage, personal income tax rate (PIT) in form of percentage, prices of good & services (PGS) in form of percentage, business investment (BI) in form of percentage, national saving (NSAV) in form of percentage and lastly national spending (NSPE) in form of percentage too. From the table above, the estimated regression analysis equation is as below.

$$GDP_{it} = \beta_0 + \beta_1 HI_{it} + \beta_2 PIT_{it} + \beta_3 PGS_{it} + \beta_4 BI_{it} + \beta_5 NSAV_{it} + \beta_6 NSPE_{it} + \varepsilon_{it}$$

$$GDP_{it} = -843.3808 + 5.9311 HI_{it} + 19.5317 PIT_{it} - 1.2887 PGS_{it} + 16.8997 BI_{it} + 0.1240 NSAV_{it} - 10.0896 NSPE_{it} + \varepsilon_{it}$$

4.4.1 T-Test

Table 4.4.1: Results for T-Test

Variables	Coefficient	Std. Error	t-Statistic	p-Value
HI	5.9311	1.6030	3.7000	0.0003
PIT	19.5317	2.1952	8.8976	0.0000
PGS	-1.2887	4.3169	-0.2985	0.7659
BI	16.8997	3.6556	4.6230	0.0000
NSAV	0.1240	2.5388	0.0488	0.9611
NSPE	-10.0896	4.7115	-2.1415	0.0346

For the household income (HI), this study shows significant result based on the table above. The p-value (0.0003) is less than the critical p-value (0.05). So, the null hypothesis is rejected. This indicates that the changes in household income give effect towards the economic growth. When household income increases by 1 percentage point unit, the GDP will increase by USD5.9311 Billion. Holding by all other factors are constants.

Then for personal income tax rate (PIT), the table above shows significant result. The p-value (0.0000) is less than the critical p-value (0.05). Therefore, the null hypothesis is rejected. This shows that changes in personal income tax rate do affect the amount of GDP. When personal income tax rate increase by 1 percentage point unit, the GDP will increase by USD19.5317 Billion. Holding by all the factors are constants.

Next the prices of goods & services (PGS). This study finds that there is no significant result. The p-value (0.7659) is more than the critical p-value (0.05). So, the null hypothesis is failed to reject. This shows that changes in prices of goods & services does not affect the amount of GDP. This means when prices of goods and services

increases by 1 percentage point unit, the GDP will decrease by USD1.2887 Billion. Holding by all the factors are constants.

For business investment (BI), the table above shows significant result. The p-value (0.0000) is less than the critical p-value (0.05). Therefore, the null hypothesis is rejected. This shows that changes in business investment do affect the amount of GDP. When business investment increase by 1 percentage point unit, the GDP will increase by USD16.8997 Billion. Holding by all the factors are constants.

While for national saving (NSAV), this study finds that there is no significant result. The p-value (0.9611) is more than the critical p-value (0.05). So, the null hypothesis is failed to reject. This indicates that the changes in national saving does not give effect towards the economic growth. It means when national saving increases by 1 percentage point unit, the GDP will increase by USD0.1240 Billion. Holding by all the factors are constants.

Last but not least, national spending (NSPE). The table above shows significant result. The p-value (0.0346) is less than the critical p-value (0.05). Therefore, the null hypothesis is rejected. This shows that changes in national spending do affect the amount of GDP. If national spending increase by 1 percentage point unit, the GDP will decrease by USD10.0896 Billion. Holding by all the factors are constants.

4.4.2 R-squared

Based on table 4.4, the value of R-squared is 0.4644, this indicates that 46.44% variation in economic growth can be explained by variation in household income, personal income tax rate, prices of good & services, business investment, national saving and national spending. While the remaining 53.56% of variation in GDP is explained by other variables which are not included in the study.

Since, this consumption's components holding almost half (46.44%) of the total output of economic growth, the issue on the consumption become a major growth engine especially in less developing countries such as ASEAN countries can be figured out. There are 3 other elements in economic growth equation, but consumption holding the biggest figure among of them. So, it is proved that consumption become a major growth engine in the ASEAN countries.

