



## EFFECT OF GLOBALIZATION ON UNEMPLOYMENT IN ASEAN

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### ABSTRACT

*In recent decades globalization has become increasingly evolving. The existence of openness between countries facilitates the establishment of mutually beneficial cooperation between various countries. The formation of ASEAN organizations is one example of the existence of globalization. This research aims to analyze the influence of globalization, especially economic, social, political and economic growth and wages on unemployment in ASEAN. This research uses regression analysis of panel data. Zurich and the World Bank in the period 2000-2017. The results of the study concluded that the variables of globalization as a whole, social and political globalization have a significant negative effect on unemployment. The wage control variable has a significant negative effect, while economic growth has a negative but insignificant effect on unemployment. Meanwhile, economic globalization has a positive effect on the unemployment rate in ASEAN.*

**Keywords:** Economic Globalization, Social Globalization, Political Globalization, Unemployment, ASEAN

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### ABSTRAK

*Dalam beberapa dekade terakhir ini globalisasi menjadi semakin berkembang. Adanya keterbukaan antar negara memudahkan dalam menjalin hubungan kerjasama yang saling menguntungkan antar berbagai negara. Terbentuknya organisasi ASEAN merupakan salah satu contoh dari adanya globalisasi. Penelitian ini bertujuan untuk menganalisis pengaruh globalisasi terutama globalisasi ekonomi, sosial, politik serta pertumbuhane-konomidan upah terhadap pengangguran di ASEAN. Penelitian ini menggunakan analisis regresi data panel. Data yang digunakan merupakan data sekunder yang berasal dari ETH Zurich dan World Bank pada periode waktu 2000-2017. Hasil penelitian menyimpulkan bahwa variabel globalisasi secara keseluruhan, globalisasi sosial dan politik berpengaruh signifikan negatif terhadap pengangguran. Variabel control upah berpengaruh signifikan negatif, sedangkan pertumbuhan ekonomi berpengaruh negatif namun tidak signifikan terhadap pengangguran. Sementara itu, globalisasi ekonomi memiliki pengaruh positif terhadap tingkat pengangguran di ASEAN. Hal ini berarti semakin tingginya globalisasi ekonomi maka pengangguran akan semakin meningkat, pertumbuhan ekonomi tidak berpengaruh signifikan terhadap pengangguran di ASEAN. Hasil ini tidak sejalan dengan hipotesis, namun dilihat dari kondisi pertumbuhan ekonomi di ASEAN adanya pertumbuhan ekonomi positif tidak selalu diiringi dengan penurunan tingkat pengangguran. Hal ini menunjukkan bahwa pertumbuhan ekonomi kurang berperan dalam menurunkan pengangguran, upah berpengaruh signifikan dan negatif terhadap pengangguran di ASEAN. Hal ini menunjukkan bahwa tingginya upah akan menurunkan pengangguran.*

**Kata Kunci:** Globalisasi Ekonomi, Globalisasi Sosial, Globalisasi Politik, Pengangguran, ASEAN

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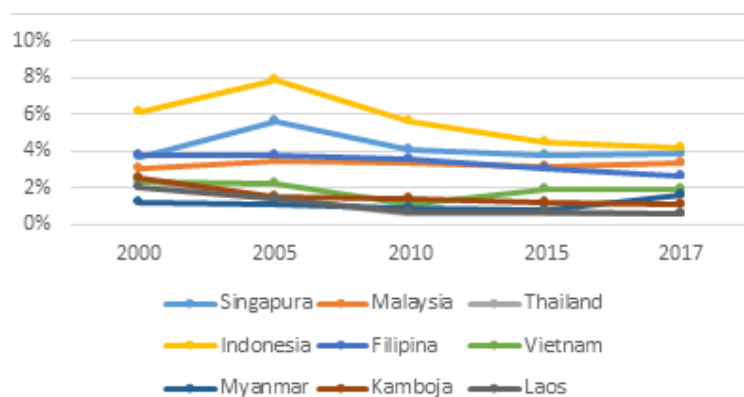


## Introduction

Unemployment is one of the problems that is often faced by every country, especially developing countries. The problems arising from unemployment are quite a lot, both economic and social problems. Unemployment in terms of the economy can lead to a decrease in economic activity, such as a decrease in people's purchasing power, which leads to a decrease in demand for goods and services. The interest of entrepreneurs and investors to expand and establish new businesses also fell, causing a decrease in per capita income. Other problems that arise due to unemployment are crime, decreased human capital, increasing social costs, misery, and social instability (Oniore et al., 2015). Therefore, unemployment is still an important issue that every country in the world must address.

The issue of unemployment continues to be a concern in ASEAN countries. This is because most of the ASEAN member states still have weak economic fundamentals and ultimately cause crisis vulnerability in the economic sector at the regional and global levels when compared to developed countries such as America and Europe (Firmansyah & Kusreni, 2018). The lack of capital owned by most ASEAN countries is also an obstacle to creating new jobs. According to Moosa (2008), there are several things that cause unemployment in ASEAN. First, structural or frictional problems are not due to cyclical. Secondly, the primary source of labor demand is dominated by the government. Hence, the labor market is rigid. Third, there are differences between developing and developed countries in their economic structure.

The unemployment rate in ASEAN from 2000 to 2017 is shown in Figure 1. Since 2000 some ASEAN countries have had unemployment rates with trends that stagnate, such as Myanmar and Cambodia. In 2017, the unemployment rate of Thailand, Vietnam, Myanmar, Cambodia, and Laos was below 2%, the Philippines at 2.6%, Malaysia at 3.4%, and Singapore at 2.9%, while Indonesia had a relatively high unemployment rate of 4.2%.



Source : (World Bank, 2020)

**Figure 1: Unemployment Rate (%) in ASEAN, 2000-2017**

Reducing unemployment and achieving a high rate of economic growth is an important priority for a country, especially developing countries. Economic growth is one of the factors that affect the unemployment rate. Economic growth and unemployment have a relationship based on the Okun Law. Okun's law explains that there is a negative relationship between economic growth and unemployment, any increase in economic growth will lead to a decrease in the unemployment rate. Soylu et al. (2018) state that wages are also one that affects unemployment. An increase in wages in labor market theory can result in a decrease in the quantity of labor. If the wage rate rises (assuming the price of other capital goods is fixed or *ceteris paribus*), then the price of labor will be relatively more expensive than other

inputs. This situation prompted the company to reduce the use of labor in order to maintain maximum profits. The reduction in labor has increased the unemployment rate (Pitartono & Hayati, 2012).

Recently, globalization has become one of the determining factors for the unemployment rate by researchers (Altiner et al., 2018). Until now, globalization's good or bad impact is still a controversial discussion. In a broad sense, globalization is an economic and social integration through cross-country where there is a flow of information, ideas, technologies, goods, services, capital, finance, and society (Dhas & Helen, 2008). Globalization is one of the potential to encourage economic growth and national development in the modern world (Daly et al., 2017). In developing countries, globalization can help facilitate the integration of economic development into world markets and institutions, aid diffusion and cultural exchange, develop better governance, sources of knowledge, information, and technology, and improve cross-border capital flows (Bacchetta et al., 2009).

Globalization has optimal benefits for increasing productivity, expanding employment, increasing commodity choices, reducing costs, improving living standards, and reducing poverty with modernization (Dhas & Helen, 2008). In addition, with globalization, cooperation relations between various countries will be created through exports, imports, capital, and labor flow to meet the needs of each country and increase foreign exchange. Some countries will experience increased economic growth with this cooperation. Dreher (2006), Olimpia & Stela (2017), Suci et al. (2015), and Ying & Lee (2014) said that globalization has a significant positive relationship with economic growth in several countries of the world. This is indicated by the increase in GDP (Gross Domestic Product) in these countries. The process will help in the absorption of labor or the opening of employment to reduce the unemployment rate. In the end, the increase in economic growth due to globalization has implications for the decline in the unemployment rate.

