

# Ownership rights and ASEAN-5 economic growth

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## Abstract

**Purpose:** The basis of this opinion is that human resources, property rights and physical capital and other factors of production that are used effectively can encourage an increase in economic growth.

**Research methodology:** Panel data is the data used in this study with the best method, namely the Common Effect Model obtained from the Eviews 9.0 analysis tool.

**Result:** Based on the calculation results show that the Right of Ownership (IPR), the ratio of labor, and foreign investment have a positive and significant effect on economic growth. That is, if the GPA increases by one percent, it will encourage economic growth in a better direction, ceteris paribus. Early Growth has a positive and significant effect on economic growth. This means that there is economic convergence as indicated by a positive initial growth value.

**Limitations:** The need to increase the time and number of cross-sections in the study so that it has a higher diversity of data.

**Contribution:** Increasing property rights in ASEAN must also strengthen property rights norms that apply in society to improve the country's economic performance.

**Keywords:** *Common Effect Model, Economic Growth, Improvement of Property.*

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## 1. Introduction

Economic growth is still a measure of the progress of a country. Currently, countries in the world are competing to set a high growth rate in the future. The success factor of a country's development and the process of increasing output from time to time is the meaning of economic growth (Todaro & Smith, 2015). Measurement of economic growth can be seen through the real Gross Domestic Product (GDP) per capita such as the research conducted by Williams (2007) by linking the determinant variables of economic growth such as capital accumulation and labor.

There have been many studies related to economic growth and the determinant variables that influence it, both theoretical and empirical research, however, few have reached a consensus, Chirwa and Odhiambo (2016). Within the framework of economic growth, two important things can be discussed based on Neo-Classical theory and Endogenous Growth Theory, namely the importance of the role of government and the accumulation of capital, both physical capital and human capital. In addition, developments and other contributions in explaining economic growth have been carried out by previous researchers such as Croix (2015), Radelet and Sachs (1998) with research that leads to fundamental sources of growth such as the importance of institutional and legal quality, geographic, demographic, socio-economic, and political.

In the 1990s, [Ngenoh, Kirui, Mutai, Maina, and Koech \(2015\)](#) found that efficiency was prominent in explaining economic growth with three main determinants, namely: macroeconomic stability, the effectiveness of the economic institutional framework related to political and economic governance, incentive structures and social infrastructure, and regulatory mechanisms. the right price and environment for the free market.

The differences in the determinants of economic growth are certainly caused by differences in the characteristics of an economy. Institutional economics has become an economic thought that has received considerable attention in the last few decades. Divides three streams of institutional economics. First, Old Institutional Economics, New Institutional Economics, and quasi-institutional schools, based on the focus of their respective studies.

[Acemoglu, Johnson, and Robinson \(2005\)](#) in their book entitled Why Nations Fail explain clearly how differences or gaps in welfare can occur throughout the world by looking at institutional differences that are applied in all countries. For example, the differences in the economy on the Korean peninsula, which are geographically very close, however, have very striking differences in welfare.

[Easterly and Levine \(2003\)](#) explains that the emphasis on the physical capital investment variable is the difference between neoclassical economic growth and other economic growth theories. The endogenous growth model views human capital as the main source of economic growth. Property rights have the assumption that their existence will encourage productive activities, but it does not apply in all countries, for developing countries this assumption has not been accepted while it applies in developed countries. This difference is the trigger for differences in the level of economic growth in the long term.

The main determinant of economic growth is property rights according to the institutional economic tradition. In this context, the efficient allocation of resources and transaction costs establish the relationship between property rights and economic growth. [Ahmed Lahsen and Piper \(2019\)](#) define the factors that determine economic growth include transaction costs, changes in ownership, capital stock, and labor which are included in production inputs which are calculated in the total cost of production.

[Besley and Ghatak \(2010\)](#), an economic cost associated with acquisitions and transfers is the definition of economic costs and the protection of property rights. The relationship between transaction costs and channels of economic growth is the basis for building the protection of property rights. Highly detailed contracts and coverage of both potential situations are indispensable for dealing with the complexities of economic processes and uncertainty about the future.

In addition, there is an effective allocation of available resources to be linked in the relationship that has been built between economic growth and property rights. Economic growth is positive if there is proper maintenance of physical and human capital, in other words, proper maintenance and effective use are the basis for the assumptions of the arguments put forward.

[Easterly and Levine \(2003\)](#) evaluates that economic growth can increase directly if there is an increase in property rights due to the efficient use of resource allocation. The flow that is carried out through improving existing technology is driven by the use of human capital in the productive sector which is related to effectively protected property rights. Disruption to economic growth and lack of economic productivity due to rent-seeking and redistributive activities, this can occur because an effective property rights protection system is not implemented in an area.

[Haydaroglu \(2015\)](#) said that to obtain results in accordance with expectations can increase human capital in productive activities effectively through property rights. Economic growth can be in a positive direction driven by improvements in technology and the granting of patents or the protection of property rights, often referred to as patents.