4.4.3 F-Test (Annova)

H₀ : The overall model is insignificant.

H₁ : The overall model is significant.

Decision : Reject the null hypothesis because the p-value (0.0000) is less than 0.05.

Referring to the table 4.4, the p-value is 0.0000 which is less than 0.05. This indicates that the model is significant. At least, one of the beta is not equal to zero.

4.5 Summary

At the end of this chapter, it will tell about the real results from the 3 types of analysis. It clearly explained and detailed out about the results. It is the actual outcome and this chapter also give the opportunity towards the researcher to get the real figure from the study.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Introduction

In this chapter, it will roughly point out the outcome and relates it with the idea or point of view from others researches. This chapter also will figure out the recommendations based on the conclusion.

5.2 Conclusion

As the conclusion, the aim of the study is to examine the effect of the consumption's components (household income, personal income tax rate, prices of good & services, business investment, national saving and national spending) towards the economic growth in ASEAN countries. The study is focus on the ASEAN countries by using the data from 2008 until 2018.

For household income, this variable gives positive effect towards the economic growth. This result is parallel with the finding of the past researcher which increased the household income by increasing the human capital, automatically will boost up the economic growth in that region (Li & Liang, 2010).

Next, personal income tax rate. The result shows positive effect towards the economic growth. But, based on view of past researcher, he stated that lower marginal tax rate and low government regulation can improve the economic growth (Kim, 2017). He also stated that a well implementation of tax system can boost the economic growth and indirectly minimize the productivity loss. But, from the result, it shows that increase percentage of personal income tax will increase the amount of GDP. To clear out, the result actually highlight only a certain point because the study only focusing on personal income tax rate and not included the other taxes such as business tax rate. So, the main point is when a country implement a good tax system, it will rise up the economic level. To decide whether to increase or decrease a certain taxes, it must be calculates all the goods even the bads about it. So, wise actions need to be figure out.

Then, the prices of goods & services. Before this, it has been stated that reduce in cost of goods & services will increasing the economic growth (Kim, 2017). If the cost of goods & services decreases, the prices will decrease too. Thus, this fact can be proven from the result that shows the negative effect. It indicates that when prices of goods and services increase, the economic growth will decrease.

Besides, the business investment. As the increasing in economic growth, there is must link together towards the increasing in the business capital funding (Tseng, Chiu, Tan, & Siriban-Manalang, 2013). This idea is point out the important of the business investment. The result from the study also show that this variable gives positive effect towards the economic growth. If the business' funds increase, of course the investment will increase. So, there is no doubt if the economic growth will increase too.

The national saving points out about the positive possible in the future consumer spending (Kim, 2017). When personal saving, business saving and government saving increase, the economic growth will be increase too. The result from the study support this idea because this variable gives positive effect towards the economic growth. Increase the national saving level, increase the economic growth.

Lastly, the national spending. The government must wisely spend the money in beneficial way (Kim, 2017). This idea can be supported by the outcome from the study. A country needs to decrease its spending for increasing its economic growth. Thus, here it shows that the variable is point out the negative effect towards the economic growth.

5.3 Recommendation

Based on the discussion and conclusion above, it shows some recommendations that need to be done. Firstly, for future researchers, to get the better result, is suggested to include all the taxes that have been implemented in the regulation to reach out the clear figure. This is because includes all of taxes give a better and clearer outcome and contributes more effects.

Next, the future researchers also can use the panel data or maybe increases the time range also a better way. This is because when increases the time range, the researchers will get a better result and the effects towards the economic growth can be reach out more effectively.