Globalization also shows negative impacts. Borrell (2006) and Ogunwa (2012) say that globalization can create cultural imperialism, with openness that will give rise to unskilled and inexperienced human resources that will ultimately harm the country. The positive relationship between globalization and unemployment is also supported by several studies such as research from Dutt et al. (2009), Egger & Kreickemeier (2009), Heid et al. (2012), and Helpman et al. (2010) showing that globalization actually increases unemployment and reduces welfare in some countries. Globalization can be measured by various indicators. In general some studies such as Davidson & Matusz (2004), Dutt (2007), Felbermayr et al. (2011), Hasan et al. (2012), Moore & Ranjan (2005) use Foreign Direct Investment (FDI) and trade openness as indicators of globalization. However, these variables only describe a small part of the macroeconomic effect. Therefore, to determine other indicators of globalization (Dreher, 2006). An index called the KOF (Conjuncture forschungs Estelle) Globalization Index. The index was compiled by the Swiss Economic Institute to show the level of globalization of a country.

In the KOF globalization index, globalization consists of economic globalization, social globalization, and political globalization. KOF globalization index has a scale of 1 to 100, if the scale is close to 100, the higher the level of globalization. The figure is obtained through the following formula  $((V_i - V_{min}) / (V_{max} - V_{min}) \times 100)$ . The KOF globalization index each has the same weight of 33 percent, of which the total of the three sub-indices is the overall globalization figure. In recent decades the process of globalization itself has been growing. The formation of ASEAN also reflects the impact of political globalization, namely the entry of a country into international organizations members (Lini & Sasana, 2019). In accordance with

the purpose of the establishment of ASEAN, it is hoped that there will be mutually beneficial cooperation to create economic, social, and political integration to accelerate social progress, economic growth, and cultural development among members who have been joined. A comparison of the level of globalization in ASEAN countries can be seen in Table 1. The average level of globalization has increased across ASEAN member states, indicating that these countries are increasingly open. According to 2017 data, Singapore became the highest level of globalization compared to other members, with an index value of 83.84, ranked first among ASEAN countries and ranked 20th in the world. Meanwhile, with a value of 43.93, Myanmar ranked last among ASEAN countries and became ranked 180th globally.

**Table 1: Overall Globalization Levels, Economic Globalization, Social Globalization, Political Globalization in ASEAN, 2000-2017**

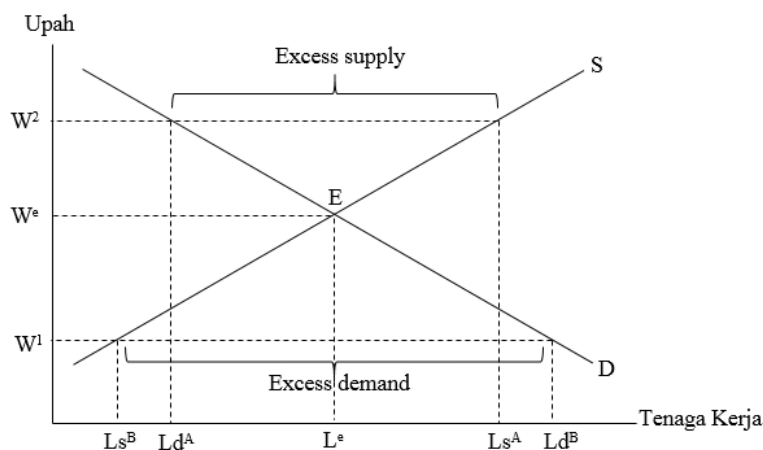
Country	Year	Globalization Sum (Index)	Economic Globalization (Index)	Social Globalization (Index)	Political Globalization (Index)
Singapore	2000	79.15	91.42	79.59	66.43
	2017	83.84	94.00	89.08	68.43
Malaysia	2000	71.40	72.57	66.99	74.65
	2017	81.41	76.77	82.18	85.28
Indonesian	2000	59.77	65.13	36.70	77.46
	2017	63.38	48.10	54.74	87.28
Thailand	2000	63.27	64.63	50.23	74.94
	2017	72.52	67.06	68.38	82.14
Philippines	2000	63.31	63.47	48.52	77.94
	2017	67.45	57.48	61.90	82.96
Vietnam	2000	43.43	52.25	25.26	52.10
	2017	64.53	60.40	58.56	74.39
Cambodia	2000	36.28	53.25	20.08	35.50
	2017	59.22	67.97	49.48	60.21
Laos	2000	37.14	48.14	28.32	34.62
	2017	45.83	49.25	45.29	42.94
Myanmar	2000	30.12	44.23	15.23	30.05
	2017	43.93	39.46	37.79	54.25

Several researchers have empirically studied economic, social, and political globalization and the unemployment rate and produced varying conclusions. Globalization in the economic aspect has a significant influence on the decline in unemployment (Awad & Youssof, 2016; Dutt, 2007; Gozgor, 2017). Meanwhile, Daly et al. (2017) said political and social globalization reduces the unemployment rate in the short term but increases in the long term, while economic globalization is profitable in the long term, not in the short term. The positive relationship between economic globalization and unemployment is also supported by several researchers (Adamu et al., 2017; Altiner et al., 2018). Adamu et al. (2017) added that social and political globalization could reduce unemployment. Based on the background that has been described, there are several factors that affect the unemployment rate, namely economic globalization, social globalization, political globalization, economic growth, and wages. Therefore, there is a need for further research on the factors that affect the unemployment rate in ASEAN. This study used macro data derived from ETH Zurich and the World Bank from 2000 to 2017 with panel data regression analysis techniques. This study analyzes the influence

of globalization consisting of economic, social, and political globalization on unemployment in ASEAN. In addition, this study also aims to analyze the effect of economic growth and wages on unemployment in ASEAN.

### Literature Review

The balance of supply and demand for labor is caused by an excess supply of labor and excess demand of labor. A labor supply that is greater than the demand for labor is called excess supply of labor, while a demand for labor that is higher than the supply of labor is called excess demand of labor. Excess supply of labor causes unemployment while excess demand of labor causes scarcity in labor.



Source : (Borjas, 2005)

**Figure 2: Labor Market Balance**

The balance of the labor market is shown in Figure 2. The horizontal line describes the labor variable while the vertical line describes the wage variable. The equilibrium between labor supply (S) and labor demand (D) is shown at Point E, where wages are  $W^e$  and labor is  $L^e$ . This situation is called full employment. The absence of excess demand and supply of labor at the time of wages of  $W^e$ . If wages rise by  $W^2$  then the demand for labor is equal to  $Ld^A$  while the labor supply is only by  $Ls^A$  then it can lead to unemployment of  $Ld^A + Ls^A$ . When wages fall by  $W^1$ , the demand for labor by  $Ld^B$  and the supply of labor by  $Ls^B$  result in a labor shortage of  $Ld^B + Ls^B$ .

Unemployment is a condition of a person not having a job or leaving his job or someone who enters at working age who wants to find a job but has not yet obtained it. Unemployment can occur due to imbalances in the labor market as described in Figure 2 earlier. This shows that the amount of labor that offered is exceeds the amount of labor that is demanded. Unemployment is (1) a situation when a person does not have a job, but they are actively trying to find a job within the last four weeks or (2) the labor force (aged 16 and above) but can only enter the job in the next two weeks (Chowdhury & Hossain, 2014).

Globalization describes the process of creating a network of connections between actors at intra- or multi-continental distances through many flows such as society, information, ideas, capital, and goods (Clark & Cash, 2019). Globalization is the process of breaking through national boundaries, integrating national economies, cultures, technologies, and governance, and resulting in complex interdependent relationships with each other (Norris, 2000). Dreher (2006) quotes from Nye & Kyohane (2000), who distinguish between three different dimensions of globalization. First, Economic globalization is about the flow of capital, goods, and

services, as well as the information and perceptions that accompany market exchanges. Second, social globalization is about the spread of ideas, information, images, and societies. Last, Globalization of politics is about the diffusion of government policies. The KOF Globalization Index is one of the measures to look at the level of globalization of a country. The index was first published in 2002 by ETH Zurich and compiled by the Swiss Economic Institute. The KOF Globalization Index is calculated annually from 1970 to 2017 for 203 countries and regions. The selection of countries and regions depends on the World Bank, but not all countries and years are available for these variables. The KOF Globalization Index comes from variables that are transformed into a value on a scale of 1 to 100, where the number 100 is the maximum value. This means that the higher the value of the globalization index, the greater the globalization that exists in a country.