Therefore, to achieve a good growth rate, many countries in the world are currently minimizing institutional barriers by making multilateral agreements and cooperation such as the European Union, APEC, ASEAN, etc. These countries hope to achieve a higher level of welfare by removing institutional boundaries and merging them into one large society.

ASEAN is an example of such a group of countries, through the Bangkok declaration in 1967, which aims to accelerate economic growth, positive social development, and increase cultural development by increasing the strengthening of friendship and the spirit of equality of prosperous and prosperous member countries so that they become an Asian country. Peaceful Southeast (ASEAN National Secretariat). This objective describes how the leaders of countries in the Southeast Asian region want to unite their countries through a common institutional entity and hope to achieve mutual prosperity.

In fact, until 2018, the difference in GDP per capita still occurs in the Southeast Asia region, as shown in the following figure:

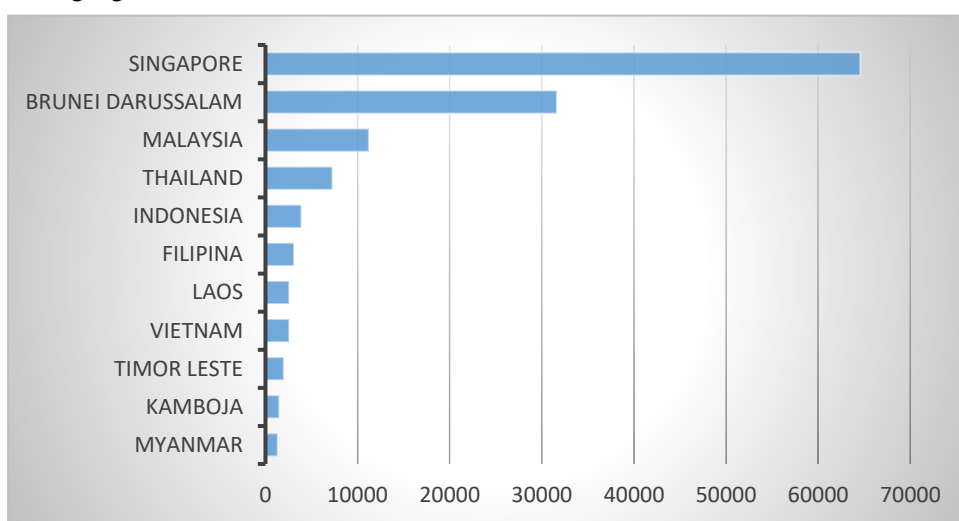


Figure 1. GDP per capita of ASEAN countries in 2018  
Source: World Bank, 2020

Singapore still leads the per capita income of ASEAN countries at US\$ 64,581, followed by Brunei Darussalam at US\$ 31,627, Malaysia at US\$ 11,239, Thailand, US\$ 7,273, while Indonesia is in the fifth position with a GDP per capita of US\$ 3,893, then the Philippines at US\$ 3,102, Laos US\$ 2,567, Vietnam US\$ 2,563, and Timor Leste, Cambodia and Myanmar for US\$ 2,000, US\$ 1,512, and US\$ 1,326, respectively.

The differences that still occur in the per capita income of the ASEAN countries even though they are already in one common entity are certainly influenced by many factors. Institutional differences become the focus of this research, especially on the discussion of property rights and their effect on economic growth.

Discussions about property rights often refer to interrelated rights in the definition provided by [Besley and Ghatak \(2010\)](#) which involves restricting use by other users and other users, inheriting, transmitting, and selling using rights as a basis. Other people's potential or actualization, rights that are used as implications for assets carried out by someone using these rights so that overlapping rights often occur. In addition, there are differences in the granting of rights to communities, households and individuals (for example, natural resources and other natural resources that are used by some individuals, but do not transfer or transact on these resources).

Ownership rights are important in sustaining economic growth because it is easier for investors to invest if their ownership is clear and protected. This will result in a maintained investment climate which has implications for maintaining the quality of a country's economic growth. [Haydaroglu \(2015\)](#) examined the relationship of property rights in OECD countries and the European Union in 2007-2014, the results showed that there was a positive influence on economic growth both in the short and long term. [Everest-Phillips \(2008\)](#) added the financial deepening variable in their research showing that ownership rights and financial deepening have a strong relationship with economic growth.

Research on property rights is not without debate, not everyone supports this institutional view, and specific property rights are a key ingredient for growth such as [Ahmed Lahsen and Piper \(2019\)](#) and the question by some researchers is whether the acceleration of growth can best be driven through property rights. The question arises about other factors influencing growth broadly that are equal to or even more important than property rights themselves even though property rights promote growth, in addition to the degree of market competition or distribution of wealth.