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APPENDICES

APPENDIX 1

Table of raw data

COUNTRIES	Year	GDP	HI	PIT	PGS	BI	Nat. Sav	Nat. Spe
Malaysia	2008	238.650	74.591	28	5.441	20.570	38.518	19.568
	2009	208.910	74.822	27	0.583	21.976	33.363	21.671
	2010	255.020	74.833	26	1.623	22.435	33.467	18.232
	2011	297.960	76.782	26	3.174	22.183	34.082	19.735
	2012	314.440	75.036	26	1.664	25.363	30.915	20.980
	2013	323.280	74.368	26	2.105	26.477	29.420	20.602
	2014	338.070	75.420	26	3.143	25.974	29.367	19.684
	2015	296.640	73.896	25	2.104	26.129	28.159	18.582
	2016	296.750	74.374	28	2.091	25.737	28.260	17.018
	2017	314.710	74.571	28	3.871	25.286	28.531	16.047
	2018	354.350	74.750	28	0.885	24.399	25.960	15.842
Indonesia	2008	558.580	38.569	35	10.227	27.699	28.452	18.449
	2009	577.540	38.726	30	4.386	31.115	29.056	15.367
	2010	755.260	39.794	30	5.134	30.999	32.727	14.012
	2011	892.590	42.516	30	5.356	31.307	33.220	15.025
	2012	919.000	45.153	30	4.279	32.720	31.985	15.613
	2013	916.650	46.346	30	6.413	31.966	31.122	15.375
	2014	891.050	46.702	30	6.395	32.517	30.669	15.905
	2015	860.740	48.996	30	6.363	32.812	30.123	14.501
	2016	932.070	48.874	30	3.526	32.578	29.923	14.873
	2017	1015.290	48.809	30	3.809	32.167	30.789	14.302
	2018	1022.450	49.330	30	3.198	32.287	31.626	14.050
Singapore	2008	192.230	84.920	20	6.628	27.979	44.474	14.505
	2009	192.410	85.247	20	0.597	28.837	43.876	14.304
	2010	236.420	85.502	20	2.823	25.570	50.879	12.413
	2011	276.620	85.002	20	5.248	25.265	48.570	12.773
	2012	291.610	84.676	20	4.576	26.430	47.064	12.384
	2013	305.160	85.084	20	2.359	27.548	45.408	12.375
	2014	313.260	85.381	20	1.025	28.128	47.104	13.151
	2015	306.250	86.010	20	-0.523	27.222	42.423	15.926
	2016	316.560	85.869	22	-0.532	26.259	44.359	14.488
	2017	336.680	85.354	22	0.576	26.197	45.357	14.790
	2018	361.110	85.418	22	0.439	24.129	46.061	15.200
Philippines	2008	173.600	52.044	32	8.260	19.663	43.238	14.161
	2009	168.490	52.967	32	4.219	19.014	46.641	15.168
	2010	199.590	54.157	32	3.790	20.523	48.080	14.400
	2011	224.140	54.918	32	4.718	18.739	44.900	14.129
	2012	250.090	56.837	32	3.027	19.590	43.250	14.186
	2013	271.840	58.031	32	2.583	20.630	45.057	13.793
	2014	284.590	57.538	32	3.598	20.670	46.100	13.403
	2015	292.770	59.445	32	0.674	21.986	44.222	14.106
	2016	304.890	61.300	32	1.254	24.642	43.595	14.040
	2017	313.600	62.204	32	2.853	25.011	43.862	14.258
	2018	330.850	62.445	35	5.212	26.763	42.344	14.563