Economic globalization includes the globalization of trade and finance. The globalization of trade includes the ratio of imports and exports to GDP ([Georgantopoulos & Tsamis, 2011](#)). The high ratio of imports and exports to GDP indicates the increasing opening up of the country's economy. The diversity of trading partners is calculated through the Herfindahl-Hirschmann trading partner concentration index. Free trade agreements refer to the shares of multilateral and bilateral free trade agreements. Financial globalization includes the amount of long-term (Foreign Direct Investment) and short-term (portfolio investment) to GDP. The higher ratio of portfolio investment and foreign direct investment to GDP indicates that the country's economy is more open. These variables are calculated through the sum of shares of assets and liabilities and then normalized by GDP. As well as relying on datasets derived from External Wealth of Nations by Lane and Milesi-Ferretti and The IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) ([Lane & Milesi-Ferretti, 2017](#)).

Social globalization is described through interpersonal, informational, and cultural globalization. Interpersonal is the direct interaction of people living in different countries, including telephone traffic, transfers, tourism, domestic foreign residents, freedom of visit, and international airports ([Gygli et al., 2019](#)). The information flow includes internet data networks, internet > telephone access, international patents, and high-tech exports. According to [Saich \(2000\)](#), cultural globalization leads to the dominance of the cultural products of the United States. This is because the United States is paving the way for various global socio-cultural fields. According to [Dreher \(2006\)](#), cultural openness can be seen in English songs that are popular in the country, as well as films originating from Hollywood that is shown in domestic theaters. However, today's proxies are the number of McDonald's restaurants and IKEA stores in a country. The domestic population normalizes all variables of social globalization.

Next comes the political globalization that characterizes the diffusion of government policies. The level of political globalization can be seen from the number of embassies in a country, the number of international organizations that the country is a member of and the UNITED NATIONS (United Nations) peacekeeping missions in participating countries, as well as the existence of International NGOs's in a country. The number of ambassadors indicates how much the country receives the influence and resources of foreign sovereign governments. International NGOs are calculated through the number of International NGOs that are actively oriented in a country. Like embassies, the presence of international NGOs involves the influence of foreigners with political or social motives on its territory, which can be summed up as political influence from abroad. Political globalization refers to the ability of a country to engage in international political cooperation. It can also be measured by multilateral agreements, the number of memberships in international organizations and cultural diversity



agreements. The number of agreements and membership in international organizations may affect future relationships.

Globalization is one of the potential to encourage economic growth and national development in the modern world. Globalization creates cooperative relations between various countries through exports, imports, capital, and labor flows, in order to increase foreign exchange and meet the needs of each country. Most countries will experience increased economic growth with this cooperation. Economists use GDP data to measure the total income of each individual in the economy (Mankiw, 2008). The negative relationship between economic growth and unemployment is stated in Okun's Law. Rising economic growth could lower the unemployment rate. When economic growth increases, the amount of output produced will also increase. Therefore, additional factors of production are needed, such as labor. With the absorption of new labor, it will reduce unemployment. The negative relationship is also supported by several studies (Dreher, 2006; Olimpia & Stela, 2017; Suci et al., 2015; Ying et al., 2014).

On the contrary, some studies provide evidence that there is a positive relationship between globalization and unemployment. Borrell (2006) and Ogunwa (2012) say that globalization can create cultural imperialism, with openness that will give rise to unskilled and inexperienced human resources that will ultimately harm the country. The positive relationship between globalization and unemployment is also supported by several studies. Dutt et al. (2009), Egger & Kreickemeier (2009), Heid et al. (2012), and Redding & Helpman (2014) show that globalization actually increases unemployment and reduces welfare in some countries.

Okun law states the inverse relationship between economic growth and unemployment, where when unemployment falls by 1% then real GDP must grow by about 2% (Knotek, 2007). The legal basis of Okun refers to the continuous increase in the quantity of labor and the level of productivity that focuses on producing more goods and services. An increase in economic growth driven by an increase in production output requires additional factors of production, in this case, labor. This condition will increase employment and reduce the unemployment rate. If economic growth increases, unemployment will decrease. This is in line with several previous studies (Adrian, 2009; Doğan, 2012; Garavito, 2000; Gocer & Erdal, 2015; Özel et al., 2013; Maqbool, 2019; Misini & Pantina, 2017; Muscatelli & Tirelli, 2001; Yao & Zhang, 2005; Virén, 2001).

The theory of labor demand explains the relationship between wages and unemployment. When labor wages increase, it leads to a reduction in the quantity of labor. This condition causes an increase in production costs which has an impact on increasing output prices, causing demand for output to decrease, thus encouraging companies to reduce the use of labor in order to maintain maximum profits. This is in line with research conducted by Farid (2007) and Tello (2015) that wages have a positive relationship with unemployment.

Studies related to the influence of globalization on unemployment have mixed results. The research conducted by Daly et al. (2017) aims to determine the influence of globalization using economic, social, and political indicators and the Autoregressive Distributed Lag (ARDL) method on Pakistan's unemployment rate from 1980 to 2013. The results show a different impact on each of the indicators. Political and social globalization produces beneficial repercussions in the short term but can increase the unemployment rate in the long run. At the same time, economic integration can effectively reduce unemployment in the long run. Although economic integration is beneficial, this integration cannot proceed independently in

the absence of political and social integration. Globalization as a whole could lower the unemployment rate in the long run.

Gozgor (2014) used the objects of research of the G7 countries in 2000-2012. The study used LSDV estimates. The results show that the variables of economic openness and the globalization index negatively affect the unemployment rate. Every time globalization increases, the unemployment rate will decrease in the G7 group of countries. Other variables such as GDP growth, inflation, productivity, and population also affect the unemployment rate. Gozgor (2017) also examined the globalization of the unemployment rate in 87 countries in 2000-2012. The results of the study show that economic, political, social, and overall globalization has an insignificant negative effect on the unemployment rate. The variable result of trade openness has a significant negative effect on the unemployment rate. In addition, other variables that have an influence on the unemployment rate are economic growth, import or excise taxes, trade openness, regulation of trade barriers, setting tariff levels, and capital restrictions.

Then Adamu et al. (2017) examined the effect of globalization on unemployment in 35 countries in Sub-Saharan Africa in the period 2007-2014. They used the variable unemployment rate, globalization index, and the control variables of economic growth, inflation, wages, and labor market policies using the GMM analysis method. The results of this study include: (1) there is an influence between economic, social, and political globalization on the unemployment rate, but only economic globalization has a positive effect; (2) economic growth and labor market policies are very effective in reducing the unemployment rate; (3) inflation and wages have a positive and significant effect on the unemployment rate.

Suci (2019) examined economic, social, political openness to unemployment rates in 7 ASEAN countries (Cambodia, Indonesia, Malaysia, Thailand, Singapore, Philippines, Vietnam) in 2010-2015 using the panel data regression method. The results show that economic and social globalization has a negative and significant effect on unemployment. However, political globalization was found to have a positive and significant effect on unemployment.

The difference between this research and previous research is that most of the previous research uses FDI variables and trade openness to measure globalization. Meanwhile, this research looks at economically, socially, and politically, not only economic globalization. The object of this study adds to the countries of Myanmar and Laos that have not been included in previous research in the ASEAN region, as well as update the research year. In addition, the study also added variables of control of economic growth and wages. The hypothesis in this study is used to make decisions from the results of the study. The hypothesis that will be tested is that there is an influence of globalization consisting of economic, social, political, economic growth, and wages on unemployment in ASEAN.