Table 1. International Property Rights Index (IPRI)

<i>Country</i>	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Indonesia	4.9	4.1	4.1	5	4.93	4.9	5	4.9	5	5.17	5.33	5.41
Malaysia	6.4	6.3	6.1	6.1	6.5	6.5	6.5	6.6	6.8	6.61	6.49	6.62
Philippines	5	4.6	4.5	4.7	4.97	5	5	5.1	5.1	5.33	5.22	5.31
Singapore	7.9	8.1	8.2	8.3	8.13	8.1	8.2	8.1	8.1	8.36	8.4	8.64
Thailand	5.6	5.4	5.4	5.3	5.1	5.1	5.3	4.9	5	5,225	5.32	5.46

Source: International property rights alliance report 2019, 2020

The data above shows the highest index obtained for ASEAN-5 countries is Singapore with 8.64 in 2019, followed by Malaysia with an index of 6.62 then Thailand with an index of 5.46, and Indonesia and the Philippines at 5.41 and 5 respectively. ,31.

Physical property rights, intellectual property rights, and the legal and political environment are the three main components of the Property Rights Alliance that have been issued by the International Property Rights Index (IPRI). The three constituent components also consist of 11 forming variables. Legal and Political Environment (LP): the importance of protecting intellectual property rights becomes an important point of view of the health of a country's legal and political system. The level of trust in the courts, political stability, and variables in decision-making and bribery are included in the scope of judicial independence variables.

Physical Property Rights (PPR): The scope of this variable, namely easy-to-obtain credit, property registration, and protection of physical rights, are included in three very important sub-variables in the context of protecting private property rights.

Intellectual Property Rights (IPR): Protection of intellectual property rights, protection of patents, protection of trademarks, and the theft of four-pronged cash copyrights obtained from the linkage of trademarks and copyrights essentially applies to the policies and activities of state patents and intellectual property protection.

The International Property Rights Index (IPRI) the strongest level of property protection is represented by a rating of 10, while the absence of security in the country concerned is represented by a rating of 0. In addition, the numbers 0 to 10 represent the overall scale, elements of each variable.

Therefore, this study wants to investigate the relationship between ownership rights and economic growth in ASEAN-5 because it has different economic growth and examines whether ownership rights are the most influential variable compared to other variables forming economic growth. To explain the effect on economic growth in more depth, control variables are needed to make this research more measurable and real. The control variables used in this study are Initial Growth, Foreign Direct Investment as a proxy variable for physical capital from the World Bank, and the ratio of labor to the population from the World Bank as a proxy for the labor variable.

The control variable Initial Growth is considered to have an important effect on economic growth so that it must be included in every growth model, according to [Levine and Renelt \(1992\)](#) in addition to the physical capital and labor factors that are proxied by foreign direct investment are variables that must be included according to the economic view. neo-classical, as in the Cobb-Douglas and Solow models of economic growth which describe productivity as a contribution from the accumulation of capital and labor.

Based on the explanation above, it can be stated that the diverse economic growth in ASEAN-5 still deserves to be investigated further. Through Levine and Renelt's growth model adopted in this study, it is hoped that this difference can be explained more clearly by incorporating the variable of ownership rights into the model.

## **2. Literature review**

### ***Economic growth***

The theory of economic growth in his book, [Williams \(2007\)](#) explains that growth can be caused by the interaction of determinants of output in the long run, this occurs because of the interaction between these factors. The coverage of the theory of total GDP and the theory of population growth must be included in the theory of growth to explain per capita output. There is a tendency for growth to occur in the long term in a period of at least 10 years, this explains the perspective of growth in the long term. The historian/empirical school and the analytical theory/school are two types of clusters of overlapping theory in general. endogenous growth theory (new growth theory), neoclassical growth theory, classical growth theory, are some important theories that are included in the analytical flow.

The level of technological progress, the accumulation of capital, labor and population are factors of production that must exist in economic growth, according to Neoclassical Theory. The level of full use of the factors of production, the level of full employment is an assumption in the analysis of neo-classical theory that describes a country's economy. This model explains that the technology used determines the amount of output produced from a certain amount of capital and labor ([Mankiw, 2019](#)).

The Neoclassical Growth Theory presented in the Cobb-Douglas function emphasizes the role of capital formation as one of the important growth factors. Solow emphasized long-term growth and the role of capital, labor, and technology as factors of production. Furthermore, according to Solow, growth will occur if there is the capital, there is population growth and there is technology, although technology is still considered an exogenous factor ([Krugman & Wells, 2018](#)).

### ***Institutional Economics***

The classical economic theory of Adam Smith states that welfare can be achieved with the freedom provided on the condition that everyone follows the existing rules. However, there are various shortcomings in the classical economic theory of thought that encourage the birth of institutional economics which criticizes the weaknesses of classical and neoclassical economics ([Hoover, 2009](#)).

Then, the institutional economy is divided into two based on the tradition of thinking and the concentration of issues, namely the old institutional economy and the new institutional economy which is also known as mathematical/theoretical institutional economics. The old institutional economics is largely derived from the research of Veblen and Commons. Veblen focuses more on the dichotomy between business and industrial aspects, while Commons, pays more attention to the legal

point of view of property rights and organizations that influence economic activity. Institutionalism is interpreted as a critique of classical economics and also anything related to economic behavior ([Froyen, 2013](#)).