COUNTRIES	Year	GDP	HI	PIT	PGS	BI	Nat. Sav	Nat. Spe
Thailand	2008	291.380	43.309	37	5.468	26.448	30.662	17.059
	2009	281.710	44.716	37	-0.846	23.109	29.274	18.412
	2010	341.110	44.545	37	3.248	23.993	29.628	17.411
	2011	370.820	42.327	37	3.809	25.836	31.434	19.417
	2012	397.560	41.670	37	3.015	26.994	29.243	18.622
	2013	420.330	44.589	35	2.185	25.384	27.533	19.091
	2014	407.340	47.358	35	1.895	24.661	27.675	19.300
	2015	401.270	48.423	35	-0.900	24.529	28.369	18.583
	2016	412.440	49.062	35	0.188	23.756	30.189	18.976
	2017	455.320	49.447	35	0.666	23.174	32.090	18.399
2018	487.240	49.819	35	1.064	22.841	32.195	15.800	
Brunei	2008	16.010	92.958	0	2.085	13.672	62.629	17.140
	2009	11.890	92.747	0	1.036	17.549	48.693	23.290
	2010	13.710	92.592	0	0.357	23.531	60.150	22.150
	2011	18.530	92.443	0	0.138	25.836	63.783	18.730
	2012	19.050	92.240	0	0.112	32.765	62.903	18.440
	2013	18.090	91.963	0	0.389	39.458	60.279	20.160
	2014	17.100	91.665	0	-0.207	27.276	59.712	21.420
	2015	12.930	91.561	0	-0.415	35.026	57.118	25.060
	2016	11.400	91.335	0	-0.739	34.368	56.412	26.220
	2017	12.130	91.089	0	-0.171	34.588	55.640	26.480
2018	14.080	91.232	0	0.151	40.891	55.908	24.140	
Vietnam	2008	98.270	32.439	40	23.116	31.805	27.900	18.672
	2009	101.630	33.640	35	7.055	33.857	19.170	18.738
	2010	112.770	33.864	35	8.862	32.644	30.435	19.184
	2011	134.600	34.680	35	18.676	26.817	29.840	18.380
	2012	155.480	34.787	35	9.094	24.198	30.832	20.313
	2013	170.440	34.860	35	6.592	23.644	29.637	21.563
	2014	185.760	35.672	35	4.710	23.832	28.339	22.855
	2015	191.290	39.340	35	0.879	24.656	24.574	24.319
	2016	201.330	41.246	35	3.244	23.678	24.653	25.759
	2017	220.380	42.849	35	3.520	23.781	24.397	27.256
2018	241.270	43.404	35	3.539	25.025	25.958	28.748	
Laos	2008	5.950	14.651	25	7.629	31.682	14.033	7.770
	2009	6.430	15.072	25	0.141	33.938	16.622	13.380
	2010	7.500	15.658	25	5.983	27.462	9.676	11.900
	2011	8.960	16.166	28	7.569	28.068	18.403	11.560
	2012	10.200	16.691	28	4.255	32.504	6.868	13.420
	2013	11.970	17.114	24	6.371	30.647	5.725	17.070
	2014	13.270	17.544	24	4.129	29.801	10.174	15.180
	2015	14.360	18.001	24	1.277	31.557	10.751	15.110
	2016	15.920	18.530	24	1.597	29.008	17.650	13.970
	2017	17.070	19.014	24	0.825	29.042	18.556	12.900
2018	18.430	19.496	24	2.040	29.131	19.527	12.300	

COUNTRIES	Year	GDP	HI	PIT	PGS	BI	Nat. Sav	Nat. Spe
Myanmar	2008	34.490	33.824	20	26.800	15.735	18.349	19.400
	2009	38.000	34.593	20	1.472	18.989	16.933	19.600
	2010	49.540	35.341	20	7.718	22.916	33.155	14.450
	2011	59.980	36.098	20	5.021	29.129	37.600	14.050
	2012	59.940	36.714	20	1.468	28.841	33.583	10.550
	2013	60.130	37.303	20	5.483	31.075	32.456	14.035
	2014	65.580	37.988	20	5.046	31.295	30.561	16.480
	2015	59.690	38.520	20	9.485	34.366	31.333	17.025
	2016	63.240	38.057	25	6.965	31.893	30.938	16.030
	2017	66.720	36.767	25	4.573	31.454	29.183	16.751
	2018	68.560	37.485	25	6.873	32.435	29.743	19.260
Cambodia	2008	10.340	34.792	20	24.997	17.267	16.714	8.560
	2009	10.390	37.436	20	-0.661	20.126	18.804	10.966
	2010	11.230	40.302	20	3.996	16.194	17.503	10.633
	2011	12.820	43.174	20	5.479	15.972	16.356	11.051
	2012	14.060	46.038	20	2.933	17.361	18.860	10.573
	2013	15.230	46.490	20	2.943	18.946	21.065	11.861
	2014	16.700	46.955	20	3.855	21.040	21.365	12.453
	2015	18.080	47.470	20	1.221	21.435	20.738	12.046
	2016	20.040	47.972	20	3.045	21.685	20.334	12.990
	2017	22.230	48.394	20	2.891	21.898	23.193	14.294
	2018	24.520	48.817	20	2.387	22.551	24.718	14.404