## **Research Methods**

### ***Research model***

This research uses a quantitative approach based on statistical calculations and econometrics. This study uses a regression of panel data, a combination of cross-section data and time-series data. This study used time series data for 2000-2017 and ASEAN cross-section data from Indonesia, Singapore, Malaysia, Thailand, the Philippines, Cambodia, Vietnam, Myanmar, and Laos using the Fixed Effect Model (FEM) method. The data used in this study are secondary data with 162 observations. Sources and units of data can be viewed in the following table:



**Table 2: Sources and Data Units**

Variable	Unit	Data sources
Unemployment	Percent	World Bank
Globalization	Indices (1-100)	ETH Zurich
Economic Globalization	Indices (1-100)	ETH Zurich
Social Globalization	Indices (1-100)	ETH Zurich
Political Globalization	Indices (1-100)	ETH Zurich
Economic Growth	Percent	World Bank
Wages	USD	World Bank

This study adapts models from Adamu et al. (2018) and Suci (2019) and expands them by including variables to explain the relationship between globalization and unemployment. The following is obtained the following model:

$$UNEMP_{it} = \beta_0 + \beta_1 KOFGI_{it} + \beta_2 GROWTH_{it} + \beta_3 WAGE_{it} + \epsilon_{it} \quad (1)$$

$$UNEMP_{it} = \beta_0 + \beta_1 KOFEC_{it} + \beta_2 GROWTH_{it} + \beta_3 WAGE_{it} + \epsilon_{it} \quad (2)$$

$$UNEMP_{it} = \beta_0 + \beta_1 KOFSO_{it} + \beta_2 GROWTH_{it} + \beta_3 WAGE_{it} + \epsilon_{it} \quad (3)$$

$$UNEMP_{it} = \beta_0 + \beta_1 KOFPO_{it} + \beta_2 GROWTH_{it} + \beta_3 WAGE_{it} + \epsilon_{it} \quad (4)$$

Description:

- UNEMP : Unemployment
- KOFGI : Globalization
- KOFEC : Economic Globalization
- KOFSO : Social Globalization
- KOFPO : Political Globalization
- GROWTH : Economic Growth
- WAGE : Wages
- t : Year
- I : Country
- $\epsilon$  : error term

### Partial Test

Partial tests or t-statistical tests aim to see the effect of each independent variable on the dependent variable. The hypotheses for the t-statistical test are:

H0:  $\beta_1 = 0$  (the independent variable partially does not influence the dependent variable)

H1:  $\beta_1 \neq 0$  (the independent variable partially influences the dependent variable)

If the probability value is less than the confidence level of the  $\alpha$  (1%, 5%, or 10%), then partially the dependent variable has a significant effect on the independent variable.

### Simultaneous Test

Simultaneous tests or f-statistical tests aim to see the influence of independent variables on variables together. The hypotheses for the F-statistical test are:

H0:  $\beta_1 = \beta_2 = \dots = \beta_n = 0$  (independent variables simultaneously does not influence on dependent variables)

H1: Paling tidak ada satu parameter  $\beta \neq 0$  (independent variables simultaneously influence dependent variables)

If the probability value is less than the confidence level of the  $\alpha$  (1%, 5%, or 10%), then the independent variables together influence the dependent variable.

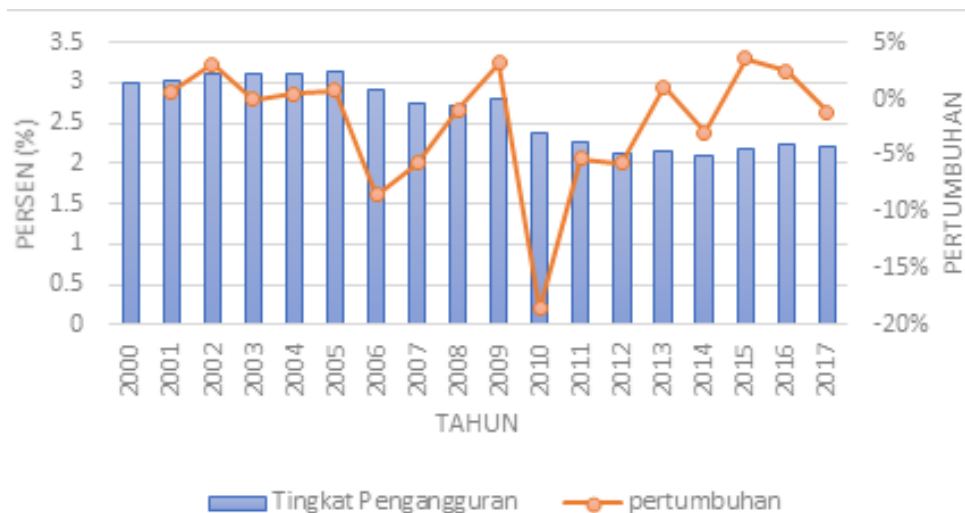
**Coefficient of Determination**

The coefficient determination in this study was used to measure the Goodness of Fit of a regression model. The value of R2 reflects how much variation of the dependent variable can be described by the free variable, the magnitude of the value of R2 i.e. between 0 and 1. When the value of R2 gets closer to one, it means that the independent variables in the model as a whole are able to explain the dependent variables.

**Results and Discussion**

**Overview**

The issue of unemployment is indeed very complex to talk about. Unemployment can reduce the amount of GDP in ASEAN, so it needs to be reduced (Maqbool et al., 2013). The unemployment rate reflects the inability of the working-age population who are actively looking for work to find work. Figure 4 shows that the unemployment rate tends to fluctuate in all ASEAN countries during 2000 to 2017, following fluctuations in the state of the economy.



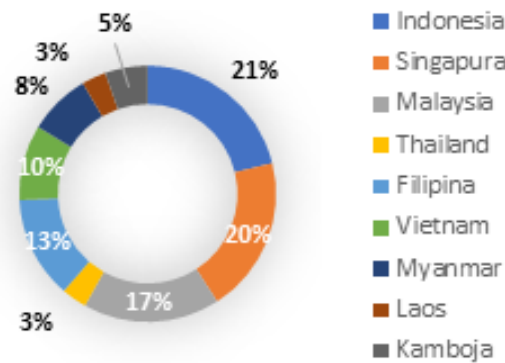
Source: World Bank (2020)

**Figure 4: ASEAN Total and Unemployment Growth in 2000-2017**

The unemployment rate of each ASEAN member state is shown in Figure 4. Since 1991 Indonesia has contributed to the largest unemployment rate in ASEAN. In 2017, Indonesia is still the country with the highest unemployment rate in ASEAN, 4.18 or 21% of the total ASEAN unemployment rate. The other four countries with high unemployment are Singapore, Malaysia, Philippines, and Vietnam, which contributed to unemployment by 20%, 17%, 13%, and 10%, respectively. The other four countries, namely Myanmar, Cambodia, Thailand, and Laos, only accounted for 8%, 5%, 3%, and 3%.

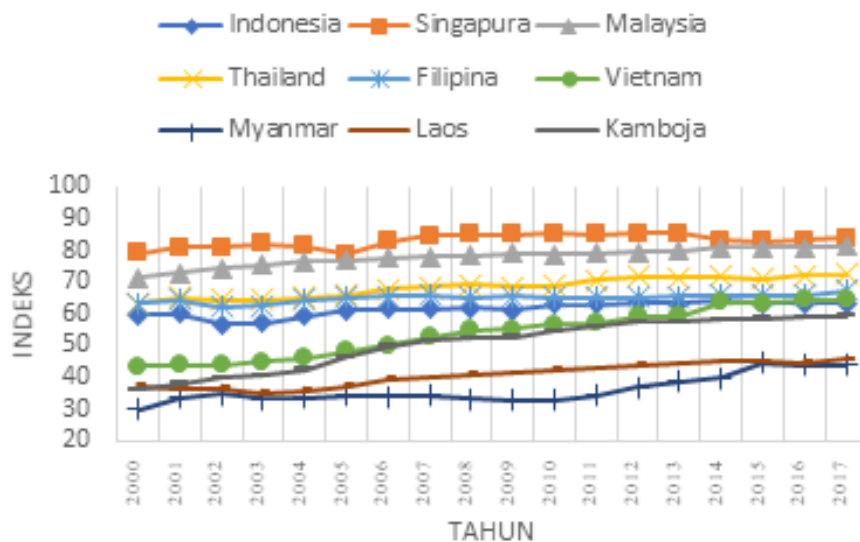
Globalization is the concept of creating a broader network that covers the whole world. Globalization reduces barriers and boundaries between countries. The KOF globalization index divides globalization into several aspects, namely economic, social and political aspects.