Institutionally, it can be interpreted as general acceptance of rules and behavior by social groups and individuals for certain behaviors in special situations, as generally accepted rules of behavior. North himself defines institutions as rules that limit deviant behavior to build political, economic, and social structures. In this context, the institution has three components, namely formal rules, informal rules, and enforcement mechanisms. Formal rules shape the political system, economic system, and security system, while informal rules include experience, traditional values, religion, and all factors that influence individual subjective perceptions. Finally, enforcement is due to ineffective institutions with enforcement mechanisms. According to [Sari, Syechalad, and Majid \(2016\)](#) the market can only work effectively if it is supported by the right institutions where the existence of institutions, in turn, reduces the element of uncertainty. The existence of a good institution can solve the problem of coordination and production.

[Glaeser, La Porta, Lopez-de-Silanes, and Shleifer \(2004\)](#) suggest that there are two branches of institutional economics, namely old institutional economics (OIE) and new institutional economics (NIE). OIE focuses on examining habits as a determining factor in the formation of institutions. Meanwhile, NIE pays attention to the obstacles that hinder the process of creating institutional conditioning as a framework for interaction between individuals. NIE with the economics of transaction costs builds on the idea that institutions seek to achieve efficiency by minimizing overall costs, not just production costs.

### ***Property Rights Theory***

The issue of property rights still receives limited attention from policymakers. Ownership rights to an asset can be defined as rights to use, change the form and content of ownership rights, and transfer all rights to assets or some desired rights. Or in other words, ownership rights are rights to own, sell, and access welfare. Caporaso and [Levine and Renelt \(1992\)](#) try to explain two theories about property rights through other perceptions, namely the positivist school (which argues that rights are created through the political system) and the natural rights school (which argues that in fact, everyone has their rights from birth).

According to [Everest-Phillips \(2008\)](#) property rights can be identified into four types of characteristics, which are:

- a) *Universality*: All resources are privately owned and all shares are fully specified.
- b) *Exclusivity*: The result of ownership in the form of all profits and costs. The utilization of resources should fall into the hands of the owner.
- c) *Transferability*: All ownership rights should be transferable from one owner to another through voluntary exchange.
- d) *Enforceability*: Ownership rights must be guaranteed from all forms of practice/division or violation from other parties.

Ronald Coase also argues that externalities can be externalized in economic activities if property rights can be properly regulated. Property Rights in this case use the International Property Rights Index issued by the Property Rights Alliance which consists of three main constituent components. The relationship between ownership rights and economic growth is positive because ownership rights can encourage investment and innovation ([McArthur & Sachs, 2001](#)).

Foreign Direct Investment describes the capital stock contained in a country that can be used to spur economic growth through credit provided to the private sector. According to [Hoover \(2009\)](#) a high saving rate will stimulate higher investment and lead to high growth as well. [Todaro and Smith \(2006\)](#) explains that population growth and labor force growth are traditionally regarded as the positive factors that spur economic growth.

[Čadil, Petkovová, and Blatná \(2014\)](#) which examines in the long and short term the relationship of property rights with economic growth, in a positive and significant relationship. Likewise with Amina A. [Dakhli and De Clercq \(2004\)](#) produced a similar study that property rights are positively correlated to welfare in Latin American countries as well as being the top variable contributing to economic growth.

[Misztal \(2011\)](#) states that executive recruitment openness and executive barriers have a strong and negative impact on growth in MENA countries. In general, the impact of increasing democracy will suppress economic growth in a negative direction. [Sari et al. \(2016\)](#), [Behname \(2012\)](#) and [Durham \(2004\)](#) show that the variables of investment, labor and government spending can increase economic growth in Indonesia towards a better direction. [Amir, Khan, and Bilal \(2015\)](#), [Vijesandiran and Vinayagathan \(2015\)](#), and [Hsiao and Shen \(2003\)](#) stated that investment and labor can significantly boost economic growth. [Levine and Renelt \(1992\)](#) shows that economic growth will always be influenced by initial economic growth, both positive and negative.

### 3. Research methodology

Panel data consisting of time-series and cross-sections is the type of data used in this study consisting of 2008-2020 time series data across the 5 early founding countries of ASEAN. The choice of country and year of study was based on data availability. The data used in this study is per capita GDP growth data based on constant prices in 2010, Property Rights are proxied using the International Property Rights Index, Initial Growth, Physical Capital is proxy using Foreign Direct Investment, and labor. Data were obtained from the Property Rights Alliance, and the World Bank, and other related sources. GRDP per capita based on constant prices in 2010 became the dependent variable in this study in the 5 founding countries of ASEAN in 2008-2020 in percentage (%). The independent variables in this study include:

1. Property rights are proxied using the International Property Rights Index, which is a measure of the institutional quality of a country in guaranteeing ownership in that country because it consists of three components, namely, intellectual property rights, physical property rights, and the legal and political environment. The IPRI value uses an index unit from the numbers 0-10 where 0 means that the guarantee of Ownership Rights in the country is very low and 10 means that the country has high guarantees of ownership rights.
2. Initial Growth that is GDP per capita data taken from one year before the study year. This data is obtained from the World Bank, in United States dollars.
3. Physical Capital proxy using Foreign Direct Investment, namely net inflows (new investment inflows minus disinvestments) in the reporting economy from foreign investors, and divided by GDP for (five) ASEAN countries provided by the World Bank in percent.
4. The labor used is the percentage of the population who are in the age range of 15 years and over and under the age of 64 years, this is included in the productive age.