APPENDIX 2

Results of Descriptive Analysis

Sample: 2008 2018

	GDP	HI	PIT	PGS	BI	NSAV	NSPE
Mean	233.6272	53.54495	24.77273	3.970864	26.27778	33.04837	16.60053
Median	192.3200	47.72100	26.00000	3.158500	25.90500	30.66550	15.70650
Maximum	1022.450	92.95800	40.00000	26.80000	40.89100	63.78300	28.74800
Minimum	5.950000	14.65100	0.000000	-0.900000	13.67200	5.725000	7.770000
Std. Dev.	251.2417	22.77932	10.10283	4.609306	5.284030	13.06351	4.098458
Skewness	1.531349	0.315159	-1.187649	2.886998	0.079035	0.411872	0.686223
Kurtosis	5.036646	2.052862	4.047988	13.54356	2.729017	2.755799	3.327751
Jarque-Bera Probability	62.00355 0.000000	5.932532 0.051495	30.89314 0.000000	662.3180 0.000000	0.451081 0.798085	3.383367 0.184209	9.125560 0.010433
Sum	25698.99	5889.945	2725.000	436.7950	2890.556	3635.321	1826.058
Sum Sq. Dev.	6880342.	56559.80	11125.32	2315.782	3043.386	18601.42	1830.912
Observations	110	110	110	110	110	110	110

APPENDIX 3

Results of Correlation Analysis

Sample: 2008 2018
Included observations: 110

Correlation t-Statistic Probability	GDP	HI	PIT	PGS	BI	NSAV	NSPE
GDP	1.000000 ----- -----						
HI	0.058998 0.614198 0.5404	1.000000 ----- -----					
PIT	0.453476 5.287586 0.0000	-0.543321 -6.725655 0.0000	1.000000 ----- -----				
PGS	-0.042015 -0.437017 0.6630	-0.395451 -4.474369 0.0000	0.253380 2.722035 0.0076	1.000000 ----- -----			
BI	0.195865 2.075692 0.0403	-0.056719 -0.590391 0.5562	-0.134096 -1.406266 0.1625	-0.067520 -0.703290 0.4834	1.000000 ----- -----		
NSAV	0.051717 0.538178 0.5916	0.827424 15.31192 0.0000	-0.494288 -5.909119 0.0000	-0.297849 -3.242500 0.0016	0.070312 0.732512 0.4654	1.000000 ----- -----	
NSPE	-0.033568 -0.349048 0.7277	0.282845 3.064546 0.0028	-0.103807 -1.084650 0.2805	-0.128780 -1.349561 0.1800	0.156719 1.649049 0.1020	0.264277 2.847696 0.0053	1.000000 ----- -----

APPENDIX 4

Results of Regression Analysis

Sample: 2008 2018
Periods included: 11
Cross-sections included: 10
Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HI	5.931082	1.602994	3.700002	0.0003
PIT	19.53171	2.195156	8.897643	0.0000
PGS	-1.288692	4.316921	-0.298521	0.7659
BI	16.89974	3.655564	4.623018	0.0000
NSAV	0.123972	2.538760	0.048832	0.9611
NSPE	-10.08960	4.711464	-2.141500	0.0346
C	-843.3808	155.0728	-5.438613	0.0000
R-squared	0.464355	Mean dependent var		233.6272
Adjusted R-squared	0.433152	S.D. dependent var		251.2417
S.E. of regression	189.1581	Akaike info criterion		13.38457
Sum squared resid	3685423.	Schwarz criterion		13.55641
Log likelihood	-729.1511	Hannan-Quinn criter.		13.45427
F-statistic	14.88191	Durbin-Watson stat		0.102890
Prob(F-statistic)	0.000000			