Higher index, higher level of globalization. Figure 5 shows the development of the level of globalization experienced by countries in ASEAN. Some countries are experiencing an increase in the level of globalization. However, some countries have also experienced declines and have different movements. Malaysia, Vietnam, and Myanmar have tended to increase from 2000 to 2017. Meanwhile, other countries experienced fluctuations in the level of globalization from 2000 to 2017. From 2000 to 2017, the country with the highest level of globalization in ASEAN was Singapore. In 2017 the rate of globalization in Singapore was 83.84, followed by Malaysia at 81.41. Myanmar and Laos are countries with relatively low levels of globalization below 50. Vietnam and Cambodia were originally among the countries with relatively low levels of globalization but tended to increase throughout 2001 to 2017. Meanwhile, the other three countries fluctuate in 50 to 70.



Source: World Bank (2020)

**Figure 5: Share of Unemployment in ASEAN in 2017**



Source: Zurich (CH) (2019)

**Figure 6: Globalization in ASEAN 2000-2017**

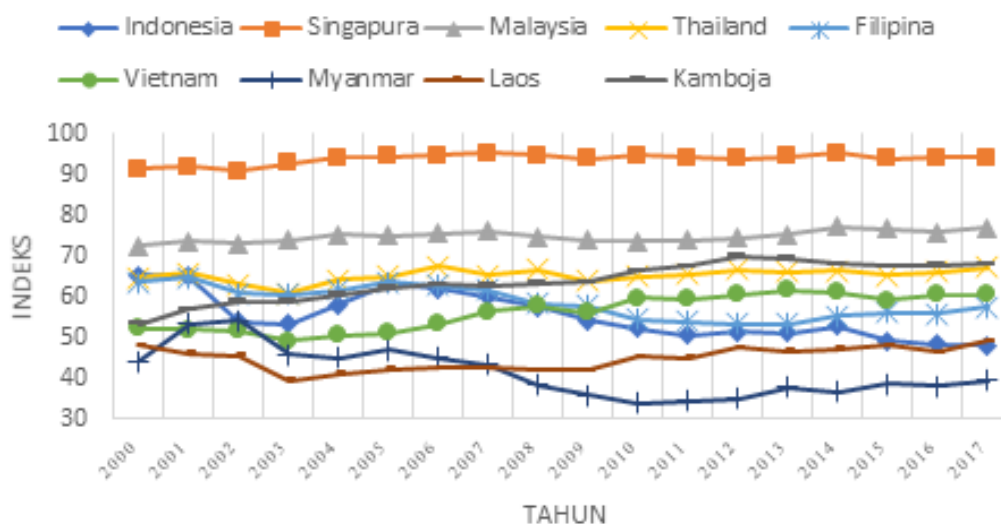
Table 3 shows the globalization ranking of ASEAN countries worldwide according to 2019 data, where the rankings are grouped by overall globalization, economic, social, and political globalization. Singapore ranks first in all globalization, except for political globalization, ranked 6th among other ASEAN countries. Meanwhile, Indonesia always occupies the bottom four position in all globalization, but in political globalization, it is ranked first among other ASEAN countries.

**Table 3: ASEAN Countries Globalization Rankings 2019**

Level	Country	Globalization	Level	Country	Economic Globalization
20	Singapore	82.62	1	Singapore	94.00
26	Malaysia	81.49	32	Malaysia	76.77
52	Thailand	72.44	60	Cambodia	67.97
72	Philippines	67.41	63	Thailand	67.06
83	Vietnam	64.55	95	Vietnam	60.40
92	Indonesian	62.47	104	Philippines	57.48
105	Cambodia	59.02	134	Laos	49.25
174	Laos	45.44	138	Indonesian	48.10
180	Myanmar	43.95	163	Myanmar	39.46
Level	Country	Social Globalization	Level	Country	Politic Globalization
9	Singapore	88.42	35	Indonesian	87.28
41	Malaysia	82.41	42	Malaysia	85.28
99	Thailand	68.11	48	Philippines	82.96
124	Philippines	61.79	50	Thailand	82.14
132	Vietnam	58.61	76	Vietnam	74.39
146	Indonesian	52.02	97	Singapore	68.43
155	Cambodia	48.87	126	Cambodia	60.21
168	Laos	44.07	139	Myanmar	54.25
187	Myanmar	37.86	157	Laos	42.94

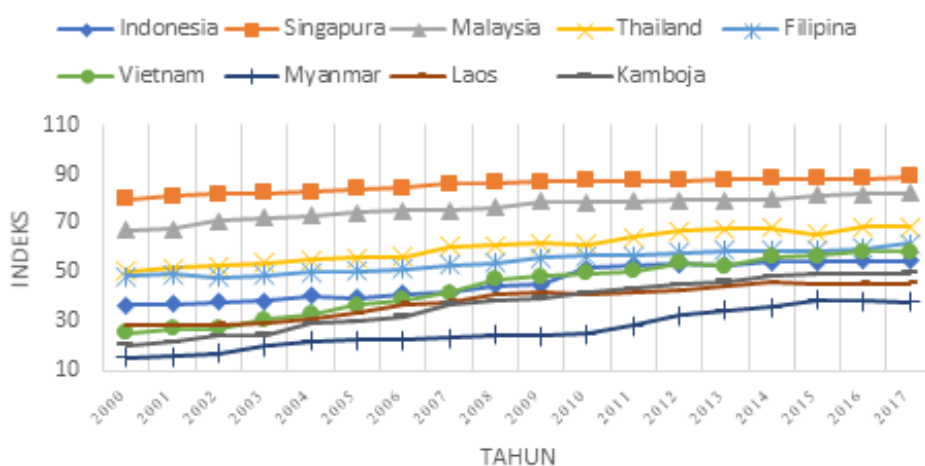
Source: Zurich (CH) (2019)

Economic Globalization is one of the factors affecting unemployment. The development of economic globalization in ASEAN in 2000-2017 is shown in Figure 4. Singapore has the highest average level of economic globalization in ASEAN followed by Malaysia, Thailand, and Cambodia. The high economic globalization in Singapore is above 90 and almost reaching the maximum figure of the KOF index, which shows that Singapore is very open. This openness is because Singapore is very dependent on exports and processing of imported materials, especially in the manufacturing sector. Singapore has become the largest international trade country in Southeast Asia (Effendi & Suska, 2014). All ASEAN countries have experienced an increase and decrease in the level of economic globalization since 2000-2017. At the time of the global crisis in 2008, almost all countries in ASEAN experienced a decrease in globalization level. However after that, the level of globalization began to increase again. Social globalization is described through three components: interpersonal, information, and cultural globalization. Figure 8 shows the development of social globalization in ASEAN countries from 2000 to 2017. Singapore has the highest average of social globalization in the ASEAN region. The globalization rate in Singapore in 2017 was 94, followed by Malaysia with 77. From 2000 to 2017 all countries in ASEAN had a trend of social globalization that tended to increase, although there were some not very sharp declines in certain years. Social globalization in Singapore and Malaysia is high compared to other countries because the internet use in these countries is quite high. Thailand, Singapore, and Malaysia are also the countries with the highest number of international airplane passengers and receive the highest visitors compared to other ASEAN countries.