#### *Analysis models and methods*

[Levine and Renelt \(1992\)](#) growth model was adopted in analyzing economic growth in this study, which are as follows:

$$GDPR_{it} = \beta_0 + \beta_1 IPRI_{it} + \beta_2 IG_{it} + \beta_3 FDI_{it} + \beta_4 TK_{it} + \varepsilon_{it}$$

Information:

GDPR = GDP Per capita based on Constant price (US\$)

IPRI = International Property Rights Index (index)

IG = *Initial Growth* (US\$)

FDI = *Foreign Direct Investment* (percent)

TK = Power Work (percent)

$\beta_i$  = Constant (intercept)

i = 1, 2, ..., n, shows the number of individual crosses (cross sections)

t = 1, 2, ..., t, shows the dimension of the time series (time series)

$\beta$  = Regression Coefficient  
 $\varepsilon$  = Error Term

### ***Regression Model Data Panel***

#### ***Common Effect Model (CEM)***

Combining cross-sectional data and time series data is an estimation of panel data with the simplest technique. we can estimate a panel data method we can use the Common Effect Model method, by combining the data without looking at the differences between individuals and research time, this method is known as the Common Effect Model regression method ([Baltagi, 2015](#)).

#### ***Fixed Effect Model (FEM)***

Fixed Effect Model regression model is a model that uses the intercept in different equations as model assumptions. The dummy used in capturing the difference in intercepts to estimate the panel data is a Fixed Effect Model. The basis on different intercepts, namely tapping from time to time which remains the same which is the definition of Fixed Effect Model. In addition, the regression coefficient that is constant or constant over time and individuals is an assumption in this model. This estimation model is often called the Least Squares Dummy Variables (LSDV) technique ([Baltagi & Baltagi, 2008](#)).

#### ***Random Effect Model (REM)***

The calculated error of time series and cross section is used to increase the inefficiency of the least squares method which can be improved by using the Random Effect Model. The generalization of the results of the variation of the least squares estimate is the Random Effect Model. Having random nature, or in other words, the absence of a strong relationship between the unobserved regressors, is the assumption of the Random Effect Model ([Baltagi, 2015](#)).

### ***Model Significance Test***

#### ***Chow test***

The panel data method that will be used in the study can be determined by using this method. In determining the best model between the Common Effect Model and the Fixed Effect Model to be used, the Chow Test can be used. If the results of the Fixed Effect Model are obtained, then the Hausman test is needed to determine the best model between the Random Effect Model (REM) and the Fixed Effect Model (FEM) to be used ([Baltagi, 2015](#)).

#### ***Hausman test***

This test aims to determine which model should be used, namely the Random Effect Model (REM) and the Fixed Effect Model (FEM). The intercept does not change over time in each different object contained in the Fixed Effect Model, the time in question is time invariant. Individual intercepts in the mean value are represented by the deviation component (random) and the average value of all intercepts (cross-section) is included in the Random Effect Model (REM) method ([Baltagi, 2015](#)).

#### ***Lagrange Multiplier (LM) Test***

In determining the best method between the Random Effect Model (REM) and the Fixed Effect Model (FEM) it can be demonstrated using the Hausman test. The constant time to time in each different object in the Fixed Effect Model method, namely the time invariance shows a constant intercept, as well as the average value of all intercepts (cross-sections) contained in the Random Effect Model (REM) method ([Baltagi, 2015](#)).

### ***Hypothesis testing***

The main component in econometric testing is hypothesis testing. This test has uses in drawing research conclusions, in addition to hypothesis testing is used to determine the accuracy of the data. In testing the hypothesis, there are three (3) forms of testing to be carried out, namely the individual parameter significance test (t test), the simultaneous significance test (F-test), and the coefficient of determination ( $R^2$ ).



#### 4. Discussion

Model selection was determined using the Chow test, Hausman test, and the Lagrange Multiplier (LM) test. The Chow test is used by comparing the Common Effect (CEM) method with the Fixed Effect (FEM) method, then followed by the Hausman test by comparing the Random Effect (REM) method with the Fixed Effect (FEM) method, and finally the Lagrange Multiplier Test (LM) by comparing the Random Effect (REM) method with the Common Effect (CEM)/Pooled Least Square (PLS) method.