Source: Zurich (CH) (2019)

**Figure 7: Economic Globalization in ASEAN 2000-2017**



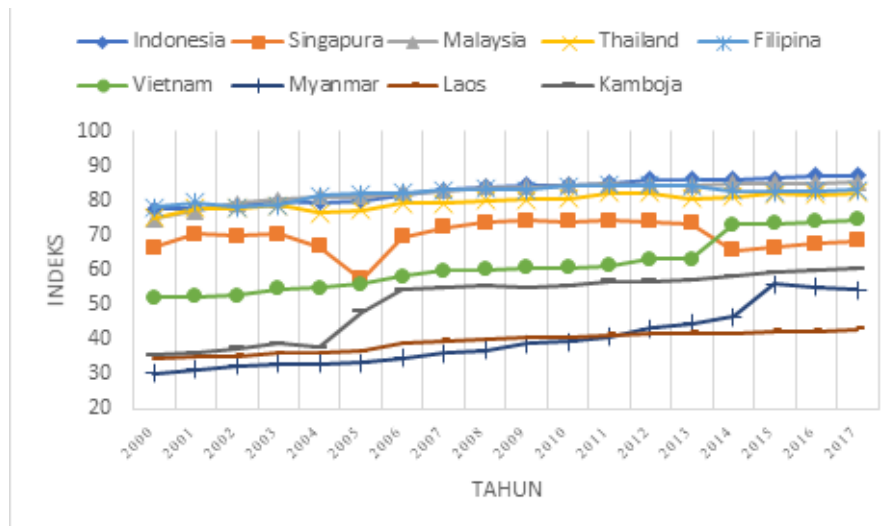
Source : Zurich (CH) (2019)

**Figure 8: Social Globalization in ASEAN 2000-2017**

Political globalization is represented by the number of international organizations in which the country is incorporated in membership, the number of embassies in a country, participation in UN missions, and international agreements. The development of political globalization in ASEAN in 2000-2017 is shown in Figure 9 some countries such as Vietnam, Cambodia, and Myanmar experienced a sharp increase, while Singapore experienced a sharp decline in 2005 and 2014. Referring to Figure 9, Indonesia, Malaysia, the Philippines, and Thailand have the highest average political globalization in the ASEAN region in 70-90. Laos is the lowest country in political globalization with a figure below 50. The active role of the Indonesian state in international political relations is one of the reasons Indonesia has a high level of political globalization. Indonesia's agreements and membership in the organization are more numerous than any other ASEAN country. Indonesia is the only country in ASEAN to join OPEC (Organization of the Petroleum Exporting Countries) from 1962 to 2008, then returned to become an official member from 2014 to 2016 (Jensen & Asmarini, 2016). In 1989 Indonesia, Malaysia, Thailand, Philippines, and Singapore joined the Asia-Pacific Economic Cooperation

(APEC). In addition, only Indonesia and Malaysia are members of the Organization of The Islamic Cooperation in the ASEAN region.

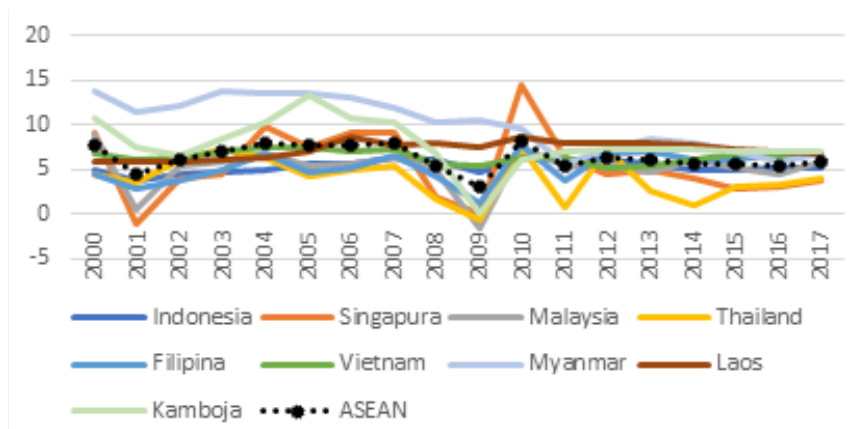
Figure 9 shows the average economic growth in ASEAN from 2000 to 2017. In 2001 it experienced a decline, but it increased from 2002 to 2004. Economic growth declined again in 2008-2009, and after recovering from the global crisis in 2010 experienced a sharp increase. Furthermore, from 2012 to 2017 economic growth tended to fluctuate neither a decline nor an increase that was too sharp.



Source : Zurich (CH) (2019)

**Figure 9: Political Globalization in ASEAN 2000-2017**

Figure 9 shows the average economic growth in ASEAN from 2000 to 2017. In 2001 it experienced a decline, but it increased from 2002 to 2004. Economic growth declined again in 2008-2009, and after recovering from the global crisis in 2010 experienced a sharp increase. Furthermore, from 2012 to 2017 economic growth tended to fluctuate neither a decline nor an increase that was too sharp.



Source: World Bank (2020)

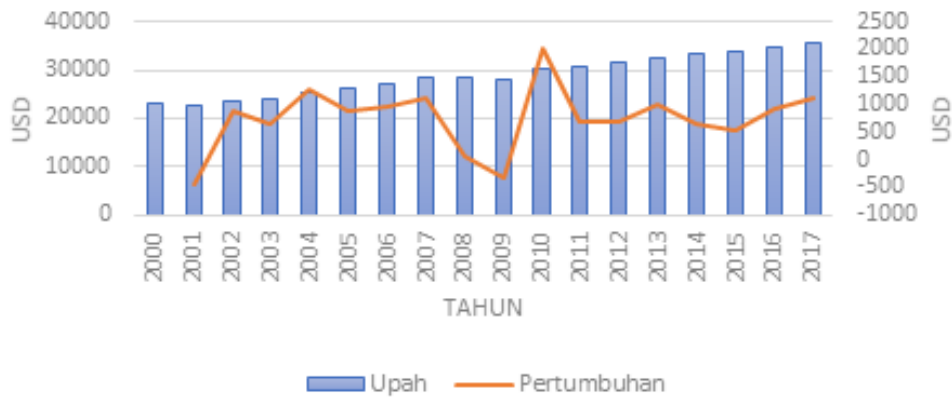
**Figure 10: Economic Growth in ASEAN 2000-2017**

In 2001 all ASEAN countries experienced a decline. However, Singapore went into recession until its economic growth was -1.1 percent, a consequence of economic restructuring in the region after the Asian crisis in the late 1990s. But, from 2002 to 2007 the economy recovered and showed strong growth again (Jordan, 2009). Due to the global crisis in 2008-2009



economic growth in Singapore slumped, but the economy jumped again to 14.5 percent. In 2009, several countries with negative growth, such as Malaysia, with its economic growth rate reaching -1.5 percent and Thailand with -0.7 percent.

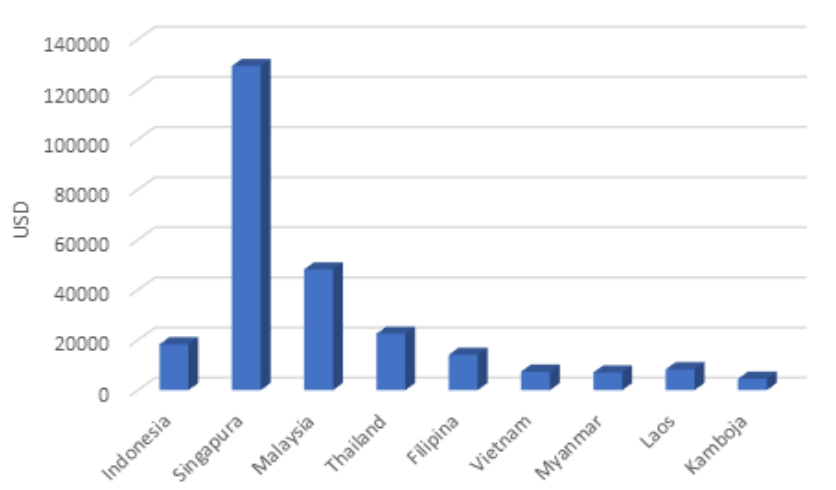
Figure 9 shows wages in ASEAN in 2000-2017 approached by GDP per person employed. If you look at the overall wages in ASEAN, it has fluctuated. In 2001 it experienced a decrease of 434 USD, but after that it experienced an increase from 2002, then fluctuated. Wages experienced a decline back in 2008-2009, after recovering from the global crisis in 2010 experienced a sharp increase until 2011 USD. Furthermore, in 2012-2017 wages tend to fluctuate, not to experience a decrease or increase that is too sharp.



Source: World Bank (2019)

**Figure 11: Wage Developments in ASEAN 2000-2017**

Figure 11 shows that the ASEAN country that provides the highest wages in each period in Singapore around 120,000 USD, Malaysia around 48,000 USD, Thailand around 22,000 USD, and Indonesia around 18,000 USD. The difference in wages in each ASEAN country depends on the conditions of each region.



Source: World Bank (2019)

**Figure 12: Average Wages in ASEAN Countries 2000-2017**

The descriptive analysis in this study was used to determine the general picture of unemployment in ASEAN and some of the factors that influenced unemployment in 2000-2017. The variables used in this study are unemployment, globalization, economic globalization, social globalization, political globalization, economic growth, and wages.

**Table 4: Descriptive Statistics**

Variabel	Obs	Notation	Mean	Std. Dev.	Min	Max
Unemployment (%)	162	UNEMP	2.63	1.78	0.49	8.06
Globalization (index)	162	KOFGI	59.68	15.62	30.12	85.34
Economic Globalization (index)	162	KOFEC	61.54	15.43	33.82	95.29
Social Globalization (index)	162	KOFSO	52.05	19.53	15.23	89.08
Political Globalization (index)	162	KOFPO	65.35	18.09	30.05	87.28
Economic Growth (%)	162	GROWTH	6.30	2.82	-1.51	14.53
Wages (USD)	162	WAGE	28861	38254	2708	150325

The unemployment variable has an average of 2.63 percent, a standard deviation of 1.78 percent, with a low of 0.49 percent and a high of 8.06 percent. The globalization variable has an average of 59.68, a standard deviation of 15.62, 30.12 as minimum value and 85.34 as maximum value. Variable of economic globalization has an average of 61.54, a standard deviation of 15.62, with 33.82 as minimum value and 95.29 as minimum value. The variable of social globalization has an average of 52.05, a standard deviation of 19.53, with the lowest value of 33.82 and the highest of 95.29. The variable of political globalization has an average of 63.35, a standard deviation of 18.09, with the lowest value of 30.05 and the highest of 87.28. The economic growth variable has an average of 6.3 percent, a standard deviation of 2.82 percent, with a low of -1.51 percent and a high of 14.53 percent. The wage variable has an average of 28861 USD, a standard deviation of 38254 USD, with the lowest value of 2708 USD and the highest 150325 USD.

## Discussion

This study uses four models to determine each of the influences of globalization on the unemployment rate. The first model analyzes globalization (as a whole), the second model analyzes economic globalization, the third model analyzes social globalization, and the last model analyzes political globalization. In addition, this study uses other free variables, namely economic growth and wages.

The regression results of all models have a statistical F-probability value of 0.000. The figure indicates a probability value smaller than the degree of its significance, then  $H_0$  is rejected. It can be concluded that independent variables together have a significant effect on dependent variables in all models.

In model 1, it can be seen that the variables of globalization and wages have a significant and negative effect on the unemployment rate in ASEAN. An increase in the globalization index score by 1 unit will reduce the unemployment rate by 0.04% and an increase of 1 USD in wages will lead to a decrease in the unemployment rate by 0.00004%. Economic growth variables were also found to have a negative effect on the unemployment rate but the influence caused was not significant. Then, the coefficient of determination ( $R^2$ ) of model 1 is known to be 0.2232 which means that independent variables can jointly explain the dependent variable by 22.32% while the remaining 77.68% is explained by other variables outside the model.

This research is consistent with research conducted by [Gozgor \(2017\)](#) in G7 countries that globalization has a negative influence on unemployment. Globalization will absorb a lot of labor, thereby reducing the unemployment rate. Gozgor measured the effects of globalization on low-skill and high-skilled unemployment. In unemployed people who have low skills, the

results are not statistically significant, but the statistical coefficient will be significant against high-skilled unemployed. In conclusion, unemployment will tend to decrease slightly if the country is rich with low-skilled unemployment.

**Table 5: Panel Data Regression Estimation Results**

Variable	Model 1	Model 2	Model 3	Model 4
Globalization	-0.0433 (0.0115)***	-	-	-
Economic Globalization	-	0.0226 (0.0122)*	-	-
Social Globalization	-	-	-0.0422 (0.0068)**	-
Political Globalization	-	-	-	-0.0303 (0.0093)***
Economic Growth	-0.0226 (0.0208)	-0.0086 (0.0212)	-0.0312 (0.0195)	-0.0248 (0.0213)
Wages	-0.00004 (-8.5e-06)***	-0.00005 (8.1e-06)***	-0.00003 (8.3e-06)***	-0.00004 (8.4e-06)***
c	6.426 (0.674)***	2.712 (0.794)***	5.749 (0.367)***	5.941 (0.631)***
R squared	0.2232	0.1606	0.1643	0.2834
Prob > F	0.000	0.000	0.000	0.000
obs	162	162	162	162

Description: The number in parentheses ( ) indicates the standard error value. Significance: \*\*\*p<0.001, \*\*p<0.05, \*p<0.1

In model 2, it can be seen that the variables of economic globalization have a significant and positive effect on the unemployment rate in ASEAN. An increase in the globalization index score by 1 unit will increase unemployment by 0.064% and an increase of 1 USD in wages will lead to an increase in the unemployment rate by 0.00000%. Economic growth variables were also found to have a negative effect on the unemployment rate but the influence caused was not significant. Then, the coefficient of determination (R<sup>2</sup>) of model 2 is known to be 0.1606 which means that independent variables can jointly explain the dependent variable by 16.06% while the remaining 83.94% is explained by other variables outside the model.

Variables of economic globalization have a significant positive influence on unemployment. This shows that an increase in the economic globalization index will increase unemployment. The positive and significant relationship between economic globalization and unemployment is supported by several studies, such as [Awad & Youssef \(2016\)](#) in Malaysia explaining that in the short term economic globalization tends to increase unemployment. The argument is based on that, as a result of the liberalization of trade, workers in the import sector will lose their jobs, while in the export sector, the absorption of labor requires adjustment time. This is because jobs in the export sector require special skills, so the workforce needs time to improve their skills in order to meet the requirements of the developing sector. According to the results carried out by [Altier et al., \(2018\)](#) on Emerging Market Economies, it was found that an increase in economic globalization will increase the unemployment rate in Colombia, Hungary, India, Malaysia, Poland, South Africa, and Turkey. However, in Brazil, China, Indonesia, Mexico, Pakistan, Peru, the Philippines, Russia, and Thailand, an increasing rate of economic globalization reduces the unemployment rate.

Economic globalization, which is approached by liberalization, has a positive effect on unemployment. It is in line with the Heckscher-Ohlin model that trade liberalization will result in an increase in unemployment. Every country, whether capital intensive or labor intensive, that conducts trade will have a different impact. The effect of the H-O theory of capital intensive rich countries will have a positive impact, while labor-intensive rich countries will have a negative impact on unemployment (Dutt et al., 2009). Other studies such as (Egger & Kreickemeier, 2017), (Hasan et al., 2012), as well as (Redding & Helpman, 2014) that use trade liberalization as a proxy for economic globalization reveal that economic globalization will tend to increase unemployment.

The globalization of the economy approached by FDI can lead to competition between domestic and foreign companies. Foreign companies will operate in the host country may have greater economic strength than domestic companies, thereby reducing the performance of domestic companies. Foreign companies that have greater economic power can monopolize the market and raise prices in competitive markets, which is detrimental to the economic well-being of the host country. If foreign companies entering the host country produce output using capital-intensive employment opportunities, the decline and unemployment increase. As of January 1, 2016, large companies are increasingly interested in investing in the ASEAN region. Since 2015 ASEAN member states have tended to experience a shift in foreign investment from labor intensive to capital intensive and technology. If foreign companies enter using capital intensive and high technology then job opportunities decrease, jobs do not absorb much domestic labor so unemployment increases.