Table 2. Results with Common Effects Model, Fixed Effects Model, and Random Effects Model

Independent Variable	Bound Variable = Growth-Economy		
	CEM	FEM	REM
C	0,068	3,175	0,068
IPRI	0,815*	4,111*	0,815
TK	0,044*	0,405	0,044
IG	1,109*	1,222**	1,109**
FDI	0,085*	0,066	0,085*
R-squared	0,445	0,520	0,644
F-Statistic	12,011	7,596	12,011
Cross-section F (Chow Test)		2,211 (0,079)***	
Cross-section Random (Hausman Test)		8,845 (0,065)***	
Cross-section Breusch Pagan (LM Test)		2,005 (0,157)***	

Source: Processed Data Eviews 9.0

Information:

\* = Significant ( $\alpha$  0.01), \*\* = Significant ( $\alpha$  0.05), \*\*\* = Significant ( $\alpha$  0.10)

In the Chow test, the Common Effect Model (CEM) method is better than the Fixed Effect Model (FEM) method being the best model, this is indicated by the probability value that is greater than the 0.05 level of significance, for that the CEM method is the best model. While in the Hausman test the Random Effect Model (REM) method is the best model compared to FEM, this is indicated by the probability value of 0.065 which is greater than the significance level of 0.05, so the REM method is the best model, to determine the best model between CEM and REM then continued testing the research model specifications using the Lagrange Multiplier (LM) Test. The probability value obtained is 0.157 which shows a higher number than the 5% significance level. Based on the three model significance tests that have been carried out, it can be concluded that the best method is the CEM method, so that method will be used in this study.

$$PE_{it} = 0,068 + 0,816IPRI_{it}^* + 0,044TK_{it}^* + 1,109IG_{it}^{**} + 0,085FDI_{it-1}^*$$

The constant value (C) of 0.068 indicates that the value of economic growth is 0.068 in the condition that all independent variables are equal to zero. An increase in property rights will encourage an increase in economic growth in a significant positive direction. this shows that the existence of free property rights can increase ceterisparibus economic growth. The labor variable also has the same effect as property rights, where an increase in labor is accompanied by an increase in economic growth. Furthermore, the initial growth variable which shows a positive number indicates that there is an economic divergence which indicates that there is an acceleration in economic growth in developing countries pursuing economic growth in developed countries. Likewise for foreign investment variables that increase will increase economic growth in a positive direction significantly. This is in accordance with the research hypothesis that there is an influence of Physical Capital on economic growth in ASEAN-5.

The analysis is repeated with “natural experiments” on the separation of North and South Korea, countries with similar historical and cultural roots, and similar geographies but which formed very different types of property rights regimes after their separation. In 2000, the per capita income level in South Korea was US\$ 16,100 while in North Korea it was only US\$ 1,000, almost the same as in sub-Saharan African countries in general ([Acemoglu et al., 2005](#)). According to [Besley and Ghatak \(2010\)](#) although the role of property rights in promoting growth is widely supported, the question arises about other factors that influence growth and which may be as or more important than property rights themselves, such as the existing distribution of wealth. or competition in the world. Other financial market research monitors the huge costs of establishing a formal property rights system and focuses on other issues that may be more critical to growth.

[Ahmed Lahsen and Piper \(2019\)](#) say economic growth can be driven by the role of property rights, not only that there are several other factors that affect economic growth, which may have an important relationship with these property rights, for example the level of competition in financial markets or such as the distribution of wealth. Finance Other research highlights the huge costs of establishing a formal property rights system and focuses on other issues that may be more important for growth. [Levine and Renelt \(1992\)](#) states that economic growth will always be significantly influenced by labor in an area and several other appropriate studies, such as those conducted by [Moricz and Sjöholm \(2014\)](#); [Amir et al. \(2015\)](#); ([Koyongjan, Kindangen, & Kawung, 2019](#)); [Maisaroh and Risyanto \(2018\)](#) which state that the workforce has a positive and significant impact on economic growth in their respective research areas. [Levine and Renelt \(1992\)](#) shows that initial growth has a positive value indicating an economic divergence event, namely that the economic growth of developing countries is able to catch up with economic growth in developed countries.

According to [Hapsari and Prakoso \(2016\)](#); [Moricz and Sjöholm \(2014\)](#); and [Maharani and Isnowati \(2014\)](#), this can happen especially if FDI encourages the incorporation of new technologies in the production function of the destination country's economy. With the entry of foreign investment will lead to the transfer of capital, technology, managerial skills, and knowledge from developed countries to developing countries. The transfer will stimulate productivity and increase national output which will increase economic growth. In addition, another impact of FDI is to create jobs which is the key to overcoming poverty and unemployment. This also has an impact on social life which provides peace and improves people's welfare which can invite more investors. The presence of a foreign firm can have an extensive impact on the recipient country beyond the effect of increasing its total capital, by generating large positive externalities, possibly increasing the technology country, with positive effects on productivity and aggregate growth.

Research conducted by [Rizky, Agustin, and Mukhlis \(2016\)](#) states that economic openness (trade openness), foreign direct investment, domestic investment, government spending, and labor work. and have a significant impact on economic growth in the six ASEAN countries. [Klasen, Herzer, and Nowak-Lehmann D \(2007\)](#) show that Foreign Direct Investment and government spending have a positive and significant effect on economic growth. [Hapsari and Prakoso \(2016\)](#) stated that Foreign Direct Investment and government spending have a positive and significant effect on economic growth. an increase in FDI will increase the country's economic growth. Previous research was also conducted by [Alfaro, Chanda, Kalemli-Ozcan, and Sayek \(2004\)](#) The results of the study indicate that Foreign Direct Investment and financial market control have a positive and significant impact on the economic growth of OECD member countries.