In model 3, it can be seen that the variables of social globalization have a significant and positive effect on the unemployment rate in ASEAN. An increase in the globalization index score by 1 unit will increase unemployment by 0.000% and an increase of 1 USD of wages will lead to an increase in the unemployment rate by 0.003%. Social growth variables were also found to have a negative effect on the unemployment rate but the influence caused was not significant. Then, the coefficient of determination ( $R^2$ ) of model 3 is known to be 0.1643 which means that independent variables can jointly explain the dependent variable by 16.43% while the remaining 83.57% is explained by other variables outside the model. Variables of social globalization have a significant negative influence on unemployment. This shows that an increase in the social globalization index will reduce unemployment. The negative relationship between social globalization and unemployment is supported by several studies such as Daly et al. (2017) in Pakistan and Adamu et al. (2017) in Sub-Saharan Africa. Meanwhile, research in ASEAN conducted by Suci & Ramdanyah (2019) who examined the globalization of unemployment stated that an increase in social globalization would reduce unemployment.

Social globalization has a variety of variables and in each of these variables can have an effect in increasing economic growth which will eventually create jobs. For example, social globalization in information is now free and accessible to anyone using telephones and the internet, so as to increase the productivity and daily activities of the workforce. In the interpersonal variables of globalization, the existence of freedom of visiting and international migration opens up increasing employment opportunities. This is in line with the theory put forward by Todaro & Smith (2003), that the most important purpose of a person to migrate is due to economic motives.

In model 4, it can be seen that the variables of political globalization have a significant and positive effect on the unemployment rate in ASEAN. An increase in the globalization index score by 1 unit will increase unemployment by 0.001% and an increase of 1 USD in wages

will lead to an increase in the unemployment rate by 0.000%. Political growth variables were also found to have a negative effect on the unemployment rate but the influence caused was not significant. Then, the coefficient of determination ( $R^2$ ) of model 4 is known to be 0.2834 which means that independent variables can jointly explain the dependent variable by 28.34% while the remaining 71.66% is explained by other variables outside the model.

Variables of political globalization have a significant negative influence on unemployment. This suggests that an increase in the political globalization index will reduce unemployment. The negative relationship between political globalization and unemployment is supported by several studies such as [Daly et al. \(2017\)](#) in Pakistan and [Adamu et al. \(2017\)](#) in Sub-Saharan Africa. Political globalization is described by the number of ambassadors, the participation of the UN Security Council, being a member in international organizations, as well as conducting international agreements. The structure can be used by the government to carry out agreements that can have an impact on the development and growth of a country, especially to reduce unemployment. Each country must develop and implement policies based on its own economic conditions.

Research by [Dee et al., \(2011\)](#) concluded that an increase in the openness of a country resulting from trade policies (including free trade agreements / FTAs, preferential trade agreements / PTA, custom unions, common markets) can lead to a positive contribution to national income and economic growth, job creation and productivity growth. For developing countries where there is a surge in the current unemployment rate, the benefit in the short term is the decline in the unemployment rate. Meanwhile, the long-term benefit is that it further encourages an increase in economic activity and productivity growth.

Based on the results of the regression that has been carried out, the hypothesis of this study is proven that globalization variables consisting of economic, social, political, and wage globalization have a significant effect on unemployment. While economic growth has no significant effect on unemployment. Economic growth variables have no significant effect on all models. This is contrary to the hypothesis in this study. The insignificant relationship between economic growth and unemployment is supported by several studies ([Bhowmik, 2016](#); [Folawewo & Adebaje, 2014](#)). [Folawewo & Adebaje \(2014\)](#) showed that economic growth can reduce the unemployment rate in West Africa, but not significantly, because the country experiences economic growth that is not balanced by large employment. Research conducted by [Rubcova \(2010\)](#) in the Baltic Region countries shows that the relationship between economic growth and unemployment is uncertain because the data and sample size are small, have a rigid labor market structure. There is no relationship between the unemployment rate and output in the case of Algeria, Morocco, Egypt and Tunisia for several reasons, namely unemployment in these countries is more of a structural or frictional type of unemployment, the labor market is dominated by the government so that there is a rigidity of the labor market and the government dominates the structure of the economy. The relationship between real GDP and unemployment in America researched by [Knotek \(2007\)](#) found that Okun's law is not a close relationship. It often happens that the decline in output does not always coincide with the increase in unemployment.

Meanwhile, research in ASEAN was conducted by [Aljileedi Mustafa Rayhan et al., \(2020\)](#) and [Panigrahi et al., \(2020\)](#). The results of these studies show that economic growth plays less of a role in reducing unemployment. Conditions in ASEAN also show that positive economic growth is not always followed by a decrease in unemployment.

**Table 6: Average Economic Growth and Unemployment in ASEAN 2000-2017**

Year	Economic growth (in percent)	Rise/Decrease	Unemployment (in percent)	Rise/Decrease
2000	7.64	-	3.00	-
2001	4.46	-3.17	3.02	0.02
2002	6.05	1.59	3.11	0.10
2003	6.95	0.90	3.11	0.00
2004	8.05	1.09	3.12	0.02
2005	7.65	-0.40	3.15	0.02
2006	7.75	0.10	2.90	-0.25
2007	7.85	0.10	2.74	-0.16
2008	5.45	-2.40	2.72	-0.03
2009	3.03	-2.42	2.81	0.09
2010	8.21	5.18	2.37	-0.44
2011	5.46	-2.74	2.25	-0.12
2012	6.42	0.96	2.13	-0.12
2013	6.01	-0.42	2.15	0.02
2014	5.64	-0.36	2.09	-0.06
2015	5.56	-0.08	2.17	0.08
2016	5.42	-0.14	2.22	0.05
2017	5.85	0.43	2.20	-0.03

Source: [World Bank \(2020\)](#)

The wage variable has a significant negative effect on unemployment in all models. Wages, which are close to GDP per person employed, suggest that an increase in wages will reduce unemployment. This is not in accordance with the theory, because wage increases are an attraction for the unemployed to enter the labor market in order to get a better income for their needs. The negative and significant relationship between wages and unemployment is supported by several studies, such as ([Baah-Boateng, 2013](#)) in Ghana. The study found that wages have a negative correlation to unemployment. [Tello \(2015\)](#) examined wages against unemployment in ASEAN-5 showing that rising wages can reduce unemployment. [Yabuuchi \(2011\)](#) revealed wages will reduce unemployment, due to the high intensity of income distribution leading to the creation of more job opportunities as well as an increase in employment.

Labor market projections made by the ILO and ADB (Asian Development Bank) in the 2025 MEA scenario indicate that there are several opportunities including in job acquisition and increased output. Each country in ASEAN has different labor market conditions. For example, Singapore, Singapore account for the largest high-skilled manufacturing export workers in about half of the total in ASEAN, followed by Thailand and Malaysia. However, according to [Kaur \(2010\)](#) Singapore also needs low-skilled workers especially in the manufacturing, construction, shipping industry, household chores, and other menial jobs sectors. According to the results of the ASEAN Mutual Recognition Arrangement (MRA) ASEAN member states can produce even higher skills and more productive employment. This will allow low- or middle-income countries to increase their productivity and skill levels in order to compete and not rely on low-skilled labor in encouraging exports and economic growth.

Briefly, the increase in wages will increase employment opportunities in several countries according to the conditions of their respective regions. Although the results of the study



show a very small coefficient in reducing unemployment, it is hoped that through increased levels of production and productivity will create more job opportunities as well as an increase in employment.

## Conclusion

This study aims to see the effect of globalization on unemployment in ASEAN. In addition, this study also examined the effect of economic growth and wages on unemployment. Based on the results and discussions in this study, the following conclusions can be obtained: globalization consisting of social and political globalization has a significant and negative effect on unemployment in ASEAN. This study shows that the higher the globalization in the country, the unemployment rate will decrease. Meanwhile, economic globalization has a positive and significant effect on unemployment in ASEAN. This explains that the increase in economic globalization goes straight with unemployment. The higher the economic globalization, the more unemployment will increase and economic growth does not have a significant effect on unemployment in ASEAN. This result is not in line with the hypothesis, but judging from the economic growth conditions in ASEAN, positive economic growth is not always accompanied by a decrease in the unemployment rate. This shows that economic growth plays less of a role in reducing unemployment, and wages have a significant and negative effect on unemployment in ASEAN. This suggests that high wages will reduce unemployment. This result is not in line with theory, but the differences in conditions for each country to increase wages can increase labor production and productivity to create more employment opportunities and labor absorption.

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