However, [Alfaro et al. \(2004\)](#) show that foreign investment inflows have a positive effect on the growth rate of the beneficiary country only if the level of human capital is above a given threshold. So that the effect cannot be said to always be positive to encourage growth, but requires quality requirements for human resources. [Durham \(2004\)](#) provides additional evidence supporting the role of development finance, focusing respectively on the role of financial intermediaries and financial markets. In addition, some authors such as [Hsiao and Shen \(2003\)](#) highlight the importance of the host

country's institutional environment, such as political stability and the degree of urbanization, ([Alfaro et al., 2004](#)) institutional qualities including corruption and economic freedom.

[Levine and Renelt \(1992\)](#) which state that the population that is transformed into the labor force will always have a positive and significant effect on economic growth in a region and several other studies that are less precise, such as those conducted by [Sani, Sambodo, and Bambang \(2018\)](#); [Amir et al. \(2015\)](#); [Sari et al. \(2016\)](#); and [Larasati \(2018\)](#) which state that the labor force has a positive and significant effect on economic growth in their respective research areas. [Levine and Renelt \(1992\)](#) who show that Early Growth has a positive effect on economic growth. This shows that the high speed of convergence will increase economic growth.

## 5. Conclusion

Ownership Rights, Initial Growth, Physical Capital, and Labor together have a significant effect on economic growth. Economic growth can be driven by the role of property rights, not only that there are several other factors that affect economic growth, which may have an important relationship with these property rights, for example the level of competition in financial markets or such as the distribution of wealth. In establishing a formal property rights system and focusing on other issues that are likely to have a significant positive impact on economic growth.

Singapore has the highest intercept value because the quality of institutions in the country is well established, as reflected in the International Property Rights Index data, which is higher than the other 4 countries studied. Therefore, other countries need to catch up in terms of institutional quality such as control over the level of corruption, protection from copyright piracy, and easy access to finance to encourage even higher economic growth. The government needs to encourage the entry of foreign direct investment which plays an important role in driving the pace of economic growth. Foreign Investment Technology from more developed countries and therefore plays a major role in technology upgrading for the recipient country, Foreign Investment can promote economic growth.

## References

- Acemoglu, D., Johnson, S., & Robinson, J. (2005). *Chapter 6 Institutions as a Fundamental Cause of Long-Run Growth*. u: Handbook of Economic Growth Volume 1A: Elsevier BV.
- Ahmed Lahsen, A., & Piper, A. T. (2019). Property rights and intellectual property protection, GDP growth and individual well-being in Latin America. *Latin American Economic Review*, 28(1), 1-21.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of international economics*, 64(1), 89-112.
- Amir, H., Khan, M., & Bilal, K. (2015). Impact of educated labor force on Economic growth of Pakistan: A human capital perspective. *European Online Journal of Natural and Social Sciences*, 4(4), 814-831.
- Baltagi, B. H. (2015). *The Oxford handbook of panel data*: Oxford Handbooks.
- Baltagi, B. H., & Baltagi, B. H. (2008). *Econometric analysis of panel data* (Vol. 4): Springer.
- Behname, M. (2012). Foreign direct investment and economic growth: Evidence from Southern Asia. *Atlantic Review of economics*, 2.
- Besley, T., & Ghatak, M. (2010). Property rights and economic development. *Handbook of development economics* (Vol. 5, pp. 4525-4595): Elsevier.
- Čadil, J., Petkovová, L., & Blatná, D. (2014). Human capital, economic structure and growth. *Procedia economics and finance*, 12, 85-92.
- Chirwa, T. G., & Odhiambo, N. M. (2016). Macroeconomic determinants of economic growth: A review of international literature. *The South East European Journal of Economics and Business*, 11(2).
- Croix, D. d. l. (2015). *Economic Growth International Encyclopedia of the Social & Behavioral Sciences* (Second Edition).
- Dakhli, M., & De Clercq, D. (2004). Human capital, social capital, and innovation: a multi-country study. *Entrepreneurship & regional development*, 16(2), 107-128.

- Durham, J. B. (2004). Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European economic review*, 48(2), 285-306.
- Easterly, W., & Levine, R. (2003). Tropics, germs, and crops: how endowments influence economic development. *Journal of monetary economics*, 50(1), 3-39.
- Everest-Phillips, M. (2008). The Myth of 'Secure Property Rights': good economics as bad history and its impact on international development. London: Overseas Development Institute Working Paper.
- Froyen, R. T. (2013). *Macroeconomics: Theories and policies*.
- Glaeser, E. L., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2004). Do institutions cause growth? *Journal of Economic Growth*, 9(3), 271-303.
- Hapsari, R. D., & Prakoso, I. (2016). Penanaman modal dan pertumbuhan ekonomi tingkat provinsi di Indonesia. *Jurnal Ekonomi dan Bisnis*, 19(2), 211-224.
- Haydaroğlu, C. (2015). The relationship between property rights and economic growth: an analysis of OECD and EU countries. *DANUBE: Law, Economics and Social Issues Review*, 6(4), 217-239.
- Hoover, K. D. (2009). *Modern Macroeconomics: Its Origins, Development, and Current State*: Duke University Press.
- Hsiao, C., & Shen, Y. (2003). Foreign direct investment and economic growth: the importance of institutions and urbanization. *Economic development and Cultural change*, 51(4), 883-896.
- Klasen, S., Herzer, D., & Nowak-Lehmann D, F. (2007). In search of FDI-led growth in developing countries.
- Koyongian, C. L., Kindangen, P., & Kawung, G. M. (2019). Pengaruh Pengeluaran Pemerintah, Investasi, Dan Tenaga Kerja Terhadap Pertumbuhan Ekonomi Di Kota Manado. *Jurnal Pembangunan Ekonomi Dan Keuangan Daerah*, 18(7).
- Krugman, P., & Wells, R. (2018). *Macroeconomics (Fifth Edit)*: Worth Publishers.
- Larasati, I. S. (2018). *Pengaruh Inflasi, Ekspor, dan Tenaga Kerja Terhadap Produk Domestik Bruto (PDB)*(Studi Pada Indonesia, Malaysia, dan Thailand Tahun 2007–2016). Universitas Brawijaya.
- Levine, R., & Renelt, D. (1992). A sensitivity analysis of cross-country growth regressions. *The American economic review*, 942-963.
- Maharani, K., & Isnowati, S. (2014). Kajian investasi, pengeluaran pemerintah, tenaga kerja dan keterbukaan ekonomi terhadap pertumbuhan ekonomi di Propinsi Jawa Tengah. *Jurnal Bisnis dan Ekonomi*, 21(1).
- Maisaroh, M., & Risyanto, H. (2018). Pengaruh Investasi, Pengeluaran Pemerintah Dan Tenaga Kerja Terhadap Pdrb Provinsi Banten. *EkBis: Jurnal Ekonomi dan Bisnis*, 1(2), 206-221.
- Mankiw, N. G. (2019). *Macroeconomics*: Macmillan Learning.
- McArthur, J. W., & Sachs, J. D. (2001). Institutions and geography: comment on Acemoglu, Johnson and Robinson (2000): National bureau of economic research Cambridge, Mass., USA.
- Miształ, P. (2011). The Relationship between Savings and Economic Growth in Countries with Different Level of Economic Development (Współzależności między oszczędnościami i wzrostem gospodarczym w krajach o różnym poziomie rozwoju gospodarczego). *Finansowy Kwartalnik Internetowy e-Finanse*, 7(2), 17-29.
- Moricz, S., & Sjöholm, F. (2014). The effect of elections on economic growth: results from a natural experiment in Indonesia.
- Ngenoh, E., Kirui, L., Mutai, B., Maina, M., & Koech, W. (2015). Economic determinants of the performance of public irrigation schemes in Kenya. *Journal of Development and Agricultural Economics*, 7(10), 344-352.
- Radelet, S., & Sachs, J. D. (1998). Shipping costs, manufactured exports, and economic growth.
- Rizky, R. L., Agustin, G., & Mukhlis, I. (2016). Pengaruh Penanaman Modal Asing, Penanaman Modal Dalam Negeri Dan Belanja Modal Terhadap Pertumbuhan Ekonomi Provinsi Di Indonesia. *Jurnal Ekonomi dan Studi Pembangunan (Journal of Economics and Development Studies)*, 8(1), 9-16.

- Sani, R. M., Sambodo, H., & Bambang, B. (2018). The Effect of Human Capital, Labors, and Capital on Economic Growth in Barlingmascakeb. *Eko-Regional: Jurnal Pembangunan Ekonomi Wilayah*, 13(2).
- Sari, M., Syechalad, M. N., & Majid, S. A. (2016). Pengaruh investasi, tenaga kerja dan pengeluaran pemerintah terhadap pertumbuhan ekonomi di Indonesia. *Jurnal Ekonomi Dan Kebijakan Publik Indonesia*, 3(2), 109-115.
- Todaro, M. P., & Smith, S. C. (2006). Economic development 8th edition. *Manila, Philippines: Pearson South Asia Pte. Ltd.*
- Todaro, M. P., & Smith, S. C. (2015). *Economic Development*, ISBN 9780133406788: United Kingdom: Pearson Education, Inc.
- Vijesandiran, S., & Vinayagathan, T. (2015). Dynamic relationship between human capital and economic growth in Sri Lanka: A co-integration analysis. *Asian Online Journal*, 2(2), 20-29.
- Williams, C. (2007). Research Methods, *Journal of Business & Economic Research*—March 2007 Volume 5, Number 3: New York: Grand Canyon University.